

A STUDY OF STUDENT-FACULTY RATINGS RELATED TO
SELECTED INSTRUCTIONAL FACTORS

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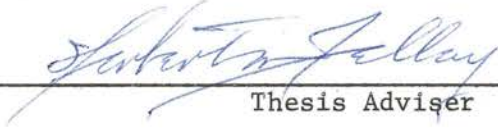
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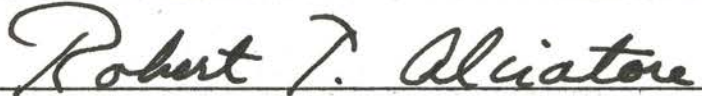
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PREFACE

As a student and educator, I have always been concerned about improvement of instruction and assessment of instructional capabilities. Today, we hear considerable discussion relating to the necessity for accountability in higher education. Even though disagreement exists as to specific procedures for evaluation of instruction, educators and citizens agree that the teacher's role is extremely crucial to achievement of a sufficient, functional education.

Considering the importance and controversial nature of evaluation, this study has attempted to examine selected variables of peer and student ratings with the hope that resultant findings might provide beneficial insight toward understanding some of the complexities present in the educational environment.

Appreciation is extended to the students and teachers who served as participants in the study. Without their help and cooperation, this research would not have been possible.

To Dr. Herbert M. Jelley, who served as my thesis adviser, I am very grateful. He gave generously of his time, and his counsel and encouragement served as inspiration throughout the preparation of this thesis. Additionally, appreciation and thanks are given to the other committee members, Dr. Robert T. Alciatore, Dr. Harold Coonrad, and Dr. Arnola Ownby for their invaluable assistance in preparation of the manuscript.

To my parents, I express sincere gratitude. Without their encouragement and financial assistance, my undergraduate education would never have been completed.

Finally, appreciation is extended to my wife, Anita. She unselfishly sacrificed so that my doctoral program could be completed and served as a source of patient encouragement that I might finish this dissertation.

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CHAPTER I

PRESENTATION OF THE PROBLEM

Statement of the Problem

The principal purpose of this study was to determine whether knowledge of student ratings collected early in a business course influences the instructor's teaching performance during the remaining portion of the course. To accomplish this purpose, business instructors were rated by students early in the course on selected instructional factors. Half of the instructors were given immediate knowledge of the ratings; the other half of the instructors were not given knowledge of the ratings. At the end of the course, all instructors were again rated by students. The study determines whether significant differences exist between ratings collected from each group during the early part of the course and ratings collected at the close of the course.

In addition, the study determines whether significant differences between initial and second student ratings are related to any of the following characteristics of students: (1) cumulative student grade average, (2) student classification (year of college), (3) sex of student, (4) amount of employment, (5) number of academic hours carried, and (6) academic field of study.

A further purpose of the study was to determine whether different student ratings are associated with age and academic rank of business instructors.

Discovering whether instructors' perceived images of student ratings collected near the beginning of the course differ significantly from those images near the end of the course was another aim of the study. In addition, the study determines whether significant differences exist between instructors' perceived images of student ratings and the actual student ratings.

Another purpose of the study was to compare faculty ratings (peer ratings) with student ratings, both those collected early in the course and those collected late in the course, to determine whether any significant differences exist.

Finally, a purpose of the study was to compare student ratings collected at the end of the first semester with student ratings collected at the end of the second semester for those business instructors who were given immediate knowledge of the student ratings during the first semester. This final comparison was made for those instructors who taught the same course for two consecutive semesters.

Delimitation of the Study

Participation in the study was limited to business teachers at Kansas State Teachers College who taught two or more sections of an undergraduate business course during the 1971-1972 academic year and who volunteered to cooperate by permitting the rating instrument to be administered to students in their classes. In addition, accumulation

of peer ratings was restricted to faculty members in the Division of Business and Business Education who were willing to be rated by their fellow teachers.

Various reasons may exist for student enrollment in a particular course offered in the business curriculum. Also, for multiple-section course offerings, a student could indicate a preference for an instructor, and this fact was not measured on the evaluative instrument. In addition, research, such as this study, of necessity must deal with the human element. For this reason, it is not possible to isolate every variable that may influence response patterns at a given time. Therefore, it is difficult to imply a definitive cause-effect relationship between demonstrated rating preference patterns.

None of the cooperating teachers were taking any special training or participating in any formal seminar or discussion groups that dealt with student evaluations. Likewise, none of these teachers were conducting any research concerned with student evaluations or improvement of classroom instruction. Every precaution was taken to insure that respondents, both faculty and students, were not aware of the purposes of this study. However, it is possible that awareness of participation in some type of research might have influenced responses. Also, it is possible that an unforeseen contingency, such as administration of a test at the class session before ratings were taken, could have influenced the ratings.

As the rating procedures involved infringements upon time and activities of both students and teachers, the data collected was limited to 10 scales of the Purdue Rating Scale for Instruction and a

rating of over-all teaching effectiveness. While this instrument does not provide for open-end responses, it can be administered in a relatively short time.

Methodology

Since specific methodology employed in the study necessitates a somewhat detailed explanation, this topic is treated separately in Chapter III of the study.

Importance of the Study

Divergent views are expressed concerning student ratings of instruction. One viewpoint stresses that students are paying for instruction and are entitled to a voice regarding the "product" they are receiving. At the other extreme, the view is expressed that students are not in a position to evaluate teachers, who have been judged competent according to academic and employment criteria.

At the present time, student interest in teacher evaluation is present on many college campuses. In addition, potential utilization of student opinion as a factor in determining academic rank, salary, and tenure has served to intensify interest. Therefore, studies, such as this study, seem to be necessary. Specifically, answers to the following questions would be of value to those interested in student ratings of instructors: Does knowledge of student ratings gathered early in a semester result in higher ratings at the end of the semester? Do fellow faculty members and students share similar opinions regarding instructional factors? Do the many variables encompassed in a student's environment, such as "number of academic

"hours carried" and "number of hours employed each week," affect student ratings of instructors?

Considering the increasing concern for students' viewpoints on instruction, business educators, as well as educators in other fields of study, need to be cognizant of qualities that students believe to be important. However, an awareness of student opinions, by itself, does not imply that more effective teaching, as measured by later evaluation, will ensue. The findings presented in this research study should help in the formulation of conclusions regarding the value of providing teachers with early knowledge of student-rating responses.

A continual goal of all educators should be improvement of their teaching effectiveness; therefore, an awareness of differences that characterize students is important in interpreting their ratings. An analysis of such variables as "cumulative grade average" or "number of hours employed each week" should serve to facilitate greater understanding of the ratings given by students.

Definition of Terms

For purposes of this study, the following definitions apply to the various words and terms:

Evaluation

Evaluation is the procedure involved in assessment of instructional factors. It also refers to rating responses that resulted from administration of the rating instrument.

Feedback

Feedback refers to informing instructors of median responses given to them by students on the ratings related to instructional factors.

Feedback Teacher

An instructor who receives knowledge of student ratings collected early in the course is called a feedback teacher.

Instructional Factor

An instructional factor is considered to be any characteristic upon which a cooperating teacher is rated. Interest in the subject, sympathetic attitude toward students, and fairness in grading are examples of instructional factors.

No Feedback

No feedback means that participating teachers were not informed of median ratings given to them by students on instructional factors.

No-Feedback Teacher

A cooperating teacher who did not receive knowledge of initial student ratings is called a no-feedback teacher.

Self Image

Self image represents a teacher's perception of what he believes to be the average (median) rating given to him by students.

Presentation of the Study

In order to provide background information and present results of selected prior research activities, Chapter II is devoted to a review of related literature.

Chapter III explains the development of procedure utilized in the study and provides an explanation of statistical calculations used in interpreting the data. In addition, background information related to the rating instrument is included in this chapter.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents a review of literature related to teacher evaluation in higher education. The first section presents introductory and background data and is followed by a presentation of pertinent studies related to segments of this thesis. Finally, a brief summary of the literature is included.

Introduction and Background

It is generally agreed that effectiveness is a goal to be sought in any profession. However, following his survey into literature related to college teaching, Knapp (1962) concluded that "we have as yet very little solid research on the images evoked by the profession or on the supposed techniques and qualities of a good teacher."¹ In a 1928 study of teaching effectiveness at 30 colleges distributed throughout the country, Douglass found that interest in delineating characteristics of effective teachers was very high and also noted that college instructors themselves favored additional research upon

¹Robert H. Knapp, "Changing Functions of the College Professor," The American College: A Psychological and Social Interpretation of the Higher Learning, ed. Nevitt Sanford (New York, 1962), p. 306.

establishment of criteria for judgment of effectiveness.² Yet, three decades later Getzels and Jackson (1960) concluded that 50 years of research effort had yielded but little definite knowledge of the relationship between personality and teaching effectiveness.³

Lack of standards for assessment can be attributed to the subjective nature of factors involved and lack of agreement as to what constitutes an effective teacher. Yet, despite the vaguenesses, most people have formulated some framework for defining an effective teacher. James Earl Russell stated: "Many can recall teachers who knowing and loving their subjects taught us to know, love, and enjoy them, not for the time being, but for all time. How few there are."⁴ While president of Sarah Lawrence College, Harold Taylor (1958) noted that a capable teacher "must not only be an intellectual leader but must be an educational planner who is sensitive to his students."⁵ Finally, Ruth Eckert (1950) stressed that excellent teachers "have a number of different qualities properly balanced and blended to produce an effective pattern of classroom behavior."⁶

²Harl R. Douglass, "Rating the Teaching Effectiveness of College Instructors," School and Society, XXVIII (1928), p. 195.

³J. W. Getzels and P. W. Jackson, "The Teacher's Personality and Characteristics," Handbook of Research on Teaching, ed. N. L. Gage (Chicago, 1963), p. 574.

⁴James Earl Russell, "A Summary of Some Difficulties Connected with the Making of a Teacher's College," Teacher Education in America, ed. Merle Borrowman (New York, 1965), p. 212.

⁵Harold Taylor, "The Teacher at His Best," The Two Ends of the Log: Learning and Teaching in Today's College, ed. Russell M. Cooper (Minneapolis, 1958), p. 152.

⁶Ruth E. Eckert, "Ways of Evaluating College Teaching," School and Society, LXXI (1950), pp. 65-69.

Personality and behavior characteristics are essential variables in assessment of teachers. Personality, as defined by Getzels and Jackson refers to "the person as a psychological or unique whole and the dynamic organization of motives within the individual."⁷ Gray (1969) defined teacher behavior "as those linguistic, performance, and expressive acts designed to elicit a given response from the student."⁸ In his analysis of formulation of attitudes toward teachers, Ryans (1960) concluded that a person's conception of effective teaching depends primarily upon three elements:

1. Past experiences and value attitudes
2. Aspects of teaching that are foremost in consideration at a given time
3. Characteristics of the student⁹

Pullias (1963) examined the life and work of several distinguished teachers and stated that:

These great teachers seem to have a special measure of ability to experience, and to communicate to others, symbolic or abstract representations of experience as if they were immediate, direct, fresh experience.¹⁰

Not only are problems of definition complex; another area of confusion relates to the problem of who is entitled to judge qualifications for teachers. While an article by Falk (1968) included one

⁷Getzels and Jackson, p. 507.

⁸Charles E. Gray, "The Teaching Model and Evaluation of Teaching Performance," Journal of Higher Education, XL (1969), p. 638.

⁹David G. Ryans, Characteristics of Teachers (Washington, 1960), pp. 370-371.

¹⁰Earl V. Pullias, "Factors Influencing Excellence in College and University Teaching," Educational Record, XLIV (1963), p. 245.

viewpoint that student opinion represents "nothing better than an effort to wreck the professor's status and competence."¹¹ Desmond (1969) noted that "there are relevant pieces of information that only students have. They demand that their information be heard and utilized."¹²

Although results of a national survey conducted by Mueller (1951) showed that 39 percent of colleges and universities had prior experience with student ratings, only 30 percent of replies from teachers colleges indicated prior usage.¹³ A survey of usage of student evaluations by 1,110 institutions of higher education was sponsored by the American Council on Education (1966). The survey revealed that systematic student ratings were used by 12.4 percent of the total group of respondents and by 4.9 percent of the teachers colleges. In addition, these data indicated that informal student ratings, which provided confidential information for the teacher, were used by 41.2 percent of the total number of institutions surveyed and by 28 percent of the teachers colleges.¹⁴

¹¹Gerhard Falk, "The Student Views His Professor," Improving College and University Teaching, XVI (1968), p. 195.

¹²Richard L. Desmond, "Faculty and Student Frustrations Shaping the Future of the University," AAUP Bulletin, LV (1969), p. 25.

¹³Francis J. Mueller, "Trends in Student Ratings of Faculty," AAUP Bulletin, XXXVII (1951), pp. 320-321.

¹⁴Alexander W. Astin and Calvin B. T. Lee, "Current Practices in the Evaluation and Training of Teachers," Improving College Teaching, ed. Calvin B. T. Lee (Washington, 1967), pp. 316-317.

Presentation of the Review

This section of the review of literature presents results of research efforts that were directed toward the goal of achieving greater understanding of pertinent variables in the assessment of college teachers. Literature related to student rating of instruction began to appear in publications during the third decade of the Twentieth Century, and for the past 40 years, an ever-increasing number of studies have been reported. While many researchers were primarily concerned with delineation of personality characteristics deemed appropriate for success, other scholars attempted to examine the influence of such variables as age, professorial rank, and field of study upon indicated student responses.

One of the early studies of student ratings (Clinton, 1930) examined responses of 177 college juniors. In order of rank, qualities found to be associated with preferred teachers included: (1) knowledge of subject, (2) pleasant personality, (3) neatness in appearance, (4) fairness, and (5) sympathetic understanding.¹⁵ In a similar study conducted a decade later, Bousfield (1940) examined ratings of 507 undergraduates of Tufts and the University of Connecticut. Results showed that the top five preferred traits were: (1) fairness, (2) mastery of subject, (3) interesting presentation of material, (4) organization of material, and (5) clearness of exposition. Several

¹⁵R. J. Clinton, "Qualities College Students Desire in College Instructors," School and Society, XXXII (1930), p. 702.

sex-related differences were noted; while men gave higher ratings to subject mastery and clearness of exposition, women attached greater value to the instructor's poise and research accomplishments.¹⁶

Duncan and Leach (1934) reported results of questionnaire responses obtained from 122 university students. While friendliness, sociability, and interest in student welfare served to describe most-liked teachers, these researchers found that lack of subject-matter knowledge, inability to structure classroom recitations, and partiality for certain students were characteristics of least-liked teachers. Although 25 percent of the respondents described their least-liked teacher as being "crabbed and sarcastic," only 8 percent indicated that individual mannerisms of the teacher were responsible for dislike of an instructor. Even though 10 percent of these students considered grading procedures and disciplinary practices to be responsible for unfavorable attitudes toward disliked teachers, 20 percent associated rigorous grading and disciplinary practices with their best-liked teachers.¹⁷

Kilcoyne (1949) reported results obtained from questionnaire responses of slightly less than 7,000 students at Brooklyn College. Respondents were asked to select three most outstanding qualities in

¹⁶W. A. Bousfield, "Students' Rating of Qualities Considered Desirable in College Professors," School and Society, LI (1940), pp. 253-256.

¹⁷H. G. Duncan and Winnie Leach, "Student-Teacher Relationships," Sociology and Social Research, XVIII (1934), pp. 535-539.

teachers from the following list of items that related to characteristics typically associated with teaching effectiveness:

1. Systematic organization of subject matter
2. Good speaking ability
3. Ability to explain clearly
4. Ability to encourage thought
5. Sympathetic attitude toward students
6. Expert knowledge of the subject
7. Enthusiastic attitude toward subject
8. Fairness in tests
9. Tolerance toward student disagreement
10. Pleasing personality¹⁸

In order to isolate the three most favored qualities desired in college instructors, students were classified according to their field of study. For students who majored in the arts, the following items and percentages of preference were indicated as most desirable qualities:

1. Expert knowledge of the subject (54 percent)
2. Ability to encourage thought (47 percent)
3. Enthusiastic attitude toward subject (46 percent)

In the physical sciences, these qualities and percentages of students who favored them were desired:

1. Ability to explain clearly (89 percent)
2. Systematic organization of subject matter (78 percent)
3. Expert knowledge of the subject (70 percent)

Based upon responses of social science majors, these factors and percentages of preference were sought:

1. Ability to encourage thought (70 percent)
2. Systematic organization of subject matter (48 percent)
3. Tolerance toward student disagreement (45 percent)

¹⁸Francis P. Kilcoyne, "He Sure Knows His Stuff, but He's a Lousy Teacher," School and Society, LXIX (1949), p. 437.

Ratings of faculty members showed that these items, along with response percentages, were most highly rated on actual ratings given by students in the arts:

1. Expert knowledge of the subject (88 percent)
2. Enthusiastic attitude toward subject (79 percent)
3. Good speaking ability (75 percent)

For physical science majors, these ratings and percentages were found:

1. Expert knowledge of the subject (88 percent)
2. Systematic organization of subject matter (78 percent)
3. Enthusiastic attitude toward subject (77 percent)

Similar responses and percentages for social science majors were:

1. Expert knowledge of the subject (88 percent)
2. Enthusiastic attitude toward subject (78 percent)
3. Systematic organization of subject matter (75 percent)¹⁹

The questionnaire method was used by Bradley (1950) to elicit responses from 694 students at Morgan State College. The purpose of this study was to obtain listings of characteristics that students associated with good and poor college teachers. Good teachers were found to be effective communicators who possessed "dynamic" personalities and were interested in development of democratic teacher-student relationships. Additionally, these teachers were thought to exhibit a high degree of knowledge as well as considerable recognized professional stature. While disagreeable personalities, poorly constructed tests, and biased grading practices were attributed to poor teachers, these individuals were considered to be inefficient in their teaching and also poor organizers and planners.²⁰

¹⁹Ibid., p. 438.

²⁰Gladyce H. Bradley, "What Do Students Like and Dislike about College Teachers and Their Teaching?" Educational Administration and Supervision, XXXVI (1950), pp. 113-120.

In order to examine the relationship between age variables and traits associated with effective teaching, Riley (1950) separated teachers into age-related categories. While older teachers (ages 50 to 60) were thought to be superior to younger teachers (ages 20 to 40) in subject knowledge, students believed that younger teachers were more effective in the following areas: (1) organization of materials, (2) speaking ability, (3) ability to explain, (4) encouragement of thinking, (5) attitude toward students, (6) attitude toward subject, (7) fairness in exams, and (8) tolerance to disagreement. Also, teachers who had published research were considered to be superior to those without such credentials. Individuals who had completed their terminal degree were ranked highest in scholarship and were considered to make better teaching presentations than other teachers.²¹

To examine the variable of time as it influenced student ratings, 92 Purdue faculty members were rated by 251 undergraduates and 138 alumni. Participant teachers taught the same class in 1936 as they did in 1948. The researchers, Drucker and Remmers (1951), random sampled student and alumni respondents and found several significant differences in responses. While students rated teachers significantly lower than alumni on fairness of grading, significantly higher ratings were indicated for (1) interest in subject matter, (2) self-reliance and confidence, and (3) sense of proportion and humor.²²

²¹Riley, John W., Bryce F. Ryan, and Marcia Lifshitz, The Student Looks at His Teacher (New Brunswick, 1950), pp. 99-103.

²²A. J. Drucker and H. H. Remmers, "Do Alumni and Students Differ in Their Attitudes Toward Instructors?" Journal of Educational Psychology, XLII (1951), pp. 129-143.

Downie (1952) studied student ratings supplied by volunteer instructors at the State College of Washington. Approximately 16,000 student ratings were analyzed in order to examine the influences upon student-rating responses of such variables as grade-point average, class size, upper or lower division course offering, and required or optional course selection. While students with grade-point averages above 3.0 rated attainment of course objectives lower than students with averages below 3.0 students in the latter category gave lower ratings to items concerned with classroom testing practices and student-teacher relationships. Although few differences existed between ratings of required and optional courses, upper-level course evaluations exhibited higher responses for such elements as discussion of test results, influence of a particular course upon students enrolled in another course in the same field, and stimulation of intellectual curiosity. When dichotomized according to class size, larger classes (over 30 members) received lower ratings pertaining to instructional procedures and value of the courses.

Ratings of 247 faculty members who were under 40 years old were compared to a group that consisted of 169 teachers aged 40 or older. Results indicated no differences in ratings received. An additional facet of the study involved comparison of ratings according to academic rank (59 professors, 79 associate professors, 103 assistant professors, and 165 instructors). Professors were rated higher than other ranks on these variables: (1) background of interests and experiences, (2) sense of humor, (3) minimal use of sarcasm, and (4) effectiveness

of classroom presentation. Additionally, all other ranks were evaluated higher than instructors on knowledge of subject matter.²³

A study conducted by Maslow and Zimmerman (1956) at Brooklyn College, which was characterized as representing a population of "excellent and serious" students with a heterogeneous faculty, found differences to exist between faculty and student conceptions of capable and ineffective teachers. While a teacher's peer group associated successful teaching with creativity, students felt that personality factors--such as those related to adjustment, contentment, and usage of constructive capacities--were more indicative of idealistic teachers. When the data were intercorrelated, several relationships above .50 and one considerably below this level were revealed:²⁴

<u>Variables</u>	<u>r</u>
1. Ratings by colleagues "as a teacher" vs. their ratings "as a personality"	.58
2. Ratings by colleagues "as a teacher vs." their ratings "for creativeness"	.77
3. Ratings by colleagues "as a teacher" vs. ratings by students "as a teacher"	.69
4. Ratings by colleagues "as a teacher" vs. ratings by students "as a personality"	.59
5. Ratings by colleagues "as a personality" vs. their ratings "for creativeness"	.51
6. Ratings by colleagues "as a personality" vs. ratings by students "as a teacher"	.29
7. Ratings by colleagues "for creativeness" vs. ratings by students "as a teacher"	.51
8. Ratings by students "as a teacher" vs. ratings by students "as a personality"	.76

²³N. M. Downie, "Student Evaluation of Faculty," Journal of Higher Education, XXIII (1952), pp. 495-496.

²⁴A. H. Maslow and W. Zimmerman, "College Teaching Ability, Scholarly Activity and Personality," Journal of Educational Psychology, XLVII (1956), pp. 185-189.

In order to determine qualities that college students either like or dislike in their teachers, Hurd (1957) examined questionnaire replies received from 137 members of the Class of 1955 at Utah State Agricultural College. These graduates were asked to provide open-end responses to the following three statements: (1) I liked "Teacher A" best because, (2) I liked "Teacher Z" least because, (3) I think "Teacher H" is the best teacher I had in college because.

A categorization of responses showed that over a fourth of the graduates indicated these items as characteristic of most-liked instructors:

1. Takes an individual interest in each student and works with him in and out of class. (n = 131)
2. Is enthusiastic about and knows well his subject matter. (n = 103)
3. Gives clear and interesting lectures. (n = 60)
4. Gives several tests throughout the quarter that were bases for fair grades. (n = 55)
5. Has a sense of humor. (n = 39)
6. Is well prepared each day. (n = 35)²⁵

When classified according to answers given for least-liked teacher, these items were specified by 25 percent or more of the respondents:

1. Is sarcastic, conceited, rude, aloof, and degraded students. (n = 70)
2. Does not have any form of personal contact with students in or out of class. (n = 62)
3. Is highly trained, but could not teach. (n = 59)
4. Is unprepared day after day. (n = 34)²⁶

²⁵Dean W. Hurd, "A Determination of Characteristics College Students Like and Dislike in Teachers" (unpub. M.S. Thesis, Utah State Agricultural College, 1957), p. 30.

²⁶Ibid., p. 37.

Tabulations of data related to characteristics of the best teacher, not most or least liked, encountered in college showed that over a quarter of the graduates chose preparation and presentation of subject matter (n = 49) as well as helpfulness or cooperativeness outside of the classroom (n = 40) as elements of primary importance.²⁷

Responses were tallied according to graduates of various schools within the university. These schools included: School of Education, School of Business and Social Science, School of Humanities and Science, School of Home Economics and Family Living, School of Engineering, School of Forestry, and School of Agriculture. It was found that little difference in preference patterns existed; therefore, analysis of results based upon this criterion was discarded.²⁸

In order to study authoritarianism characteristics of faculty members, Maney (1959) used 157 questionnaire replies from majors in a single department at a southern women's college. Two hypotheses were tested:

1. The greater the amount of authoritarianism in a student's personality makeup, the more favorable will be his evaluation of a teacher, regardless of the teacher's specific characteristics.

2. As the amount of authoritarianism in the personality makeup of a student increases, the favorableness of his evaluation of a teacher will vary directly with the degree of authoritarianism in the teacher's personality makeup, and conversely, as the amount of authoritarianism in the personality makeup of a student decreases, the favorableness of his evaluation of a teacher will vary inversely with the degree of authoritarianism in the teacher's personality makeup.

²⁷Ibid., p. 44

²⁸Ibid., pp. 28-29.

When analysis of variance tests were applied to the data, both hypotheses were rejected. It was concluded that teachers who were characterized as being authoritarian received significantly less favorable ratings. In addition, authoritarianism of the student raters was not demonstrated by the amount of the favorableness expressed by their ratings.²⁹

Voeks and French (1960) studied the relationship between student ratings and grades assigned by instructors at the University of Washington. During registration, students of advanced sophomore status or higher were asked to list anonymously five faculty members in each of five categories ("superior" to "of small value to me"). When these ratings were correlated with grades given, no relationships were found to exist. From each of 10 departments, the researchers selected the highest and lowest rated instructor. The t test showed no significant difference between mean ratings given by students and grades recorded by the teachers. Finally, 16 teachers whose second student rating was at least three deciles higher than an initial rating were chosen in order to examine if a relationship existed between higher ratings and higher grades. A chi-square analysis demonstrated that no significant differences were present for 13 of these instructors.³⁰

²⁹Ann C. Maney, "The Authoritarianism Dimension in Student Evaluations of Faculty," Journal of Educational Sociology, XXXII (1959), pp. 226-231.

³⁰Virginia W. Voeks and Grace M. French, "Are Student-Ratings of Teachers Affected by Grades?" Journal of Higher Education, XXXI (1960), pp. 330-334.

Weaver (1960) analyzed 699 student responses obtained from 12 teachers who taught 39 undergraduate classes at Central Michigan University. The purposes of the study were to determine if a relationship existed between the grades that students expected and ratings given to instructors. Another purpose was to compare scores categorized according to teachers' personalities (voice, mannerisms, interest, humor, poise) and teaching techniques (variety in classroom procedure, provision of assistance to students, and class management) with grade expectations.

At the .001 level of confidence, student-rating responses were found to be significantly related to grade expected in the course. That is, students who anticipated receiving A's or B's gave higher evaluations than those who thought that C's or D's would be received. Questions related to teachers' personality scores revealed only one significant difference, which was between students who anticipated B's and those who expected C's. Weaver concluded that popularity was not a pertinent factor in gaining high student ratings. However, ratings that pertained to teaching techniques were found to be significantly related to the grade anticipated.³¹

For a period of five years, Drayer (1961) sampled a section of an introductory education class at a four-year liberal arts college for men. Based upon frequency of occurrence, the top five reasons for preferring certain teachers were: (1) effective presentation of material, (2) good command of subject, (3) granting of personal

³¹Carl H. Weaver, "Instructor Rating by College Students," Journal of Educational Psychology, LI (1960), pp. 20-24.

assistance, (4) fairness in testing, and (5) conducting the course in an interesting manner. Major reasons for disliking certain teachers included: (1) lack of explanation of material, (2) unfairness in testing, (3) favoritism, (4) attitude of superiority, and (5) unreasonable assignments. Drayer concluded that effective teachers utilized good teaching methods and possessed the ability to understand students and their problems.³²

In order to formulate background information on image expectancies of college students and teachers that may influence role perceptions and expectancies, O'Dowd and Beardslee (1961) administered the Osgood semantic-differential scales to 1200 arts and sciences students in four colleges located in the Northeast. Subjects were divided into two categories (freshman and seniors) and asked to rate their image of college professors; in addition, they were asked to rate their image of other occupations.

Analysis of these data showed several positive correlations between college teaching and other employment categories: school teacher (+.80), scientist (+.77), artist (+.70), social worker (+.57), doctor (+.44), lawyer (+.40), and engineer (+.21). Only negative correlations were shown between college teaching and business occupations; specifically, the following correlations were reported: personnel director (-.02), business executive (-.11), accountant (-.19), industrial manager (-.21), sales manager (-.26), retail store manager (-.29), and office supervisor (-.31).

³²Adam M. Drayer, "Students' Views of the Qualifications of Their Teachers," Journal of Teacher Education, XII (1961), pp. 338-341.

The high correlation between artist and college teacher categories was not expected and was examined in greater detail. While both jobs were perceived similarly for scales relating to strength, activity, self-assertion, and perseverance, college teachers were considered to be more sociable and less impulsive.

In order to compare faculty views to student sentiments, the questionnaire was administered to a 60 percent stratified-random sample of faculty members at Wesleyan University. The coefficient of correlation was .89; this showed considerable relationship among the images of both groups. However, the faculty group exhibited a tendency to rate the image of a college professor lower on these factors: (1) hard, (2) self-assertive, (3) confidence, and (4) realism about life. In addition, they gave higher ratings for scales measuring (1) calmness, (2) caution, (3) stability, (4) rationality, and (5) freedom from emotional problems.

As compared to male students, females rated professors higher on (1) intelligence, (2) aesthetic interest, and (3) sensitivity. In addition, students attending private colleges stressed qualities related to richness, complexity, and vitality; however, those students attending state universities more often emphasized traits related to emotional control, masculinity, and worldly success. O'Dowd and Beardslee concluded that criteria for success may differ by type of institution.

As part of the research, a sample of undergraduates at Western University who planned to become college teachers was asked to rate

the term: "college professor." When compared to data obtained from active professors, the coefficient of correlation was +.95.³³

Voeks (1962) sought to answer several questions in her study at the University of Washington:

1. Are teachers who actively publish considered to be better teachers than those who publish little?
2. When teaching and research activities are pursued at the same time, is classroom teaching hindered or promoted?
3. Is the number of publications related to effective teaching?
4. Considering the publication variable, do people at the extremes differ from each other in the quality of their teaching?
5. Is the number of publications and effectiveness of teaching related in some academic areas but not in others?

A sample of 305 faculty members was selected in order to supply information for the first question. In seeking to answer the final four questions, art and music faculty were omitted from the study; in addition, some assistant professors were randomly eliminated in order to equate the number of University Research Society members--membership based upon society's evaluation of research--and nonmembers within departments. T tests and chi-square analyses revealed a negative answer for all of the questions. Voeks concluded that research and publication competence had no relationship to efficiency in teaching.³⁴

McKeachie, Isaacson, and Milholland (1963) used peer group nominations, a descriptive adjective inventory, and Cattell's scales in order to correlate teacher personality variables and student ratings in introductory psychology classes at the University of Michigan. It was found that teaching fellows who were highly rated by their peers

³³Donald D. O'Dowd and David G. Beardslee, "The Image of the College Professor," AAUP Bulletin, XLVII (1961), pp. 216-221.

³⁴Virginia W. Voeks, "Publications and Teaching Effectiveness," Journal of Higher Education, XXXII (1962), pp. 212-218.

on the "cultural" scale (artistically sensitive, intellectual, imaginative) were also considered to be highly esteemed by their students. The researchers found that two remaining peer group nomination variables (emotional stability and agreeableness), as well as the Cattell "enthusiasm" scale, were related to student ratings for three of the four semesters during which the study was conducted. It was concluded that teachers rated highly by peers on surgency, culture, and emotional stability were also considered to be effective by students.³⁵

In order to determine if superior teaching is a function of personality interaction among students and professors, Edwin Lewis (1964) studied students majoring in three different departments (mechanical engineering, animal husbandry, and home economics) at Iowa State University. Each participant was asked to indicate the instructor who most facilitated his learning; in addition, students and instructors completed the Guilford-Zimmerman Temperament Scale and a biographical inventory. Specifically, the purpose of the study was to answer the following questions:

1. Are there certain personality traits which consistently differentiate between more and less effective teachers?
2. To what extent does student-teacher interaction contribute to effective teaching?
3. What personality characteristics are most influential in determining the effectiveness of student-teacher interaction?

Although "masculinity" (GZTS) showed a relationship to instructor choices in animal husbandry and "general activity" (pace of activities, enthusiasm, liveliness) to teacher selections in home economics, personality variables were not found to be related to choices

³⁵Robert L. Isaacson and others, "Correlation of Teacher Personality Variables and Student Ratings," Journal of Educational Psychology, LIV (1963), pp. 110-117.

made by students. For the final two questions, no conclusive results were obtained due to lack of appropriate measurement instruments and complexity of the problem.³⁶

Twenty-four instructors who taught evening courses in American government were subjects of a study conducted by Soloman, Rosenberg, and Bezdek (1964). The purpose of the study was to investigate relationships between student ratings and learning of facts or gains in comprehension. Research methodology included student and teacher questionnaires as well as observers. It was found that teachers who were rated moderate on the factor of "permissiveness-control" and who were also considered "energetic" and "flamboyant" were significantly related to promoting gains in comprehension on the part of their students. Gains in factual data were significantly related to "clarity and expressiveness" and lecturing. "Warmth" was found to influence the students' opinion of the instructor as a person, but this factor was not related to their estimates of resultant learning.³⁷

In a study conducted by Quick and Wolfe (1965), 483 University of Oregon students were asked to describe an "ideal" professor. In order of importance, the following characteristics were most esteemed: (1) stimulation of independent thinking, (2) organization of the class,

³⁶Edwin C. Lewis, "An Investigation of Student-teacher Interaction as a Determiner of Effective Teaching," Journal of Educational Research, LVII (1964), pp. 361-363.

³⁷Daniel Soloman, Larry Rosenberg, and William E. Bezdek, "Teacher Behavior and Student Learning," Journal of Educational Psychology, LV (1964), pp. 23-30.

and (3) enthusiasm for the subject. Less important characteristics included the teacher's speaking ability and participation in research activities.³⁸

Morton (1965) reported results of a longitudinal survey involving 90 undergraduate students. The purposes of the study were (1) to determine if a difference existed between qualities expressed as a freshman and those expressed by the same students as seniors and (2) to denote any sex-related differences of opinion. As compared to freshmen, mature students regarded an effective teacher as "a scholar who has the ability to teach and inspire, and guide and befriend his students."³⁹ While men were found to exhibit less interest in personal characteristics of teachers than women, they were more likely to respond more rapidly to unfairness, prejudice, or errors displayed by teachers. On the other hand, women tended to evaluate total personality to a greater extent than men. A study of 300 part-time students, revealed that men prefer a vigorous instructor who presents material in a clear, logical manner. However, part-time women students indicated that a pleasing personality and ability to relate subject matter to life goals were esteemed traits of superior teachers.⁴⁰

McComas (1965) asked students in two education courses to indicate characteristics of the best and poorest teachers under whom

³⁸Alan F. Quick and Arnold D. Wolfe, "The Ideal Professor," Improving College and University Teaching, XIII (1965), pp. 133-134.

³⁹Richard K. Morton, "Students' Views of Teaching," Improving College and University Teaching, XIII (1965), p. 141.

⁴⁰Ibid., pp. 140-142.

they had studied. Compilation of responses disclosed that highly regarded teachers possessed a good sense of humor, excellent knowledge of subject matter, and respect for students' views. In addition, these teachers stimulated interest in their subjects and utilized fair grading practices. While effective teachers were prepared for class and seemed to enjoy their work, these individuals were also characterized as never being too preoccupied to help students. Poorest teachers were found to be described negatively upon qualities which the best teachers were rated highly; in addition, they were typified as lacking enthusiasm as well as being late for class sessions.⁴¹

Hall (1965) surveyed attitudes of 1,217 undergraduates at Ohio State University and 60 students at Capital University in order to examine characteristics of best and worst teachers. Among items included on a questionnaire, these students were asked to indicate three of their best and worst instructors and note discernible effects resulting from the teaching of these individuals. At the .01 level of significance, chi-square analysis revealed that more of the best teachers were associated with high and grade school teachers; worst teachers were at the junior high school and college level. While "worst" teachers were remembered primarily only for academic effects, "best" teachers were regarded as having both academic and personal influences. In one phase of the study, subjects were requested to write a brief character sketch of their highly and poorly rated teacher selections, and three judges were asked to categorize the

⁴¹J. D. McComas, "Profiles of Teachers," Improving College and University Teaching, XIII (1965), pp. 135-136.

the replies. Analysis of these data revealed that personality variables and attitude toward student or classroom behavior accounted for slightly over 80 percent of the distinguishing characteristics. While favored teachers were classified as being friendly and having a personal interest in students, poorly rated teachers were considered to be temperamental and unfair. In addition, those instructors in the latter category were typified as having poor discipline in their classes and thought to be disinterested in students.⁴²

Yamamoto and Dizney (1966) designed a study to determine if the type of professor (socialite, researcher, administrator, or teacher) and source of teacher (College of Education or College of Arts and Sciences) were related to student preferences. Three hundred secondary education students at Kent State University served as subjects and expressed their preferences on a Likert-type questionnaire, which was developed by the researchers. While no differences in types of professors existed between sexes, students expressed the following order of preferences: "teacher," "researcher," "socialite," and "administrator." However, at the .05 level of significance, several significant interactions were found between type of professor and students' grade levels. Juniors tended to prefer "teachers" and "socialites" to a greater extent than graduate students; however, preference for the "researcher" was greater for graduate students than juniors. Even though seniors expressed less choice for "administrators" than juniors, this pattern was reversed in a

⁴²Vernon C. Hall, "Former Student Evaluation as a Criterion for Teaching Success," Journal of Experimental Education, XXXIV (1965), pp. 2-9.

comparison of seniors to graduate students. Finally, results of the study did not indicate a preference for liberal arts over education professors.⁴³

Sprights (1967) divided students who were enrolled in an introductory education course at Ohio State University into two groups: (1) high achievers--GPA above mean of the group and (2) low achievers--GPA below mean of the group. While over 70 percent of the low achievers considered actual instructors' attitudes to be impersonal, authoritarian, and sarcastic, high achievers did not share this viewpoint and did not tend to attribute negative qualities to the instruction. Every student in both groups felt that college teachers should be more willing to confer with students, show more enthusiasm for teaching, and demonstrate greater respect for students. However, 88.4 percent of the high achievers believed that instructors should be more willing to listen to students' personal problems, but only a fourth of the below-average students shared this opinion.⁴⁴

Sorey (1967) used the Purdue Rating Scale for Instruction, Guilford-Zimmerman Temperament Survey, and a self-rating scale to study personality characteristics of 50 volunteers at a church-related liberal arts college. Each teacher administered the PRSI to one of his classes and the average for all items (except items 12, 16, 20, and 21 of the scale) was used to categorize participants into two groupings:

⁴³Karou Yamaoto and Henry F. Dizney, "Eight Professors--A Study on College Students' Preferences among their Teachers," Journal of Educational Psychology, LVII (1966), pp. 147-150.

⁴⁴Ernest Sprights, "Students Appraise Teacher's Methods and Attitudes," Improving College and University Teaching, XV (1967), pp. 15-17.

- (1) superior teachers, upper 26 percent of participants, and
- (2) inferior teachers, lower 26 percent of cooperating teachers.

Three hypotheses were established:

1. Superior teachers would score in the socially-esteemed direction on more GZTS factors than inferior teachers.
2. Superior teachers would rate themselves more positively on the self-rating scale than inferior teachers.
3. Superior teachers would estimate their personality characteristics more accurately than would inferior teachers.

Analysis of the data showed that none of the hypotheses could be accepted. In fact, superior teachers were significantly less ascendant (shy, submissive, sensitive to criticism) than the inferior teachers. In rejecting the first hypothesis, Sorey felt that students may be exhibiting "adolescent rebelliousness" and reacting negatively to ascendant, "thick-skinned" instructors.

While the second hypothesis was rejected, one significant difference was noted between superior and inferior teachers; superior teachers perceived themselves as being more restrained (serious minded, deliberate). Even though only one significant difference was found, superior teachers did tend to give themselves higher ratings than inferior teachers. Sorey concluded that "better" college instructors "tend to see themselves as rather controlled, reserved individuals who do not 'put themselves forward' in society."⁴⁵

By comparing self-ratings and CZTS ratings, the researcher found that inferior teachers perceived their personalities more accurately than superior teachers. Superior teachers were most accurate in their

⁴⁵Kenneth Sorey, "A Study of the Distinguishing Personality Characteristics of College Faculty Who Are Superior in Regard to the Teaching Function" (unpub. Ed. D. dissertation, Oklahoma State University, 1967), p. 51.

self perception of objectivity (being thickskinned), restraint (serious minded, deliberate), and thoughtfulness (reflectiveness, philosophically inclined). Inferior teachers were most accurate in self perceptions of objectivity, ascendance, friendliness, personal relations (tolerance), and emotional stability.⁴⁶

Lewis (1968) analyzed the opinions of 631 undergraduate students at a northwestern state university. While 68.1 percent of the science majors indicated that teaching interest and skills were the most important traits that a teacher should possess, only 54.3 percent of the humanities majors and half of the social science majors made the same preferences. As compared to students concentrating in social science and humanities, a smaller percentage of the science majors valued intellectual abilities and flexibility of personality.⁴⁷

Musella and Rusch (1968) conducted a survey of seniors enrolled at State University of New York at Albany. The purposes of the study were to identify teacher behaviors that stimulated thought and to indicate behaviors of greatest value for teaching in specified areas that included physical-biological sciences, social sciences, and arts-literature. In addition, respondents were asked to rank 10 qualities according to importance for teaching in general.

When ranked according to number of times mentioned, these five instructor behaviors were indicated as stimulants that promoted

⁴⁶Ibid., pp. 59-61.

⁴⁷Lionel S. Lewis, "Students' Images of Professors," Educational Forum, XXXII (1968), pp. 185-190

student thinking: attitude toward subject matter, attitude toward students, effective use of questions, speaking ability, and knowledge of subject.⁴⁸

From a listing of 10 qualities, respondents were asked to select three qualities of paramount importance for teaching courses in each of the three subject areas. While qualities of sympathetic attitude toward students and pleasant personality were chosen the least number of times in each of the subject-matter fields, knowledge of the subject was considered the most important quality regardless of the area of concentration. Fairness in test construction and grading was considered more important in physical-biological sciences than in other classifications; however, the reverse situation existed concerning the pertinence of the instructor's ability to speak. Spearman rank-order correlation was used to correlate student ratings between the subject fields; the highest correlation (.92) was between social sciences and arts-literature, and the lowest correlation (.59) was between physical-biological sciences and arts-literature.⁴⁹

Students were categorized into specific classifications according to major subject fields and asked to rank 10 qualities as to their pertinence for general teaching effectiveness. The highest correlation (.98) was between business and foreign language; the lowest (.61) was

⁴⁸Donald Musella and Reuben Rusch, "Student Opinion on College Teaching," Improving College and University Teaching, XVI (1968), p. 138.

⁴⁹Ibid., p. 139.

between business and English. Additional correlations, which involved business students, were between business and science/math (.79) and between business and social science (.75).⁵⁰

An analysis of composite rankings revealed the following to be the most important general qualities of competent, efficient teachers: expert knowledge of subject matter, systematic organization of subject matter, ability to explain clearly, enthusiastic attitude toward subject, and ability to encourage thought. The five qualities that were indicated to be of least importance to effective teaching in general were: fairness in making and grading tests, tolerance toward student disagreement, sympathetic attitude toward students, good speaking ability, and pleasing personality.⁵¹

Crawford and Bradshaw (1968) asked 300 university students to write a theme describing characteristics of their most effective college teacher. From these writings, 13 descriptive statements were randomly arranged for paired-comparison analysis and submitted to a group of undergraduate psychology students (N = 158) and a group composed of faculty members (N = 50) and administrators (N = 30). In order to examine consistency of agreement among respondents, 10 categories were established:

⁵⁰Ibid.

⁵¹Ibid., p. 140.

Associate and full professors, instructors and assistant professors, deans and administrators, department chairmen, high ranking (GPA of 3.0 or higher with a grade of A or B in the class) female students, average ranking (GPA between 2.0 and 3.0 with a grade of C in the class), and low ranking (GPA under 2.0 with a grade of D or F in the class) female students, high ranking male students, average ranking male students, and low ranking male students.⁵²

At the .01 level of significance, chi-square analysis revealed significant agreement among members within each category as to characteristics of effective college teachers. However, further chi-square tests revealed that combined expressions of the population differed significantly (.01 level) from responses of the separate categories. Therefore, it was concluded that judgment expressed by various categories was independent of combined judgment of the entire population. Considering all 10 groupings, most agreement upon importance was related to the following characteristics:

1. Encourages student participation in class by questions and discussions.
2. Has a sense of humor.
3. Is punctual in starting and ending class.

The greatest amount of disagreement among the groupings related to these three characteristics:

1. Lectures are well-planned and organized.
2. Presents a neat appearance.
3. Lacks defensive attitudes and prejudices.⁵³

⁵²P. L. Crawford and H. L. Bradshaw, "Perception of Characteristics of Effective University Teachers: A Scaling Analysis," Educational and Psychological Measurement, XXVIII (1968), p. 1082.

⁵³Ibid., pp. 1081-1084.

Bryan (1968) sent questionnaires to 416 schools offering bachelor's degrees and having over 1500 students. The purpose of the study was to examine the degree of utilization for student evaluative instruments and to learn what provisions were made for dissemination of results from these surveys. Responses were received from 307 schools. Of these institutions, 49 percent had a systematic plan that used student ratings, and 38 percent had never instituted such a plan. In addition, 13 percent of the replies stated that student rating programs had been discontinued. While 49 percent of the colleges made results of ratings known only to the teacher, 22 percent of the schools made results available to both teachers and administrators. In 30 percent of the cases, published ratings were available to anyone who may be interested.⁵⁴

Wagoner and O'Hanlon (1968) sent questionnaires to 800 randomly selected public school teachers in Arizona. The purpose of the study was to examine teacher attitudes toward evaluation. Specifically, the study sought to test the following null hypotheses: (1) No significant difference in ratings existed between teachers who rated themselves as "better than average" and those rating themselves as "average" or "below average." (2) There was no significant difference in attitude toward evaluations between tenured and nontenured teachers. (3) Attitudes of male teachers were not significantly different from those of females. Data were analyzed by using the analysis of variance statistical test. At the .05 level of significance, self ratings of

⁵⁴Roy C. Bryan, "Student Rating of Teachers," Improving College and University Teaching, XVI (1968), p. 200.

"better than average" teachers were found to be significantly higher than ratings of other teachers. While the null hypothesis concerning the sex variable was accepted, those teachers who had not acquired tenure favored evaluation to a greater extent (.01 level) than tenured instructors. The researchers believed that two factors may have contributed to these differences: Nontenured teachers sought the reward of tenure, and those individuals without tenure were likely to be young, energetic, and idealistic individuals.⁵⁵

In an effort to identify characteristics of effective teachers, all faculty members at the University of Toledo and a stratified sample of students and alumni were asked to submit their opinions concerning behavior patterns exhibited by effective teachers. The jury method was used to reduce 13,643 stated behaviors into 60 criterion behaviors. A weighted-value factor was determined in order to recognize differences in importance among the criterions.

As reported by Perry (1969), combined rankings for students, faculty, and alumni showed that these factors received the top five ratings: (1) being well prepared for class, (2) establishing interest in subject, (3) demonstrating comprehensive knowledge of subject, (4) using teaching methods that enable students to achieve course objectives, and (5) constructing tests which search for understanding rather than memory. Although factors one through three were rated among the top five by each separate grouping, faculty members rated "establishing interest in subject" in sixth place, "constructing tests which search

⁵⁵Roderic L. Wagoner and James P. O'Hanlon, "Teacher Attitude Toward Evaluation," Journal of Teacher Education, XIX (1968), pp. 472-474.

for understanding" in a tie for seventh, and "using teaching methods that enable students to achieve course objectives" in tenth place.⁵⁶

Of the 60 criterion items, rankings for combined groups revealed these factors to be lowest in priority of importance: (1) holding memberships in scholarly organizations, (2) being consistently involved in research projects, (3) publishing material related to subject field, (4) devoting time to student activities on campus, and (5) making appearances which assist community organizations. Compared to students and alumni, faculty members attributed higher rankings to the first three criteria and lower ratings to the last two factors.⁵⁷

Brewer and Brewer (1970) found high correlations (.82 or higher) to exist among schools (North Park College, De Paul University, and Northwestern University) and class levels (freshman or upperclassmen) for student-trait ratings of instructor characteristics established by Bousfield (1940). As compared to Bousfield's results, participants in the Brewer and Brewer study gave higher rankings to (1) enthusiasm for teaching, (2) tolerance of peoples' views; however, lower ratings were recorded for (1) interest in students, (2) ability to direct discussion, and (3) sense of humor. Despite a twenty-year difference, highly valued characteristics included interesting presentations and fairness to students.⁵⁸

⁵⁶Richard R. Perry, "Evaluation of Teaching Behavior Seeks to Measure Effectiveness," College and University Business, XLVII (1969), pp. 18, 22.

⁵⁷Ibid.

⁵⁸Robert E. Brewer and Marilyn B. Brewer, "Relative Importance of Ten Qualities for College Teaching Determined by Pair Comparisons," Journal of Educational Research, LXIII (1970), p. 244.

Fifty-four faculty members at DePaul University were asked to rank order these same traits in order to determine the extent of agreement with student rankings from the various schools. The coefficient of correlation was .94, which indicated a very high degree of agreement.

At DePaul University, 120 students were asked to rate the characteristics of an "ideal" college teacher. As compared to composite rankings of students' ratings (DePaul, Northwestern, and North Park) of "real" teachers, the major difference was in ranking of the item "fairness to students" While ranking fifth on ratings of "real" teachers, this trait ranked second on ratings of "ideal" teachers.⁵⁹

In an examination of questionnaire responses from degree candidates, McDaniel and Ravitz (1971) found that 80 percent of the respondents noted that their "best" instructor was a teacher from the major subject area studied. Typical responses showed that such factors as knowledge of the subject, preparation for class, presentation of material, and ability to communicate were characteristic of favored instructors. Unfavorable elements included disregard for feelings of students, poor methods of evaluation, and stress toward nonintellectual factors.⁶⁰

In three courses at the University of Iowa, Miller (1971) randomly assigned 36 graduate teaching assistants according to their attitude (favorable or unfavorable) toward student evaluation. Each attitude grouping was further divided into feedback and no-feedback categories.

⁵⁹Ibid., pp. 245-246.

⁶⁰Ernest McDaniel and Leonard Ravitz, "Student's Perceptions of College Instruction," Improving College and University Teaching, XIX (1971), p. 217.

While results of student responses, which were recorded upon the Survey of Student Opinion of Teaching, were given to teachers in the feedback category during the fifth week of the semester, remaining teachers were not informed of results obtained from the evaluative instrument, which was also administered at the end of the semester.

Analysis of covariance technique was used to test for significant differences between initial and final ratings. Provision of feedback information during the early portion of the semester did not result in significantly higher ratings at the close of the term. In addition, there was no significant difference between ratings of teachers who favored student evaluation of instruction and ratings of those who did not.

As a final aspect of the study, analysis of covariance was used to determine if significant differences existed between student scores on departmentalized final examinations and provision of feedback data to teachers. In two courses, no significant differences existed; however, in the third course, the obtained F value was significant at the .01 level of significance. Miller concluded that a partial explanation of this phenomenon was attributed to the small number of instructors and to the fact that teaching assistants had not necessarily made commitments to teaching careers. Therefore, rating results were generally considered to be independent from attitudes toward evaluation and implementation of feedback data.⁶¹

⁶¹Martin T. Miller, "Instructor Attitudes Toward, and Their Use of, Student Ratings of Teachers," Journal of Educational Psychology, LXII (1971), pp. 235-239.

Mueller, Roach, and Malone (1969) administered a questionnaire to 642 students who were enrolled in Introductory Psychology at Windsor University. In descriptions of "ideal" college professors, the following items were found to be most pertinent:

1. Has a thorough knowledge, both basic and current, of the subject he teaches.
2. Has a deep interest in and enthusiasm for the subject he teaches.
3. Is inspiring, has the ability to present material to meet students' interests and needs.
4. Uses appropriate language, has ability to explain clearly, presents material at students' levels of comprehension.
5. Respects differences of opinion, accepts constructive criticisms.⁶²

In addition, respondents indicated these qualities to be least important to their assessment of an "ideal" instructor:

1. Writes books and articles for journals and publications.
2. Is well groomed and appropriately dressed.
3. Takes an active part in community life, participates in clubs and community projects.
4. Is punctual for classes.
5. Is prompt in returning tests and assignments.⁶³

At the .01 level of significance, the Spearman rank-order correlation test revealed no significant differences in ratings between men and women students. Also, rank-order intercorrelations showed that field of study had no significant influence (.01 level) upon choice of characteristics of "ideal" teachers.⁶⁴

In order to study the value of providing feedback and evaluation, The Bureau of Institutional Research at the University of Minnesota sponsored a project that involved 10 instructors and about 2000

⁶²Ronald H. Mueller, Paul J. Roach, and John A. Malone, "College Students' Views of the Characteristics of an 'Ideal' Professor," Psychology in the Schools, VIII (1971), pp. 164-165.

⁶³Ibid.

⁶⁴Ibid., pp. 164-166.

students. The study was designed to provide each instructor with initial information concerning students in his courses. These data included such things as reasons for enrollment in class, related courses that were completed, and topics of interest to students. In addition, provision was made for evaluative feedback after half of the course was completed; this information included student viewpoints toward:

Adequacy of course organization, purpose of the course, instructor's awareness of student difficulties in understanding course material, availability of instructor for individual help, extent and clarity of student responsibilities, worth of texts, fairness of examination procedures, and adequacy of the services of teaching assistants.⁶⁵

A final aspect of the project was formulation of committees to serve as continual information links and to involve students actively in their courses. These committees held informal meetings each week, and in some cases, membership was rotated in order to involve more students. Since the project stimulated greater involvement, participants, both students and faculty, felt that increased recognition of roles and responsibilities resulted from this approach to education. Also, faculty members believed that provision of evaluative information facilitated accommodation of changes in their courses while classes were still in session. Many students indicated an awareness of changes made as a result of feedback information.⁶⁶

⁶⁵Elaine R. Parent, C. Edwin Vaughan, and Keith Wharton, "A New Approach to Course Evaluation," Journal of Higher Education, XLII (1971), p. 135.

⁶⁶Ibid., pp. 136-138.

Summary

The aim of this chapter was to present results of selected research efforts related to various segments of the present study. During the late 1920's and early 1930's, reports of student evaluations began to appear in the literature. Recent studies continue to be directed toward achievement of greater understanding of the complexities involved in evaluative processes.

In general, researchers sought to study differences in rating responses categorized according to age, personality, sex, year of college, and field of study variables. Additionally, efforts were made to delineate characteristics important to assessment of instruction. While early studies tended to emphasize the role of social and human characteristics, later research seemed more oriented toward intellectual considerations.

High student ratings were associated with organized, logical presentations of subject material. Evidence of depth in knowledge of subject matter was an esteemed trait. In addition, possession of enthusiasm and friendly personalities served to distinguish highly-rated educators.

Despite existence of conflicting results, some generalized response patterns were found. Women, as compared to men, emphasized the importance of teachers' overall personality patterns to a greater extent. While physical and natural science majors stressed the importance of factors related to interest in the subject and teaching skill, humanities and social science majors valued characteristics related to intellectual capability and personality. Older teachers

were rated more highly than younger teachers on variables related to knowledge of the subject and sense of humor. Many similarities were present between characteristics considered pertinent by both students and faculty members.

CHAPTER III

METHODOLOGY

This chapter explains the procedures used in the study. In addition, descriptive information related to the Purdue Rating Scale for Instruction and a discussion of reliability and validity of this instrument are presented. Finally, statistical processes employed in analyzation of the data are described.

Development of Procedure

The Purdue Rating Scale for Instruction was used to collect information relative to certain teaching attributes of the participants in this study. The following paragraphs discuss the selection of the faculty participants, the time of administration of the rating instruments, and the subjects to whom the instruments were administered.

Selection of Participants

All instructional personnel who were employed by the Division of Business and Business Education and taught at least two sections of the same undergraduate course offering were asked to volunteer as participants for this study. Twenty-four teachers were qualified, and all of them agreed to participate.

Normally, each instructor taught either four or five classes, which included undergraduate courses, graduate courses, or a mixture of both.

In order to select specific courses to be included in the study, two undergraduate classes were randomly selected for each instructor. Therefore, 48 separate classes formed the basis of the student group from which responses were taken.

Administration of the Rating Instruments

Immediately following the close of the sixth week of classes, students who were enrolled in classes taught by the participants were asked to respond to the first 10 scales of the Purdue Rating Scale for Instruction and were asked to answer one question relative to over-all evaluation of the instructor. In addition, students were asked questions that permitted classifications to be made for the following variables: grade average, year in college, enrollment, employment, academic major, and sex.

During the last week of classes prior to final examination week, the evaluative instrument was administered to these same classes. As a final aspect of the student-response phase of this study, teachers who were categorized as members of the feedback group and who taught the same classes during the next semester were rated for a third time during the week prior to termination of the spring semester.

At the same time student ratings were gathered, each participant teacher was asked to indicate what he believed to be the score that most nearly represented the average (median) rating that he would be given by students on the various rating characteristics. These data formed the basis for comparison of changes in self-image responses and also for examination of discrepancies between teachers' perceived ratings and actual student ratings.

The cooperating teachers were dichotomized as follows: feedback and no feedback. During the week after initial administration of the rating instrument, each feedback teacher was given results of his evaluation. The no-feedback teachers were not given any information relative to their student ratings. When no-feedback teachers inquired about their results, they were told that final tabulations had not been completed for all participants.

Another segment of this research involved gathering of ratings from teachers' fellow faculty members. After student evaluations had been collected and during final examination week of the fall semester, participant faculty members were contacted about their willingness to be rated by fellow teachers. Of the 24 cooperating teachers, only three individuals expressed a preference for being excluded from this phase of the study. These persons stated that information relative to their peers was personal and too confidential to be subjected to evaluation.

Since teachers may not have been qualified to rate each other on all 10 scales of the Purdue Ratings Scale for Instruction, a jury approach was used to determine the appropriateness of items for purposes of peer ratings. Jurors included the following administrators and faculty members at Kansas State Teachers College: (1) dean of the School of Applied Arts and Sciences, (2) chairman of the Division of Business and Business Education, (3) head of the Department of Psychology, and (4) two faculty members randomly selected from the teaching faculty. One of these faculty members taught in the Department of Education, and the other taught in the English Department.

For purposes of peer ratings, agreement upon the appropriateness of a question by three jury members was necessary. Accordingly, questions related to these aspects were deleted:

1. Fairness in grading
2. Presentation of subject matter
3. Sense of proportion and humor
4. Stimulating intellectual curiosity

Each teacher was assured that his response would remain unknown to other faculty members and administrators. Each teacher was also assured that anonymity would be provided in reporting results of the study.

The Rating Instrument

Originally developed in the late 1920's, the Purdue Rating Scale for Instruction has been popular for obtaining student ratings of instruction. The first 10 scales of this instrument were used. Ten possible choices for expression of opinions for each question are provided. For purposes of analysis, the highest rating (A) was assigned a point value of 10 with correspondingly lower values given until the lowest rating (J) was given a numerical value of one.

No standardized conditions need to exist for administration of the Purdue Rating Scale for Instruction. All instructions are provided in written format so that no oral directions are necessary. In order to assure that the anonymity of each respondent is provided, directions state that no marks that could serve to identify the rater should be made.

Reliability and Validity of the Rating Instrument

In a six-year longitudinal study that involved 13 psychology classes (Elkin, 1956), the Kendall W for over-all rating agreement was significant at the .01 level, and the rho value for diverse testing administrations was .81. It was concluded that "validity is indicated qualitatively in that there are strong general relationships between earliest and latest ratings."¹

In order to determine reliability coefficients that could be compared to established normative data, Bendig (1953) administered the Purdue Rating Scale for Instruction to introductory psychology classes at the University of Pittsburgh. Data were obtained from 11 instructors whose academic rank varied from lecturer to associate professor. Intraclass coefficients, which are weighted according to the number of students from whom ratings are gathered, and generalized reliability coefficients, which are independent of differing numbers of raters, were determined. Although every coefficient was greater than .50, the most discriminating scale pertained to presentation of subject matter, and the least discriminating scale related to fairness in grading.²

Remmers and Weisbrodt (1965) reported generalized reliability coefficients based upon a sample of 59 teachers and 1,908 student ratings. While no coefficient was below .67, the greatest and least

¹Albert Elkin, "A Longitudinal Study of the Purdue Rating Scale for Instruction," in "Program of the Sixty-fourth Annual Convention of the American Psychological Association," American Psychologist, XI (1956), p. 412.

²A. W. Bendig, "Comparison of Psychology Instructors and National Norms on the Purdue Rating Scale," Journal of Educational Psychology, XLIV (1953), pp. 436-438.

discriminating scales were found to be identical to those reported by Bendig. Remmers and Weisbrodt noted that intercorrelations among the 10 scales were significantly lower than reliability coefficients and concluded that students possessed the ability to discriminate among traits represented on the Purdue scale.³ Table I presents a comparison of reliability coefficients between data compiled by Bendig and results reported by Remmers and Weisbrodt.

Remmers and Weisbrodt also reported a tabulation of reliability coefficients obtained in two separate samples. In each case, the Spearman-Brown prophecy formula was applied to correlations between rating responses. Additionally, for the smaller sample, reliability coefficients were determined according to class, which meant ratings for each class were treated separately, and according to instructor, which meant classes were grouped to give one composite score. Without exception, every reliability coefficient was .81 or higher. A complete tabulation of these data is presented in Table II.

In order to examine the reliability of scales one through 10 the Purdue scale, Remmers and Brandenburg (1927) assigned scale values for each trait randomly, which meant that high or low numerical values were placed at left or right margins according to chance expectation, and administered the instrument to 34 subjects. After a three-day period had elapsed, the subjects were given a second form upon which all of the zero values for each trait were placed at the right margin of the page. No significant differences in discrimination were found

³H. H. Remmers and J. A. Weisbrodt, Manual of Instructions for the Purdue Rating Scale for Instruction (Revised ed., Lafayette, 1965), pp. 5-6.

TABLE I
COMPARISONS OF RELIABILITY COEFFICIENTS AS REPORTED BY
BENDIG AND REMMERS-WEISBRODT

Trait	Bendig Intra- class	Genera- lized	Remmers and Weisbrodt Generalized
Interest in Subject	.91	.91	.875
Sympathetic Attitude Toward Students	.82	.61	.899
Fairness in Grading	.58	.54	.669
Liberal and Progressive Attitude	.81	.64	.872
Presentation of Subject Matter	.96	.93	.911
Sense of Proportion and Humor	.88	.75	.890
Self-Reliance and Confidence	.91	.90	.887
Personal Peculiarities	.76	.65	.869
Personal Appearance	.92	.91	.907
Stimulating Intellectual Curiosity	.92	.84	.882

Source: A. W. Bendig, "Comparison of Psychology Instructors and National Norms on the Purdue Rating Scale," Journal of Educational Psychology, XLIV (1953), p. 438.

Source: H. H. Remmers and J. A. Weisbrodt, Manual of Instructions for the Purdue Rating Scale for Instruction (Revised ed., Lafayette, 1965), p. 6.

TABLE II
 RELIABILITY COEFFICIENTS FOR THE PURDUE RATING SCALE
 OF INSTRUCTION

Trait	Reliability N=205	Reliability N=114	Reliability by Class N=114	Reliability by Instructor N=114
Interest in Subject	.925	.893	.922	.924
Sympathetic Attitude Toward Students	.864	.856	.895	.924
Fairness in Grading	.835	.845	.810	.857
Liberal and Progressive Attitude	.856	.904	.893	.910
Presentation of Subject Matter	.928	.900	.933	.933
Sense of Proportion and Humor	.873	.891	.872	.897
Self-Reliance and Confidence	.908	.909	.914	.916
Personal Peculiarities	.904	.870	.897	.916
Personal Appearance	.904	.915	.933	.943
Stimulating Intellectual Curiosity	.915	.838	.908	.908

Source: Remmers and Weisbrodt, p. 4.

to exist, and the researchers concluded that "student judgments as measured by the Purdue Rating Scale for Instruction have a considerable degree of reliability."⁴

Although there is no absolute minimum criterion that differentiates acceptable from unacceptable reliability, consideration of reliability cannot be neglected.⁵ As a guideline, one group of authors indicated that most tests standardized for school utilization should possess reliability coefficients of .80 or higher; however, for purposes of research, reliability coefficients may be as low as .50 without negating usefulness of the data.⁶

The Purdue Rating Scale for Instruction was developed to provide a method for assessment of selected instructor characteristics. Generally, validity is interpreted as appraisal of factors that are purported to be measured. In reference to the Purdue scale, Remmers and Weisbrodt (1965) stated:

To the extent that the students agree among themselves, and to the extent that each student is self-consistent in his judgments, we are able to say that the scale is valid. In this sense, validity is synonymous with reliability.⁷

⁴H. H. Remmers and G. C. Brandenburg, "Experimental Data on the Purdue Rating Scale for Instructors," Educational Administration and Supervision, XIII (1927), p. 523.

⁵Robert L. Thorndike and Elizabeth Hagen, Measurement and Evaluation in Psychology and Education (New York, 1955), p. 139.

⁶H. H. Remmers, N. L. Gage, and J. Francis Rummel, A Practical Introduction to Measurement and Evaluation (2d ed., New York, 1965), p. 133.

⁷Remmers and Weisbrodt, p. 7.

In summarizing their discussion of the difficulty inherent in measurement of instructor capability, these authors reached the following conclusion:

As yet, we do not know how valid the composite judgment of an instructor's students or of alumni is as a 'true' measure of the instructor's ability. We should certainly hesitate to accept the undergraduate's judgment of the value of an instructor in preference to the judgment of the University or of society in general. Perhaps there are some instructors who would be judged failures in the classroom by their students yet whose value to the University or to society, in one way or another, is beyond question.⁸

Analysis of the Data

Statistical techniques provide methods for analyses of numerical data. Specifically, these techniques can be categorized as parametric and nonparametric tests. While parametric tests make a number of assumptions about the population from which items are taken, nonparametric tests do not make such stringent assumptions.⁹ In order for parametric tests to be applicable, it is assumed that observations are independent and drawn from normally distributed populations having the same variances. Additionally, interval scaling, which implies that "any change in the numbers associated with the positions of the objects measured . . . must preserve not only the ordering of the objects but also the relative differences between the objects," is assumed to exist.¹⁰ Nonparametric tests obviate the necessity for

⁸Ibid., pp. 7-8.

⁹Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York, 1956), pp. 2-3.

¹⁰Ibid., p. 28.

reliance upon assumption of a normal distribution as well as the requirement for interval scaling, which are characteristics of parametric techniques.

In his discussion of nonparametric tests, Siegel concludes that "parametric statistical tests which use means and standard deviations . . . ought not be used with data in ordinal scale."¹¹ Peatman (1963) notes that:

Population variables whose numerics are countables or rankables are not normally distributed. Thus the use of distribution free methods with measurables is achieved by reducing the original measures of a sample result to counts or ranks.¹²

Ordinal scaling permits conclusions to be reached of the "equivalence" and "greater than" type.¹³ Therefore, ranking data according to an acceptable statistic is possible. Siegel says that:

The statistic most appropriate for describing the central tendency of scores in an ordinal scale is the median, since the median is not affected by changes of any scores which are above or below it as long as the number of scores above and below remains the same.¹⁴

The median refers to a measure of central tendency and has been defined as "that score or potential score in a distribution of scores, above and below which one-half of the frequencies fall."¹⁵

Data involve both related and independent samples. The term "related samples" means that comparisons are based upon response data

¹¹Ibid., p. 26.

¹²John G. Peatman, Introduction to Applied Statistics (New York, 1963), p. 12.

¹³W. James Popham, Educational Statistics (New York, 1967), p. 271.

¹⁴Siegel, p. 25.

¹⁵Richard P. Runyon and Audrey Haber, Fundamentals of Behavioral Statistics (Reading, 1967), p. 54.

obtained from the same respondents. For example, in order to determine whether any significant differences exist, scores obtained from the feedback group on the first administration of the evaluative instrument are compared to those scores recorded on the second administration. The term "independent samples" denotes that comparisons involve response data derived from separate categories of respondents.

To test the significance of difference between the samples in this study, two statistical tests were used. These tests are described in the following paragraphs.

Wilcoxon Test

In order to test for differences between related samples, the Wilcoxon test will be used.¹⁶ As in all statistical tests, certain assumptions are implied for utilization of this test. According to Runyon and Haber (1967), assumptions are made that "the scale of measurement is at least ordinal in nature" and that "the differences in scores also constitutes an ordinal scale."¹⁷ Additionally, Siegel specifies that the Wilcoxon test assumes that "the variable under consideration has a continuous distribution underlying the scores."¹⁸ The term "continuous distribution" implies that quantities under consideration can assume any value within a specified range. However,

¹⁶James L. Bruning and B. L. Kintz, Computational Handbook of Statistics (Glenview, 1968), p. 205.

¹⁷Runyon and Haber, p. 221.

¹⁸Siegel, p. 93.

Siegel relates that this requirement applies to the variable under consideration and not to the measurement itself:

Notice that there is no requirement that the measurement itself be continuous; the requirement concerns the variable of which the measurement gives some gross or approximate representation.¹⁹

Considering instructors in the feedback group, assume that it is desired to know if a significant difference exists between initial and final median ratings for the trait "knowledge of subject." The following steps are illustrative of procedures employed in using the Wilcoxon test:

Step 1. Construct a table that includes both initial and final scores for each teacher and compute differences between these values. Then, determine the rank of these differences and give the sign of the differences to the ranks.

<u>Instructor</u>	<u>Initial Score</u>	<u>Final Score</u>	<u>Difference</u>	<u>Rank</u>
A	10.0	9.5	-0.5	- 4
B	9.5	9.6	+0.1	+ 1
C	8.0	9.7	+1.7	+ 7
D	8.5	9.8	+1.3	+ 6
E	7.0	8.9	+1.9	+ 8
F	6.5	8.8	+2.3	+ 9
G	6.0	8.7	+2.7	+10
H	5.5	8.6	+3.1	+11
I	5.0	8.5	+3.5	+12
J	4.5	4.3	-0.2	- 2
K	4.0	3.6	-0.4	- 3
L	3.5	2.9	-0.6	- 5

Step 2. Determine the sum of positive and negative ranks. In this case, the sum of negative ranks is 14 and the corresponding sum for

¹⁹Ibid.

positive ranks is 64. The smaller of these two values (regardless of sign) is called the Wilcoxon \underline{t} value.

Step 3. Formulate the null and alternative hypotheses and compare the obtained \underline{t} value to the critical table value specified in a table of critical values for the Wilcoxon test.

Siegel explains the relationship between hypotheses and level of significance as follows:

Our procedure is to reject H_0 (null hypothesis) in favor of H_1 (alternate hypothesis) if a statistical test yields a value whose associated probability of occurrence under H_0 is equal to or less than some small probability symbolized as α (alpha).²⁰

If the obtained \underline{t} value is equal to or less than the critical table value, a significant difference exists; this means that the null hypothesis would be rejected. In event the computed \underline{t} value is greater than the critical table value, there is no significant difference; this indicates that the null hypothesis would not be rejected.

Referring to the example, the computed \underline{t} value is 14. At the .05 level of significance, the critical table value is also 14. Therefore, since the computed value is equal to the critical value, the null hypothesis is rejected. It is concluded that there is a significant difference between ratings; final scores are significantly higher than initial scores.

²⁰Ibid., p. 8.

Popham explains the operational procedure of the Wilcoxon test as follows:

Consideration of the process involved will reveal that the smaller the value of \underline{t} is, the greater is the preponderance of differences between pairs in favor of one group, hence the more significant. If the two related samples were perfectly identical, there would be an equal quantity and magnitude of negative ranks and positive ranks; thus the value of \underline{t} would be large. To put it another way, if the members of each pair in one group exceed their counterparts in the other group, the value of the less frequent rank sum, that is, \underline{t} , would be zero and, of course, quite significant.²¹

Mann-Whitney U Test

For comparisons involving independent samples, the Mann-Whitney U Test will be used.²² Siegel states that this test serves "to test whether two samples represent populations which differ in location (central tendency)."²³ In his discussion of assumptions for this statistical test, Champion (1970) concludes that:

The Mann-Whitney U test is designed to perform a function similar to that of the t test, and it makes no assumptions concerning the distributions involved. This test assumes that the investigator has at least ordinal-level information at his disposal . . . Specifically, it is designed to determine whether the various ranked values for any given variable are equally distributed throughout both samples.²⁴

²¹Popham, p. 280.

²²Bruning and Kintz, p. 196.

²³Siegel, p. 157.

²⁴Dean J. Champion, Basic Statistics for Social Research (Scranton, 1970), p. 176.

The basic formulas utilized in calculation of the Mann-Whitney U statistic are as follows:

$$U = n_1 n_2 + \frac{n_1 (n_1 + 1)}{2} - R_1$$

$$U' = n_1 n_2 + \frac{n_2 (n_2 + 1)}{2} - R_2$$

n_1 = number of rankings in the first group

1

n_2 = number of rankings in the second group

2

R_1 = sum of rankings in the first group

1

R_2 = sum of rankings in the second group

2

After either U or U' is determined, a conversion is available for finding the remaining unknown element, since $U = n_1 n_2 - U'$ and

$$U' = n_1 n_2 - U.$$

Following determination of responses from final administration of the evaluative instrument in both student and teacher groups, it is desired to know if these two independent samples differ in proportion of high and low ranks among each group for the trait "personal appearance." The following steps are illustrative of procedures employed to solve the problem:

Step 1. Construct a table that includes final scores for each grouping and rank all responses by size of number from smallest to largest.

STUDENT GROUP			TEACHER GROUP		
<u>Instructor</u>	<u>Final Median Score</u>	<u>Rank</u>	<u>Instructor</u>	<u>Final Median Score</u>	<u>Rank</u>
A	8.6	21.5	A	6.5	8.0
B	8.3	18.5	B	8.6	21.5
C	7.5	11.0	C	6.4	7.0
D	7.6	12.0	D	6.6	9.0
E	8.3	18.5	E	6.3	6.0
F	8.1	16.0	F	8.3	18.5
G	8.0	15.0	G	5.5	5.0
H	7.8	14.0	H	5.4	4.0
I	7.7	13.0	I	8.3	18.5
J	7.4	10.0	J	5.2	3.0
K	9.0	23.0	K	5.1	2.0
L	9.1	<u>24.0</u>	L	5.0	<u>1.0</u>
		196.5			103.5

Step 2. Multiply the number of observations for the student category by the number of numbers in the teacher classification.

$$12 \times 12 = 144$$

Step 3. Perform calculations necessary to complete the following formula:

$$\frac{n(n+1)}{2} = \frac{12(12+1)}{2} = 78$$

n = number of observations in the feedback group
1

Step 4. Sum the ranks for the student group. The sum of this operation is 196.5.

Step 5. Sum the resultant numbers from the second and third steps and subtract this figure from the fourth step.

$$144 + 78 - 196.5 = 25.5$$

Step 6. From the resultant product in step two, subtract the answer obtained in step 5.

$$144 - 25.5 = 118.5$$

Step 7. The smaller number determined by performing the calculations in steps 5 and 6 is considered to be the \underline{U} value and is compared to a critical value obtained by consulting a table of critical values for the Mann-Whitney U statistic. The null hypothesis is that these two independent samples do not differ in the distribution of high and low rankings; the alternative hypothesis is that these rankings do differ at the .05 level of significance.

The critical value is found to be 37. Therefore, since the calculated \underline{U} value of 25.5 is less than the critical value of 37, the null hypothesis is rejected. There is a significant difference in the distribution of rankings between the two samples with higher rankings associated with the student group. Since all medians were ranked from smallest to largest, the grouping with the largest summation of rankings would have the highest scores. For example, while the sum of the rankings for the student group is 196.5, the comparable total for the no-feedback classification is 103.5.

Summary

The aim of Chapter III was to explain procedures employed to solve the problem of this study. In addition, the Purdue Rating Scale for Instruction was described and a discussion of the reliability and validity of this instrument was presented. Finally, explanation of statistical tests used in the study was given.

Chapter IV is devoted to a presentation of results derived from examination of the data.

CHAPTER IV

PRESENTATION OF DATA

The purpose of this chapter is to present the results of student, peer, and self-image evaluations. In several places, brief accounts of procedures and techniques are presented to facilitate presentation of the data.

Student Evaluations

Initial and Second Rating Comparisons

Students in the classes of the instructors participating in this study rated their instructors at the end of the sixth week and during the last week of the course. This section presents a discussion of the differences that existed between ratings for teachers who received information about the initial ratings and the teachers who did not receive this feedback.

The Purdue Rating Scale for Instruction contains 10 characteristics of instruction. A comparison between initial and second student evaluations on these characteristics and on an over-all effectiveness item are presented in Tables III through XIII.

For each response variable, the Wilcoxon t value and level of significance, either .05 or .01 is specified. In event that the t value is not significant, the letters "ns" are indicated. When the second

evaluation had a higher median score than the initial evaluation, the t value is negative, such as -31.5 or -26.0. N refers to the number of teachers, excluding zero differences between observations, upon which each t value is based. For comparisons using the Wilcoxon test, no decisions are possible at the .01 or .05 levels of significance when N is less than six. Therefore, whenever N is five or less, a dash "---" appears in the level of significance column of the table.

Interest in the Subject. On the interest-in-the-subject attribute, as shown in Table III, students rated teachers lower on the second median-response evaluation. Second ratings for the no-feedback group were significantly lower at the .05 level; corresponding responses for feedback members were significantly lower at the .01 level.

Sophomore students rated instructors in the feedback group significantly lower (.01 level) on the second evaluation. Also, feedback teachers received significantly lower second ratings (.05 level) from students who were employed between 1 to 21 hours weekly.

For teachers in the no-feedback group, data revealed significantly lower second evaluations (.05 level) from students with grade averages between 2.1 and 3.1. Students who carried between 7 and 17 academic hours rated these teachers significantly lower (.01 level) on the second administration of the rating instrument.

Several additional significantly lower second ratings were found in the no-feedback group. At the .01 level of significance, lower ratings on the second evaluation were given by students with no outside employment, business majors, and males. At the .05 level of significance, non-business students gave no-feedback teachers lower second ratings.

TABLE III

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON INTEREST IN SUBJECT

Item	FEEDBACK GROUP			No-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	+12.0	.05	12	+ 4.0	.01
BY GRADE AVERAGE						
(a)No Prior	5	+ 3.0	--	4	+ 1.0	--
(b)Under 2.1	11	-31.5	ns	9	+20.0	ns
(c)2.1 - 3.1	12	+31.0	ns	12	+ 8.0	.05
(d)3.1 - 4.0	12	+21.0	ns	10	-26.0	ns
BY CLASS						
(a)Freshman	5	+ 3.0	--	5	+ 0.0	--
(b)Sophomore	11	+ 6.0	.01	11	+16.5	ns
(c)Junior	12	-33.5	ns	12	+22.0	ns
(d)Senior	12	+23.0	ns	10	+ 9.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	+19.0	ns	12	+ 0.0	.01
(b)Over 17 Hours	12	+26.0	ns	11	+24.5	ns
By EMPLOYMENT						
(a)None	12	+36.0	ns	11	+ 3.0	.01
(b)1 to 21 Hours	12	+10.0	.05	11	+15.5	ns
(c)Over 21 Hours	11	+26.0	ns	11	+28.0	ns
BY MAJOR						
(a)Business	12	+18.0	ns	12	+ 6.0	.01
(b)Non-business	11	+21.0	ns	10	+ 5.0	.05
BY SEX						
(a)Male	12	+24.0	ns	12	+ 5.0	.01
(b)Female	10	+10.0	ns	11	+14.5	ns

Sympathetic Attitude Toward Students. For both feedback and no-feedback classifications, Table IV shows that no significant differences were present between initial and second composite median-response ratings for teachers' sympathetic attitudes toward students. When categorized according to grade average, year of college, extent of enrollment, amount of employment, academic major, and sex of student, examination of responses failed to show any significant differences between initial and second ratings.

Fairness in Grading. As presented in Table V, no significant differences existed between initial and second median-response ratings for the fairness-in-grading characteristic in either the feedback or the no-feedback group. Classification of responses according to the various subcategories did not reveal any significant differences in rating responses between ratings gathered early in the term and those ratings obtained at the close of the semester.

Liberal and Progressive Attitude. Results of initial and second median-response ratings for teachers' liberal and progressive attitudes are shown in Table VI. For both groups, feedback and no feedback, no significant differences were found between ratings on initial and second administrations of the Purdue Rating Scale for Instruction. An intermixture of both higher and lower evaluations on the second ratings was found for ratings grouped according to the various subcategories; however, none of the ratings obtained in December significantly differed from those ratings gathered in October.

Presentation of Subject Matter. On the presentation-of-subject characteristic, as presented in Table VII, no significant difference in median response was found between initial and second ratings for

TABLE IV

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON SYMPATHETIC ATTITUDE TOWARD STUDENTS

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	-19.0	ns	11	-26.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	- 4.0	ns	5	+ 2.0	--
(b)Under 2.1	9	+21.5	ns	8	+23.5	ns
(c)2.1 - 3.1	12	-28.0	ns	11	+29.0	ns
(d)3.1 - 4.0	9	-11.5	ns	11	-30.0	ns
BY CLASS						
(a)Freshman	5	- 2.0	--	6	- 9.0	ns
(b)Sophomore	11	-19.5	ns	11	+22.0	ns
(c)Junior	12	+23.5	ns	12	-29.0	ns
(d)Senior	12	+37.0	ns	10	+27.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	11	-22.0	ns	11	-30.0	ns
(b)Over 17 Hours	12	-21.5	ns	11	+33.0	ns
BY EMPLOYMENT						
(a)None	12	-19.0	ns	12	-30.0	ns
(b)1 to 21 Hours	11	-15.0	ns	11	+28.0	ns
(c)Over 21 Hours	12	+38.0	ns	10	-16.00	ns
BY MAJOR						
(a)Business	12	-27.0	ns	12	-35.0	ns
(b)Non-business	9	+20.0	ns	9	+18.0	ns
BY SEX						
(a)Male	12	-36.0	ns	12	-33.0	ns
(b)Female	11	-14.5	ns	12	-29.0	ns

TABLE V

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT
RATINGS ON FAIRNESS IN GRADING

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	-30.0	ns	12	-36.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	- 5.0	ns	6	- 7.0	ns
(b)Under 2.1	7	+11.0	ns	7	- 5.5	ns
(c)2.1 - 3.1	12	-36.0	ns	12	-38.0	ns
(d)3.1 - 4.0	10	-14.0	ns	11	-31.5	ns
BY CLASS						
(a)Freshman	6	- 4.0	ns	5	- 6.0	--
(b)Sophomore	10	-22.0	ns	11	-27.0	ns
(c)Junior	12	-32.0	ns	12	-37.5	ns
(d)Senior	11	+24.5	ns	10	+14.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	10	-15.0	ns	12	+39.0	ns
(b)Over 17 hours	12	-34.0	ns	11	+27.0	ns
BY EMPLOYMENT						
(a)None	12	-29.0	ns	12	-17.0	ns
(b)1 to 21 Hours	12	-38.0	ns	12	-32.0	ns
(c)Over 21 Hours	12	+22.5	ns	12	+18.0	ns
BY MAJOR						
(a)Business	12	-37.0	ns	12	+39.0	ns
(b)Non-business	11	-24.0	ns	9	+10.0	ns
BY SEX						
(a)Male	12	+27.0	ns	12	-28.0	ns
(b)Female	12	-21.0	ns	11	+32.5	ns

TABLE VI

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON LIBERAL AND PROGRESSIVE ATTITUDE

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	+24.0	ns	12	-14.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	- 4.0	ns	5	- 4.0	--
(b)Under 2.1	10	+20.5	ns	7	-13.0	ns
(c)2.1 - 3.1	12	+27.0	ns	12	-32.0	ns
(d)3.1 - 4.0	10	+18.0	ns	12	-15.5	ns
BY CLASS						
(a)Freshman	6	- 9.0	ns	6	- 1.0	ns
(b)Sophomore	9	+14.0	ns	11	-23.5	ns
(c)Junior	11	+20.0	ns	11	-33.5	ns
(d)Senior	12	+24.0	ns	11	+22.5	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	+23.0	ns	11	-22.0	ns
(b)Over 17 Hours	12	+37.5	ns	11	+26.0	ns
BY EMPLOYMENT						
(a)None	12	+21.0	ns	12	+39.0	ns
(b)1 to 21 Hours	12	+38.0	ns	10	+20.5	ns
(c)Over 21 Hours	10	+15.0	ns	11	-30.0	ns
BY MAJOR						
(a)Business	12	+25.0	ns	12	-24.0	ns
(b)Non-business	11	+11.5	ns	8	+17.5	ns
BY SEX						
(a)Male	12	+32.0	ns	11	-23.0	ns
(b)Female	11	-31.0	ns	11	+32.5	ns

TABLE VII

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON PRESENTATION OF SUBJECT MATTER

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	-33.0	ns	12	-32.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	+ 7.0	ns	5	- 5.0	--
(b)Under 2.1	9	+13.5	ns	8	+17.0	ns
(c)2.1 - 3.1	12	-26.0	ns	11	+21.0	ns
(d)3.1 - 4.0	12	-36.0	ns	12	-18.5	ns
BY CLASS						
(a)Freshman	6	+ 8.0	ns	6	- 4.0	ns
(b)Sophomore	11	-31.0	ns	10	-25.0	ns
(c)Junior	12	+37.5	ns	12	+23.5	ns
(d)Senior	11	+28.0	ns	11	+24.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	-34.0	ns	12	+33.0	ns
(b)Over 17 Hours	12	-29.5	ns	10	+26.5	ns
BY EMPLOYMENT						
(a)None	12	-27.0	ns	12	+36.0	ns
(b)1 to 21 Hours	12	-32.0	ns	10	-27.0	ns
(c)Over 21 Hours	11	+20.0	ns	12	+32.5	ns
BY MAJOR						
(a)Business	11	-28.0	ns	12	-38.0	ns
(b)Non-business	11	+23.0	ns	9	+20.5	ns
BY SEX						
(a)Male	12	-39.0	ns	12	-31.0	ns
(b)Female	12	+27.0	ns	12	+29.0	ns

either the feedback or the no-feedback group. Furthermore, classification of replies according to subcategories, such as academic major or amount of enrollment, failed to reveal any significant differences between initial and second ratings.

Self-reliance and Confidence. For both feedback and no-feedback classifications, Table VIII indicates that no significant differences were present on median-response ratings between initial and second evaluations. When examined according to subcategories, only one significant difference was apparent. At the .05 level of significance, feedback teachers received higher end-of-term ratings from students with no prior grade averages.

Sense of Proportion and Humor. While feedback participants did not receive any higher second ratings, no-feedback teachers, as depicted in Table IX, were accorded significantly higher second median-response evaluations.

At the .05 level of significance, higher second ratings were given to no-feedback teachers by students enrolled between 7 to 17 hours, students with no outside employment, business majors, males, and freshmen. Also, for the no-feedback group, second ratings by students with grade averages between 3.1 and 4.0 were significantly higher at the .01 level.

Personal Peculiarities. On the personal-peculiarities characteristic, as indicated in Table X, no significant differences existed between initial and second median-response ratings. However, ratings from students with grade averages between 3.1 and 4.0 and business majors showed that significantly higher second evaluations were given. The former rating was significant at the .01 level, and the latter comparison was significant at the .05 level.

TABLE VIII

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON SELF-RELIANCE AND CONFIDENCE

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	-35.0	ns	12	-23.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	- 1.0	.05	5	- 6.0	--
(b)Under 2.1	9	+12.0	ns	7	-13.0	ns
(c)2.1 - 3.1	12	-22.0	ns	12	-23.0	ns
(d)3.1 - 4.0	10	+21.0	ns	10	-15.0	ns
BY CLASS						
(a)Freshman	6	- 1.0	ns	6	- 5.0	ns
(b)Sophomore	11	-31.5	ns	11	-23.0	ns
(c)Junior	11	+30.5	ns	12	-16.5	ns
(d)Senior	11	+26.0	ns	11	+17.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	11	-21.0	ns	12	-32.0	ns
(b)Over 17 Hours	11	+32.0	ns	11	+20.0	ns
BY EMPLOYMENT						
(a)None	12	-21.0	ns	12	-24.0	ns
(b)1 to 21 Hours	11	-31.0	ns	11	-32.0	ns
(c)Over 21 Hours	12	+31.5	ns	11	-25.0	ns
BY MAJOR						
(a)Business	12	-23.0	ns	12	-26.0	ns
(b)Non-business	10	+26.0	ns	8	+ 7.0	ns
BY SEX						
(a)Male	12	-32.0	ns	12	-32.0	ns
(b)Female	12	+26.0	ns	11	-16.0	ns

TABLE IX

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON SENSE OF PROPORTION AND HUMOR

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	-30.0	ns	12	-10.0	.05
BY GRADE AVERAGE						
(a)No Prior	6	- 4.0	ns	4	+ 3.0	--
(b)Under 2.1	10	+18.0	ns	7	-10.0	ns
(c)2.1 - 3.1	12	-26.0	ns	12	-20.0	ns
(d)3.1 - 4.0	11	-31.5	ns	11	- 1.0	.01
BY CLASS						
(a)Freshman	6	- 9.0	ns	6	- 0.0	.05
(b)Sophomore	11	-22.0	ns	11	-27.0	ns
(c)Junior	12	-39.0	ns	12	-24.5	ns
(d)Senior	11	+31.0	ns	11	+31.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	-26.0	ns	12	-12.0	.05
(b)Over 17 Hours	11	-17.5	ns	11	+31.0	ns
BY EMPLOYMENT						
(a)None	12	-20.0	ns	11	- 6.0	.05
(b)1 to 21 Hours	12	-39.0	ns	11	-22.0	ns
(c)Over 21 Hours	12	+36.5	ns	11	-20.0	ns
BY MAJOR						
(a)Business	12	-32.0	ns	12	- 8.0	.05
(b)Non-business	11	-30.5	ns	9	+18.5	ns
BY SEX						
(a)Male	12	-36.0	ns	12	- 8.0	.05
(b)Female	11	+30.0	ns	11	-28.0	ns

TABLE X

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT
RATINGS ON PERSONAL PECULIARITIES

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	-23.0	ns	12	-15.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	- 9.0	ns	4	- 0.0	--
(b)Under 2.1	9	+20.0	ns	8	-16.0	ns
(c)2.1 - 3.1	12	+20.0	ns	12	-15.0	ns
(d)3.1 - 4.0	12	+21.0	ns	12	- 2.0	.01
BY CLASS						
(a)Freshman	6	- 6.0	ns	5	- 4.0	--
(b)Sophomore	9	+20.0	ns	11	-18.0	ns
(c)Junior	12	-31.0	ns	12	-22.5	ns
(d)Senior	11	-32.5	ns	9	+19.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	-28.0	ns	12	-14.0	ns
(b)Over 17 Hours	11	-20.5	ns	9	-21.5	ns
BY EMPLOYMENT						
(a)None	11	-21.0	ns	12	-18.0	ns
(b)1 to 21 Hours	12	-29.0	ns	12	-18.5	ns
(c)Over 21 Hours	11	+26.0	ns	12	-16.0	ns
BY MAJOR						
(a)Business	12	-22.0	ns	12	-10.0	.05
(b)Non-business	10	-20.5	ns	8	- 8.0	ns
BY SEX						
(a)Male	12	-30.0	ns	12	-28.0	ns
(b)Female	11	-21.0	ns	12	-32.0	ns

Personal Appearance. As presented in Table XI, students gave no-feedback teachers significantly higher (.01 level) second median-response ratings on the personal-appearance characteristic.

Although no significant differences existed for the feedback group, significantly higher second ratings were given to no-feedback participants by students with grade averages between 2.1 and 3.1, students who carried from 7 to 17 academic hours, business majors, males, and females.

Stimulation of Intellectual Curiosity. Table XII shows comparisons of initial and second ratings for stimulation of intellectual curiosity. Although not significant, feedback teachers were given lower median-response ratings on the second administration of the evaluative instrument. Also, at the .01 level of significance, feedback teachers were given higher second ratings by seniors and males.

For the no-feedback teachers, only one significant difference was found between initial and second ratings. Students who had grade averages between 3.1 and 4.0 gave higher second ratings.

Over-all Teaching Effectiveness. On the characteristic of over-all teaching effectiveness, as shown in Table XIII, no significant differences between initial and second median-response ratings were apparent in either the feedback or the no-feedback group. Of the remaining comparisons related to this characteristic, only one significant difference was found. In the feedback group, students who had grade averages between 3.1 and 4.0 gave significantly lower (.05 level) second ratings.

TABLE XI

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT
RATINGS ON PERSONAL APPEARANCE

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	+38.0	ns	12	- 4.0	.01
BY GRADE AVERAGE						
(a)No Prior	5	- 4.0	ns	5	- 0.0	--
(b)Under 2.1	10	-20.0	ns	7	- 6.5	ns
(c)2.1 - 3.1	12	-25.0	ns	12	- 4.0	.01
(d)3.1 - 4.0	12	+23.0	ns	9	-13.0	ns
BY CLASS						
(a)Freshman	6	+ 9.0	ns	5	- 3.0	--
(b)Sophomore	10	+15.0	ns	9	-11.0	ns
(c)Junior	11	+27.0	ns	12	-16.0	ns
(d)Senior	11	+25.0	ns	9	+14.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	+35.0	ns	12	- 8.0	.05
(b)Over 17 Hours	12	+15.0	ns	11	+21.5	ns
BY EMPLOYMENT						
(a)None	12	-34.0	ns	12	-18.0	ns
(b)1 to 21 Hours	11	+19.5	ns	12	-36.5	ns
(c)Over 21 Hours	12	-29.5	ns	12	+33.0	ns
BY MAJOR						
(a)Business	12	-37.0	ns	12	- 5.0	.01
(b)Non-business	11	-31.0	ns	8	-16.0	ns
BY SEX						
(a)Male	12	+35.0	ns	12	-11.0	.05
(b)Female	12	-20.0	ns	10	- 7.0	.05

TABLE XII

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT RATINGS ON INTELLECTUAL CURIOSITY

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	+15.0	ns	12	+29.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	-10.5	ns	5	+ 6.0	--
(b)Under 2.1	8	+18.0	ns	6	-10.0	ns
(c)2.1 - 3.1	12	+27.0	ns	12	+32.0	ns
(d)3.1 - 4.0	11	+16.0	ns	12	-11.5	.05
BY CLASS						
(a)Freshman	6	- 9.0	ns	5	+ 6.0	--
(b)Sophomore	10	+21.0	ns	10	-23.0	ns
(c)Junior	12	+29.5	ns	12	-33.0	ns
(d)Senior	12	+ 7.0	.01	11	+26.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	+17.0	ns	12	+24.0	ns
(b)Over 17 Hours	12	+24.0	ns	11	+27.5	ns
BY EMPLOYMENT						
(a)None	12	+33.5	ns	12	+38.0	ns
(b)1 to 21 Hours	12	+18.0	ns	12	+29.0	ns
(c)Over 21 Hours	12	+27.5	ns	11	-26.0	ns
BY MAJOR						
(a)Business	12	+19.0	ns	12	+27.0	ns
(b)Non-business	10	+11.0	ns	10	-17.5	ns
BY SEX						
(a)Male	11	+ 4.0	.01	12	+22.0	ns
(b)Female	12	+22.0	ns	12	-26.0	ns

TABLE XIII

WILCOXON T VALUES FOR COMPARISONS OF INITIAL AND SECOND STUDENT
RATINGS ON OVER-ALL EFFECTIVENESS

Item	FEEDBACK GROUP			NO-FEEDBACK GROUP		
	N	Wilcoxon t value	Level of Significance	N	Wilcoxon t value	Level of Significance
MEDIAN RESPONSE						
All Categories	12	+27.0	ns	12	+22.0	ns
BY GRADE AVERAGE						
(a)No Prior	6	- 4.5	ns	4	+ 0.0	--
(b)Under 2.1	9	+16.0	ns	6	+ 6.0	ns
(c)2.1 - 3.1	12	-37.0	ns	12	+32.0	ns
(d)3.1 - 4.0	12	+12.0	.05	10	+24.0	ns
BY CLASS						
(a)Freshman	5	- 0.0	--	5	- 6.5	--
(b)Sophomore	10	+21.0	ns	11	-30.5	ns
(c)Junior	12	+22.0	ns	12	+20.0	ns
(d)Senior	11	+20.0	ns	10	+21.0	ns
BY ENROLLMENT						
(a)7 to 17 Hours	12	+32.0	ns	12	+15.0	ns
(b)Over 17 Hours	11	+20.0	ns	9	+21.0	ns
BY EMPLOYMENT						
(a)None	12	+38.0	ns	12	+29.0	ns
(b)1 to 21 Hours	12	+26.0	ns	11	+26.0	ns
(c)Over 21 Hours	12	+27.0	ns	12	+23.0	ns
BY MAJOR						
(a)Business	12	+29.0	ns	12	+18.0	ns
(b)Non-business	9	+16.0	ns	8	-14.0	ns
BY SEX						
(a)Male	11	+27.0	ns	12	+22.0	ns
(b)Female	11	+19.0	ns	11	+25.0	ns

Affect of Feedback After a Semester

To measure whether the effectiveness of feedback would make a difference one semester later, all feedback teachers were evaluated by students at the end of the second semester.

Table XIV shows comparisons between the second (winter) and the third (spring) student ratings. As indicated, the data revealed an intermixture of response patterns; however, no significant differences for any of the rating scales were present.

Although not significantly different, ratings on the following factors were closest to significance: presentation of subject matter ($\underline{U} = 60.5$), personal appearance ($\underline{U} = 61.0$), and self-reliance and confidence ($\underline{U} = 59.0$). Of the remaining scales, calculated \underline{U} values for personal peculiarities ($\underline{U} = 71.0$), stimulation of intellectual curiosity ($\underline{U} = 72$), and over-all teaching effectiveness ($\underline{U} = 72$) were furthest from significance.

Age and Academic Rank Comparisons

In order to compare median ratings according to age classifications, the data were examined on the basis of two arbitrarily selected categories: Under age 45 and over age 45. This grouping was chosen in order to approximate a middle point in age of a teacher's career, since necessary preparation for college teaching probably would not be acquired much before the age of 25, and at most institutions, 65 is considered to be retirement age.

When teachers were classified by age variables, each group had the following numbers: (1) In the feedback group, four teachers were over

TABLE XIV

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN SECOND
AND THIRD STUDENT-EVALUATION RATINGS

Factor	U Value	Level of Significance
Interest in Subject	65.0	ns
Sympathetic Attitude Toward Students	66.5	ns
Fairness in Grading	64.0	ns
Liberal and Progressive Attitude	68.0	ns
Presentation of Subject Matter	60.5	ns
Sense of Proportion and Humor	65.5	ns
Self-Reliance and Confidence	59.0	ns
Personal Peculiarities	71.0	ns
Personal Appearance	61.0	ns
Stimulating Intellectual Curiosity	72.0	ns
Over-all Teaching Effectiveness	72.0	ns

45 years old, and eight teachers were younger than 45 years of age
(2) In the no-feedback classification, six teachers were over 45, and a like number were younger than 45.

Based upon academic-rank variables, further comparisons were made between feedback and no-feedback groupings. Participants were categorized by (1) instructor-assistant professor and (2) associate professor-professor groupings. While three members of the former grouping received knowledge of initial ratings, six participants were not given this information. Additionally, nine teachers in the latter group were given knowledge of initial student ratings, and six were members of the no-feedback classification that received no knowledge of student ratings gathered early in the semester.

Median ratings were examined relative to each of the first 10 scales of the Purdue Rating Scale for Instruction and an over-all rating of teaching effectiveness. These data were analyzed by over-all median responses, year of college, grade average, enrollment, employment, academic major, and sex variables. Because several participants did not teach freshmen, students who had no prior grade average, or students who carried less than seven hours, comparisons that involved these classifications were deleted from analysis.

Comparison of Initial and Second Ratings for the Under 45 Age Category

For teachers under 45 years of age, Table XV shows an indication of the proportion who received higher evaluations from students on the second administration of the rating instrument than they received on the initial administration. The table depicts this information for

TABLE XV

COMPARISONS OF NUMBER AND PERCENT OF HIGHER MEDIAN RATINGS UPON THE SECOND
EVALUATION FOR TEACHERS UNDER 45 YEARS OF AGE

Item	Interest in Subject-FB		Interest in Subject-NFB		Sympathetic Attitude-FB		Sympathetic Attitude-NFB		Fairness in Grading-FB		Fairness in Grading-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	3	37.5	0	00.0	8	100.0	4	66.7	5	62.5	4	66.7
BY GRADE AVERAGE												
No Prior	2	33.3	1	100.0	5	83.3	1	100.0	5	83.3	0	00.0
Under 2.1	4	57.1	1	20.0	2	28.6	3	60.0	1	14.3	4	80.0
2.1 - 3.1	6	75.0	1	16.7	6	75.0	3	50.0	5	62.5	4	66.7
3.1 - 4.0	3	37.5	4	66.7	6	75.0	4	66.7	5	62.5	5	83.3
BY CLASSIFICATION												
Freshman	1	16.7	0	00.0	4	66.7	2	66.7	5	83.3	1	33.3
Sophomore	1	12.5	1	16.7	5	62.5	4	66.7	4	50.0	4	66.7
Junior	5	62.5	1	16.7	3	37.5	4	66.7	6	75.0	4	66.7
Senior	4	50.0	1	20.0	5	62.5	2	40.0	4	50.0	1	20.0
BY ENROLLMENT												
Under 7 Hours	3	75.0	0	00.0	1	25.0	0	00.0	1	25.0	0	00.0
7 to 17 Hours	4	50.0	0	00.0	7	87.5	4	66.7	5	62.5	4	66.7
Over 17 Hours	3	37.5	2	33.3	6	75.0	3	50.0	6	75.0	1	16.7
BY EMPLOYMENT												
None	5	62.5	1	16.7	7	87.5	4	66.7	5	62.5	6	100.0
1 to 21 Hours	1	12.5	2	33.3	7	87.5	2	33.3	5	62.5	4	66.7
Over 21 Hours	3	37.5	2	33.3	5	62.5	4	66.7	4	50.0	2	33.3
BY MAJOR												
Business	3	37.5	1	16.7	7	87.5	4	66.7	5	62.5	4	66.7
Non-business	1	12.5	1	20.0	4	50.0	2	40.0	6	75.0	3	60.0
BY SEX												
Male	4	50.0	1	16.7	7	87.5	3	50.0	3	37.5	5	83.3
Female	2	25.0	3	50.0	5	62.5	5	83.3	6	75.0	3	50.0

TABLE XV (Continued)

Item	Progressive Attitude-FB		Progressive Attitude-NFB		Presentation of Subject-FB		Presentation of Subject-NFB		Stimulating Intellectual Curiosity-FB		Stimulating Intellectual Curiosity-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	5	62.5	4	66.7	5	62.5	3	50.0	4	50.0	2	33.3
BY GRADE AVERAGE												
No Prior	3	50.0	0	00.0	3	50.0	0	00.0	3	50.0	0	00.0
Under 2.1	2	28.6	1	20.0	2	28.6	1	20.0	4	57.1	2	40.0
2.1 - 3.1	5	62.5	4	66.7	6	75.0	3	50.0	5	62.5	1	16.7
3.1 - 4.0	4	50.0	3	50.0	3	37.5	6	100.00	3	37.5	4	66.7
BY CLASSIFICATION												
Freshman	4	66.7	3	100.0	2	33.3	2	66.7	3	50.0	1	33.3
Sophomore	3	37.5	5	83.3	4	50.0	2	33.3	4	50.0	2	33.3
Junior	4	50.0	3	50.0	4	50.0	2	33.3	3	37.5	2	33.3
Senior	5	62.5	2	40.0	4	50.0	2	40.0	2	25.0	1	20.0
BY ENROLLMENT												
Under 7 Hours	1	25.0	0	00.0	3	75.0	0	00.0	2	50.0	0	00.0
7 to 17 Hours	5	62.5	3	50.0	4	50.0	3	50.0	5	62.5	2	33.3
Over 17 Hours	6	75.0	3	50.0	5	62.5	1	25.0	6	75.0	2	33.3
BY EMPLOYMENT												
None	4	50.0	2	33.3	5	62.5	3	50.0	6	75.0	3	50.0
1 to 21 Hours	6	75.0	1	16.7	4	50.0	1	16.7	4	50.0	2	33.3
Over 21 Hours	3	37.5	4	66.7	2	25.0	4	66.7	3	37.5	3	50.0
BY MAJOR												
Business	5	62.5	4	66.7	3	37.5	3	50.0	5	62.5	1	16.7
Non-business	4	50.0	2	66.7	4	50.0	2	40.0	2	25.0	3	60.0
BY SEX												
Male	6	75.0	4	66.7	4	50.0	5	83.3	2	25.0	2	33.3
Female	4	50.0	3	50.0	4	50.0	1	16.7	3	37.5	3	50.0

TABLE XV (Continued)

Item	Proportion and Humor-FB		Proportion and Humor-NFB		Personal Peculiarities-FB		Personal Peculiarities-NFB	
	N	%	N	%	N	%	N	%
MEDIAN RESPONSE								
All Categories	6	75.0	5	83.3	7	87.5	4	66.7
BY GRADE AVERAGE								
No Prior	4	66.7	0	00.0	4	66.7	1	100.0
Under 2.1	3	42.9	2	40.0	1	14.3	3	60.0
2.1 - 3.1	5	62.5	4	66.7	6	75.0	4	66.7
3.1 - 4.0	5	62.5	4	66.7	4	50.0	5	16.7
BY CLASSIFICATION								
Freshman	3	50.0	3	100.0	4	66.7	1	33.3
Sophomore	5	62.5	4	66.7	4	50.0	5	83.3
Junior	3	37.5	3	50.0	7	87.5	3	50.0
Senior	4	50.0	3	60.0	4	50.0	1	20.0
BY ENROLLMENT								
Under 7 Hours	1	25.0	0	00.0	1	25.0	0	00.0
7 to 17 Hours	7	87.5	5	83.3	6	75.0	4	66.7
Over 17 Hours	7	87.5	3	50.0	5	62.5	3	50.0
BY EMPLOYMENT								
None	7	87.5	4	66.7	7	87.5	4	66.7
1 to 21 Hours	4	50.0	5	83.3	6	75.0	3	60.0
Over 21 Hours	4	50.0	4	66.7	4	50.0	4	66.7
BY MAJOR								
Business	7	87.5	5	83.3	7	87.5	4	66.7
Non-business	6	75.0	2	40.0	4	50.0	3	60.0
BY SEX								
Male	6	75.0	5	83.3	5	62.5	4	66.7
Female	5	62.5	3	50.0	7	87.5	4	66.7

TABLE XV (Continued)

Item	Self-Reliance and Confidence-FB		Self-Reliance and Confidence-NFB		Personal Appearance-FB		Personal Appearance-NFB		Teachers' Over-all Rating-FB		Teachers' Over-all Rating-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	6	75.0	4	66.7	4	50.0	6	100.0	4	50.0	3	50.0
BY GRADE AVERAGE												
No Prior	5	83.3	1	100.0	4	66.7	1	100.0	5	83.3	0	00.0
Under 2.1	3	42.9	3	60.0	2	28.6	3	60.0	3	42.9	3	60.0
2.1 - 3.1	7	87.5	4	66.7	6	75.0	6	100.0	7	87.5	3	50.0
3.1 - 4.0	4	50.0	5	83.3	2	25.0	4	66.7	3	37.5	2	33.3
BY CLASSIFICATION												
Freshman	6	100.0	3	100.0	3	50.0	1	33.3	5	83.3	1	33.3
Sophomore	6	75.0	6	100.0	2	25.0	5	83.3	4	50.0	5	83.3
Junior	4	50.0	4	66.7	4	50.0	4	66.7	4	50.0	2	33.3
Senior												
BY ENROLLMENT												
Under 7 Hours	3	75.0	1	50.0	0	00.0	0	00.0	3	75.0	0	00.0
7 to 17 Hours	7	87.5	3	50.0	5	62.5	6	100.0	4	50.0	3	50.0
Over 17 Hours	4	50.0	2	33.3	1	12.5	2	33.3	2	25.0	3	50.0
BY EMPLOYMENT												
None	7	87.5	5	83.3	5	62.5	4	66.7	6	75.0	3	50.0
1 to 21 Hours	5	62.5	2	33.3	4	50.0	3	50.0	3	37.5	3	50.0
Over 21 Hours	3	37.5	6	100.0	4	50.0	4	66.7	4	50.0	3	50.0
BY MAJOR												
Business	7	87.5	4	66.7	5	62.5	3	50.0	5	62.5	2	33.3
Non-business	3	37.5	1	20.0	4	50.0	3	60.0	2	25.0	3	60.0
BY SEX												
Male	6	75.0	6	100.0	5	62.5	6	100.0	5	62.5	3	50.0
Female	5	62.5	5	83.3	7	87.5	4	66.7	3	37.5	2	33.3

both feedback and no-feedback groups. These data were classified according to representative scales of the Purdue Rating Scale for Instruction and analyzed by grade average, year of college, enrollment, employment, academic major, and sex variables. Additionally, over-all median responses were compared.

Interest in the Subject. On the interest-in-the-subject characteristic, no higher composite median responses were found for the second administration of the evaluative instrument to subjects who did not receive feedback data, but three feedback teachers were given higher over-all median ratings. Seventy-five percent of the feedback teachers, compared to 16.7 percent of the no-feedback subjects, were accorded higher median ratings on the second administration by students whose grade averages were between 2.1 and 3.1. Additionally, data showed that 62.5 percent of the feedback group, but only 16.7 percent of the no-feedback members, received higher median ratings on the second evaluation from junior students. According to the tabulated information, three-fourths of the feedback group were given higher second median ratings by students who carried less than seven hours. No member of the no-feedback category was given a higher rating on the second administration for teachers' interests in the subject. The same pattern was replicated for responses of students who carried between 7 and 17 hours; however, in this case, data showed that half of those individuals who received knowledge of initial ratings exhibited higher median ratings for the second evaluation in December. Finally, response analysis indicated that 62.5 percent of the feedback teachers received higher median ratings on the second administration of

the testing instrument from students with no outside employment; data revealed that only 16.7 percent of the no-feedback teachers followed such a response pattern.

Sympathetic Attitude Toward Students. While every feedback teacher received a higher median rating on the second evaluation for sympathetic attitude toward students, only two-thirds of the no-feedback group were given higher ratings on the over-all median response. One major difference concerned the employment variable where 87.5 percent of the feedback members received higher second median ratings from students employed between 1 and 21 hours weekly; the comparable figure for no-feedback data was 33.3 percent.

Fairness in Grading. Although no appreciable difference between initial and second ratings was found for over-all median responses on ratings for fairness in grading, at least 75 percent of the feedback teachers who were under the age of 45 were given higher second ratings by students who carried over 17 hours. However, 80 percent of the no-feedback group, compared to 14.3 percent of the feedback teachers, were accorded higher median ratings on the second administration by students with grade averages under 2.1. A similar trend was found for responses of male students; 83.3 percent of the no-feedback group received higher median evaluations on the second rating, but only 37.5 percent of the feedback participants were given higher second ratings.

Liberal and Progressive Attitude. No large discrepancy was present between groups on composite median-response ratings for teachers' liberal and progressive attitudes. Nevertheless, half of the feedback group received higher median ratings on the second evaluation from students with no prior grade averages; no member of the no-feedback

group was given a higher second rating by these students. In addition, 16.7 percent of the teachers who were in the latter group received higher median ratings on the second administration from students who carried between 1 and 21 hours; however, three-fourths of those teachers who were in the former group were given such increases. While three feedback teachers, or 37.5 percent, were rated more highly on the second evaluation by sophomores, five members, or 83.3 percent, of the no-feedback group received higher end-of-term median ratings.

Presentation of Subject Matter. No appreciable dissimilarity was noted between the feedback group and the no-feedback group on median-response ratings for presentation of subject matter. However, all of the no-feedback subjects were given higher median ratings on the second evaluation by students whose grade averages were between 3.1 and 4.0; the comparable computation for feedback teachers was 37.5 percent. No member of the no-feedback group, but 75 percent of the feedback group, was given a higher end-of-term median rating by students who carried less than seven hours.

Stimulation of Intellectual Curiosity. On teachers' abilities to stimulate intellectual curiosity, no large difference was found between feedback and no-feedback groups for composite median-response ratings. Nevertheless, as compared to no-feedback participants, feedback teachers were given higher median evaluations on the December testing by students with no prior grade averages, students enrolled in over 17 hours, and business majors.

Sense of Proportion and Humor. Analysis of data related to ratings for sense of proportion and humor showed no major differences in percents of higher composite median-response ratings for comparisons

between feedback and no-feedback groups. However, in two separate instances, students with no prior grade averages and freshmen, dissimilarities in percents of higher end-of-term ratings were found.

Two-thirds of the feedback group were given higher median ratings in December by students with no prior grade averages; no higher median rating was recorded in the no-feedback category. However, in the latter named group, all of the participants who taught freshmen were given higher second evaluations by them; for half of the feedback teachers, data showed such a pattern.

Personal Peculiarities. No major difference between initial and second median ratings existed for comparisons between feedback and no-feedback groups for over-all median responses related to teachers' personal peculiarities. Likewise, no predominant dissimilarities were found for comparisons between data classified according to the various subcategories, such as grade average or year of college.

Self-reliance and Confidence. No appreciable dissimilarity was found between the feedback group and the no-feedback group on composite median-response ratings for the characteristic of self-reliance and confidence. However, replies from students who worked over 21 hours per week showed that every no-feedback teacher was given a higher rating on the second testing; according to the feedback data, only 37.5 percent of these teachers received such higher second ratings.

Personal Appearance. On composite median-response ratings, every no-feedback teacher received a higher median rating for personal appearance on ratings gathered in December. However, only half of the feedback teachers were given such higher evaluations. An appreciable difference in percent of higher second ratings existed for comparisons

of sophomore replies. While a fourth of the feedback teachers received higher end-of-term median ratings, data showed that 83.3 percent of the no-feedback participants received such higher median evaluations.

Over-all Teaching Effectiveness. For over-all teaching effectiveness, several variations in rating patterns were apparent. At least three-fourths of the feedback group were given higher median ratings on the second administration by freshmen students, students who had no prior grade averages, and those students who carried less than seven academic hours. In the latter two situations, data revealed that not a single member of the no-feedback group was given a higher median rating on the second administration of the evaluation device.

Summary. For the teachers who were under 45 years of age, comparatively few large discrepancies in composite median-response ratings were found between initial and second ratings. As compared to no-feedback teachers, data showed that a larger proportion of feedback teachers received higher median-response ratings on the second evaluation for these scales of the Purdue Rating Scale for Instruction: interest in the subject, sympathetic attitude toward students, presentation of subject matter, stimulation of intellectual curiosity, personal peculiarities, and self-reliance and confidence. However, for no-feedback members, higher second median-response ratings predominated on scales related to fairness in grading, liberal and progressive attitude, sense of proportion and humor, and personal appearance.

Numerous higher second median ratings were found among data classified by grade average, year of college, enrollment, employment, academic major, and sex variables. However, none of the higher rating

responses was predominately associated with either the feedback group or the no-feedback group.

Comparison of Initial and Second Ratings
for the over 45 Age Category

For teachers over 45 years of age, Table XVI gives an indication of the proportion who received higher evaluations from students on the second administration of the rating instrument than they received on the initial administration. The table shows this information for both feedback and no-feedback groups. These data were classified according to representative scales of the Purdue Rating Scale for Instruction and analyzed by grade average, year of college, enrollment, employment, academic major, and sex variables. Also, over-all median responses were compared.

Interest in the Subject. On the interest-in-the-subject characteristic, no higher over-all median responses were found on end-of-term median ratings for members of the feedback group, and only one no-feedback participant, who represented 16.7 percent of this group, was given such a higher median rating. However, three-fourths of the no-feedback teachers, as compared to 33.3 percent of the feedback participants, received higher median ratings on the second evaluation from students who had grade averages under 2.1. This trend was replicated for responses of female students; in this case, 83.3 percent of the participants in the former group received higher second median evaluations as did 25 percent of those members in the latter category. As compared to a third of the no-feedback subjects, three-fourths of the feedback teachers were given higher ratings by juniors on data

TABLE XVI

COMPARISONS OF NUMBER AND PERCENT OF HIGHER MEDIAN RATINGS UPON THE SECOND EVALUATION
FOR TEACHERS OVER 45 YEARS OF AGE

Item	Interest in Subject-FB		Interest in Subject-NFB		Sympathetic Attitude-FB		Sympathetic Attitude-NFB		Fairness in Grading-FB		Fairness in Grading-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	4	00.0	1	16.7	4	25.0	4	66.7	1	25.0	2	33.3
BY GRADE AVERAGE												
Under 2.1	3	33.3	3	75.0	3	100.0	3	75.0	1	33.3	1	25.0
2.1 - 3.1	0	00.0	2	33.3	2	50.0	3	50.0	1	25.0	2	33.3
3.1 - 4.0	2	50.0	1	16.7	1	25.0	4	66.7	2	50.0	1	16.7
BY CLASSIFICATION												
Sophomore	0	00.0	1	20.0	1	33.3	4	80.0	2	66.7	2	40.0
Junior	3	75.0	2	33.3	0	00.0	3	50.0	1	25.0	3	50.0
Senior	0	00.0	2	33.3	2	50.0	3	50.0	1	25.0	2	33.3
BY ENROLLMENT												
7 to 17 Hours	0	00.0	0	00.0	0	00.0	3	50.0	2	50.0	2	33.3
Over 17 Hours	1	25.0	3	60.0	3	75.0	2	40.0	1	25.0	3	60.0
BY EMPLOYMENT												
None	1	25.0	1	16.7	2	50.0	2	33.3	2	50.0	3	50.0
1 to 21 Hours	0	00.0	2	33.3	2	50.0	1	16.7	1	25.0	3	50.0
Over 21 Hours	1	25.0	2	33.3	1	25.0	3	50.0	1	25.0	1	16.7
BY MAJOR												
Business	0	00.0	2	33.3	1	25.0	4	66.7	1	25.0	2	33.3
Non-business	2	66.7	0	00.0	1	33.3	2	40.0	1	33.3	0	00.0
BY SEX												
Male	0	00.0	0	00.0	0	00.0	4	66.7	1	25.0	3	50.0
Female	1	25.0	5	83.3	2	50.0	2	33.3	3	75.0	2	33.3

TABLE XVI (Continued)

Item	Progressive Attitude-FB		Progressive Attitude-NFB		Presentation of Subject-FB		Presentation of Subject-NFB		Stimulating Intellectual Curiosity-FB		Stimulating Intellectual Curiosity-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	0	00.0	6	100.0	2	50.0	4	66.7	4	100.0	3	50.0
BY GRADE AVERAGE												
Under 2.1	1	33.3	1	25.0	1	33.3	2	50.0	1	33.3	1	25.0
2.1 - 3.1	1	25.0	4	66.7	2	50.0	1	16.7	0	00.0	3	50.0
3.1 - 4.0	0	00.0	5	83.3	3	75.0	4	66.7	0	00.0	4	66.7
BY CLASSIFICATION												
Sophomore	0	00.0	2	40.0	2	66.7	3	60.0	0	00.0	3	60.0
Junior	0	00.0	3	50.0	2	50.0	2	33.3	2	50.0	3	50.0
Senior	2	50.0	3	50.0	2	50.0	2	33.3	0	00.0	3	50.0
BY ENROLLMENT												
7 to 17 Hours	0	00.0	3	50.0	2	50.0	3	50.0	0	00.0	2	33.3
Over 17 Hours	1	25.0	2	40.0	2	50.0	2	40.0	0	00.0	2	40.0
BY EMPLOYMENT												
None	0	00.0	4	66.7	2	50.0	3	50.0	1	25.0	4	66.7
1 to 21 Hours	0	00.0	2	33.3	2	50.0	3	50.0	0	00.0	2	33.3
Over 21 Hours	0	00.0	2	33.3	1	25.0	1	16.7	2	50.0	4	66.7
BY MAJOR												
Business	0	00.0	5	83.3	2	50.0	3	50.0	0	00.0	3	50.0
Non-business	0	00.0	2	40.0	1	33.3	2	40.0	1	33.3	3	60.0
BY SEX												
Male	0	00.0	4	66.7	1	25.0	4	66.7	0	00.0	1	16.7
Female	2	50.0	2	33.3	1	25.0	4	66.7	0	00.0	2	33.3

TABLE XVI (Continued)

Item	Proportion and Humor-FB		Proportion and Humor-NFB		Personal Peculiarities-FB		Personal Peculiarities-NFB	
	N	%	N	%	N	%	N	%
MEDIAN RESPONSE								
All Categories	1	25.0	5	83.3	1	25.0	4	66.7
BY GRADE AVERAGE								
Under 2.1	1	33.3	2	50.0	2	66.7	1	25.0
2.1 - 3.1	2	50.0	3	50.0	1	25.0	5	83.3
3.1 - 4.0	1	25.0	6	100.0	0	00.0	5	83.3
BY CLASSIFICATION								
Sophomore	2	66.7	2	40.0	1	33.3	3	60.0
Junior	2	50.0	4	66.7	0	00.0	4	66.7
Senior	1	25.0	3	50.0	2	50.0	3	50.0
BY ENROLLMENT								
7 to 17 Hours	1	25.0	5	83.3	1	25.0	4	66.7
Over 17 Hours	2	50.0	2	40.0	2	50.0	3	50.0
BY EMPLOYMENT								
None	2	50.0	5	83.3	1	25.0	4	66.7
1 to 21 Hours	1	25.0	3	50.0	1	25.0	5	83.3
Over 21 Hours	1	25.0	3	50.0	1	25.0	3	50.0
BY MAJOR								
Business	1	25.0	5	83.3	2	50.0	5	83.3
Non-business	2	66.7	1	20.0	2	66.7	3	60.0
BY SEX								
Male	2	50.0	5	83.3	2	50.0	3	50.0
Female	0	00.0	3	50.0	1	25.0	5	83.3

TABLE XVI (Continued)

Item	Self-Reliance and Confidence-FB		Self-Reliance and Confidence-NFB		Personal Appearance-NF		Personal Appearance-NFB		Teachers' Over-all Rating-FB		Teachers' Over-all Rating-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	1	25.0	4	66.7	2	50.0	5	83.3	0	00.0	1	16.7
BY GRADE AVERAGE												
Under 2.1	0	00.0	1	25.0	3	100.0	2	50.0	1	33.3	1	25.0
2.1 - 3.1	1	25.0	5	83.3	2	50.0	5	83.3	1	33.3	1	16.7
3.1 - 4.0	1	25.0	2	33.3	2	50.0	2	33.3	0	00.0	2	33.3
BY CLASSIFICATION												
Sophomore	1	33.3	1	20.0	1	33.3	2	40.0	1	33.3	2	40.0
Junior	1	25.0	5	83.3	0	00.0	5	83.3	2	50.0	1	16.7
Senior	2	50.0	3	50.0	3	75.0	1	16.7	0	00.0	2	33.3
BY ENROLLMENT												
7 to 17 Hours	2	50.0	3	50.0	1	25.0	3	50.0	1	25.0	1	16.7
Over 17 Hours	1	25.0	1	20.0	2	50.0	3	60.0	1	25.0	2	40.0
BY EMPLOYMENT												
None	4	100.0	3	50.0	1	25.0	3	50.0	0	00.0	3	50.0
1 to 21 Hours	1	25.0	4	66.7	0	00.0	4	66.7	2	50.0	2	33.3
Over 21 Hours	2	50.0	0	00.0	2	50.0	1	16.7	0	00.0	2	33.3
BY MAJOR												
Business	2	50.0	3	50.0	2	50.0	5	83.3	0	00.0	1	16.7
Non-business	2	66.7	0	00.0	2	66.7	2	50.0	1	33.3	3	60.0
BY SEX												
Male	2	50.0	1	16.7	2	50.0	4	66.7	0	00.0	1	16.7
Female	1	25.0	3	50.0	2	50.0	4	66.7	1	25.0	2	33.3

gathered for the second administration of the rating device. While no higher rating for any no-feedback participant was found, two-thirds of the feedback subjects were accorded higher second median ratings by non-business subjects.

Sympathetic Attitude Toward Students. On ratings of sympathetic attitude toward students, several differences were found. First, two-thirds of the subjects who received no information about their initial ratings were given higher composite median-response ratings for the second administration, but the data showed that only a fourth of the feedback teachers were given such higher median evaluations. While the largest percent of higher median ratings for any feedback participant on the second testing was not over 25 percent, at least half of the no-feedback teachers were accorded higher median ratings in December from these respondents: students with grade averages between 3.1 and 4.0, students enrolled between 7 and 17 hours, students employed over 21 hours weekly, juniors, males, and business majors.

Fairness in Grading. With one exception, no appreciable differences on the fairness-in-grading characteristic were found between over-all median responses of feedback and no-feedback groups for the second administration of the rating instrument. The single exception was found for replies of female students. While 75 percent of the feedback group were given higher end-of-term median ratings by females, only a third of the no-feedback members received such ratings.

Liberal and Progressive Attitude. On evaluations for teachers' liberal and progressive attitudes, several instances of divergent responses were indicated. Analysis of no-feedback data revealed that every participant was given a higher median rating on the end-of-term

evaluation; however, not a single participant in the feedback classification received such a higher second evaluation. Even though no higher median ratings were found for any participant who received feedback information from the fall evaluation, data showed that at least half of the no-feedback group were given higher end-of-term median ratings for teachers' liberal and progressive attitudes from students in these categories: grade averages between 3.1 and 4.0, enrollment between 7 and 17 hours, no outside employment, business majors, juniors, and males.

Presentation of Subject Matter. For teachers' presentations of subject matter, no appreciable differences in rating responses existed for comparisons between the feedback group and the no-feedback group. This situation predominated for composite median-response ratings as well as for classifications that included grade average, year of college, enrollment, employment, academic major, and sex variables.

Stimulation of Intellectual Curiosity. Several differences between initial and second ratings were present on ratings of teachers' abilities to stimulate intellectual curiosity. Feedback evidence showed that every member of this group was given a higher composite median-response rating; half of the no-feedback teachers received such higher ratings at the close of the term. When data were analyzed, no member of the feedback group had a higher median rating from students in any of these categories: grade averages between 3.1 and 4.0, grade averages between 2.1 and 3.1, sophomores, seniors, and business majors. However, at least half of the no-feedback participants were given higher median ratings in the above-named categories on the second administration of the testing instrument.

Sense of Proportion and Humor. On ratings for sense of proportion and humor, 83.3 percent of the no-feedback teachers were given higher over-all median responses on December ratings; however, just one feedback subject received such a higher rating. Only in the case of non-business students did the data show much change in favor of feedback participants. In this case, 66.7 percent of the group received higher ratings on the second administration of the rating instrument, and only 20 percent of the no-feedback members were given such higher ratings. As compared to feedback participants, no-feedback subjects received a greater proportion of higher second ratings from students in these categories: grade averages between 3.1 and 4.0, enrollment between 7 and 17 hours, business majors, and females.

Personal Peculiarities. On the personal-peculiarities attribute, two-thirds of the no-feedback teachers received higher median responses on December ratings. Yet, only one teacher, who represented 25 percent of the feedback group, was given a higher end-of-term median rating. Data revealed that 83.3 percent of the no-feedback subjects, compared to a fourth or less of the feedback group, were given higher median ratings on the second administration of the rating instrument by students with grade averages between 2.1 and 3.1 and those students with averages above 3.1. Similar evaluations were given to teachers in this group by female students and students who were employed between 1 and 21 hours weekly. Finally, two-thirds of the no-feedback group received higher median evaluations on second ratings from juniors and students with no outside employment. In each case, comparable increases for feedback participants were 25 percent or less.

Self-reliance and Confidence. On the self-reliance-and-confidence variable, data indicated that 66.7 percent of the no-feedback members were given higher over-all median responses on the second administration of the Purdue Rating Scale for Instruction; data for only one feedback member showed such an increase. Examination of student replies showed an intermixture of higher end-of-term median ratings; yet, every feedback teacher received a higher second median evaluation from students who had no outside employment. Considering the no-feedback group, no member was given a higher median score on the second administration by students employed over 21 hours weekly or non-business students. However, in the latter two circumstances, 50 percent or more of the feedback group were given a higher median rating on the December evaluation. However, it was found that 83.3 percent of those teachers who did not receive knowledge of their fall ratings were given higher end-of-term median ratings by students with grade averages between 2.1 and 3.1 and junior students. In each case, feedback data indicated that one participant received a higher median evaluation at the close of the semester.

Personal Appearance. Analysis of data related to personal appearance showed several differences. While no member of the feedback group was given a higher median rating at the close of the term, two-thirds or more of the no-feedback members received higher median ratings from students employed between 1 and 21 hours weekly and juniors. Another pattern of response existed for replies of students with grade averages under 2.1 and seniors. While half of the no-feedback participants were given higher median evaluations on the second administration of the rating instrument by students with grade averages under 2.1, every feedback teacher was given a higher median rating at the close of the

term. Only 16.7 percent of the no-feedback teachers received higher median ratings in December from seniors; however, data for 75 percent of the feedback teachers showed such a response pattern.

Over-all Teaching Effectiveness. With one exception, no major differences were indicated for responses related to over-all teaching effectiveness. This one exception concerned ratings of students who had no outside employment. In this case, information showed that half of the no-feedback group received higher median responses on data gathered at the close of the semester, and no member of the feedback category was given such higher median ratings.

Summary. Except for the characteristic of ability to stimulate intellectual curiosity, no-feedback data revealed greater proportions of higher over-all median responses on the second administration of the rating instrument for all 10 scales of the Purdue Rating Scale for Instruction and the rating on teaching effectiveness. Even though a number of higher median ratings were found on the end-of-term evaluations for data classified according to grade average, year of college, enrollment, academic major, and sex variables, none of these changes was consistently associated with particular scales on the rating instrument.

Comparison of Initial and Second Ratings for Instructors and Assistant Professors

For instructors and assistant professors, Table XVII presents an indication of the proportion who received higher evaluations from students on the second administration. The table shows this information for both feedback and no-feedback groups. These data were classified

TABLE XVII

COMPARISONS OF NUMBER AND PERCENT OF HIGHER MEDIAN RATINGS UPON THE SECOND
EVALUATION FOR INSTRUCTORS AND ASSISTANT PROFESSORS

Item	Interest in Subject-FB		Interest in Subject-NFB		Sympathetic Attitude-FB		Sympathetic Attitude-NFB		Fairness in Grading-FB		Fairness in Grading-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	3	33.3	0	00.0	9	100.0	4	66.7	5	55.6	4	66.7
BY GRADE AVERAGE												
No Prior	2	33.3	1	50.0	5	83.3	1	50.0	5	83.3	2	100.0
Under 2.1	4	50.0	1	20.0	3	37.5	3	60.0	2	25.0	2	40.0
2.1 - 3.1	6	66.7	2	33.3	7	77.8	2	33.3	5	55.6	3	50.0
3.1 - 4.0	3	33.3	2	33.3	6	66.7	4	66.7	5	55.6	4	66.7
BY CLASSIFICATION												
Freshman	1	16.7	0	00.0	4	66.7	1	50.0	5	83.3	2	100.0
Sophomore	1	12.5	2	33.3	5	62.5	4	66.7	4	50.0	4	66.7
Junior	5	55.5	2	33.3	3	33.3	3	50.0	6	66.7	3	50.0
Senior	4	44.5	0	00.0	6	66.7	1	20.0	4	44.4	1	20.0
BY ENROLLMENT												
Under 7 Hours	3	75.0	0	00.0	1	25.0	0	00.0	1	25.0	0	00.0
7 to 17 Hours	3	33.3	0	00.0	7	77.8	4	66.7	5	55.6	3	50.0
Over 17 Hours	3	33.3	3	50.0	7	77.8	2	33.3	6	66.7	1	16.7
BY EMPLOYMENT												
None	4	44.5	1	16.7	7	77.8	3	50.0	5	55.6	5	83.3
1 to 21 Hours	1	11.1	2	33.3	8	88.9	2	33.3	5	55.6	4	66.7
Over 21 Hours	4	44.5	2	33.3	6	66.7	2	33.3	4	44.4	1	16.7
BY MAJOR												
Business	3	33.3	0	00.0	8	88.9	3	50.0	5	55.6	4	66.7
Non-business	1	11.1	0	00.0	4	44.5	1	25.0	5	55.6	1	25.0
BY SEX												
Male	4	44.5	1	16.7	7	77.8	4	66.7	3	33.3	4	66.7
Female	2	22.2	1	16.7	6	66.7	4	66.7	7	77.8	3	50.0

TABLE XVII (Continued)

Item	Progressive Attitude-FB		Progressive Attitude-NFB		Presentation of Subject-FB		Presentation of Subject-NFB		Stimulating Intellectual Curiosity-FB		Stimulating Intellectual Curiosity-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	5	55.6	4	66.7	5	55.6	3	50.0	4	44.4	1	16.7
BY GRADE AVERAGE												
No Prior	3	50.0	1	50.0	3	50.0	1	50.0	3	50.0	1	50.0
Under 2.1	3	37.5	2	40.0	2	25.0	2	40.0	4	50.0	0	00.0
2.1 - 3.1	5	55.6	2	33.3	6	66.7	2	33.3	5	55.6	1	16.7
3.1 - 4.0	4	44.4	3	50.0	3	33.3	5	83.3	3	33.3	3	50.0
BY CLASSIFICATION												
Freshman	4	66.7	2	100.0	2	33.3	1	50.0	3	50.0	2	100.0
Sophomore	3	37.5	4	66.7	4	50.0	2	33.3	4	50.0	2	33.3
Junior	4	44.4	2	33.3	4	44.4	1	16.7	3	33.3	0	00.0
Senior	4	44.4	1	20.0	4	44.4	1	20.0	2	22.2	1	20.0
BY ENROLLMENT												
Under 7 Hours	1	25.0	0	00.0	3	75.0	0	00.0	2	50.0	1	50.0
7 to 17 Hours	5	55.6	3	50.0	4	44.4	3	50.0	5	55.6	3	50.0
Over 17 Hours	6	66.7	2	33.3	5	55.6	2	33.3	6	66.7	2	33.3
BY EMPLOYMENT												
None	4	44.4	1	16.7	5	55.6	4	66.7	6	66.7	2	33.3
1 to 21 Hours	6	66.7	1	16.7	4	44.4	1	16.7	4	44.4	2	33.3
Over 21 Hours	3	33.3	2	33.3	2	22.2	2	33.3	5	55.6	2	33.3
BY MAJOR												
Business	5	55.6	3	50.0	3	33.3	3	50.0	5	55.6	1	16.7
Non-business	4	44.4	1	25.0	4	44.4	0	00.0	2	22.2	3	75.0
BY SEX												
Male	6	66.7	3	50.0	4	44.4	4	66.7	2	22.2	1	16.7
Female	4	44.4	3	50.0	4	44.4	3	50.0	3	33.3	2	33.3

TABLE XVII (Continued)

Item	Proportion and Humor-FB		Proportion and Humor-NFB		Personal Peculiarities-FB		Personal Peculiarities-NFB	
	N	%	N	%	N	%	N	%
MEDIAN RESPONSE								
All Categories	6	66.7	4	66.7	8	88.9	4	66.7
BY GRADE AVERAGE								
No Prior	4	66.7	1	50.0	4	66.7	2	100.0
Under 2.1	3	37.5	1	20.0	2	25.0	2	40.0
2.1 - 3.1	5	55.6	4	66.7	7	77.8	5	83.3
3.1 - 4.0	5	55.6	5	16.7	4	44.4	4	66.7
BY CLASSIFICATION								
Freshman	3	50.0	2	100.0	4	66.7	1	50.0
Sophomore	5	62.5	4	66.7	4	50.0	4	66.7
Junior	3	33.3	1	16.7	7	77.8	3	50.0
Senior	4	44.4	1	20.0	5	55.6	1	20.0
BY ENROLLMENT								
Under 7 Hours	1	25.0	0	00.0	1	25.0	0	00.0
7 to 17 Hours	7	77.8	4	66.7	7	77.8	4	66.7
Over 17 Hours	7	77.8	3	50.0	5	55.6	1	16.7
BY EMPLOYMENT								
None	7	77.8	3	50.0	7	77.8	4	66.7
1 to 21 Hours	4	44.4	4	66.7	6	66.7	4	66.7
Over 21 Hours	4	44.4	3	50.0	5	55.6	4	66.7
BY MAJOR								
Business	7	77.8	4	66.7	8	88.9	4	66.7
Non-business	7	77.8	2	50.0	4	44.4	3	75.0
BY SEX								
Male	5	55.6	4	66.7	6	66.7	4	66.7
Female	5	55.6	2	33.3	7	77.8	3	50.0

TABLE XVII (Continued)

Item	Self-Reliance and Confidence-FB		Self-Reliance and Confidence-NFB		Personal Appearance-NF		Personal Appearance-NFB		Teachers' Over-all Rating-FB		Teachers' Over-all Rating-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	6	66.7	5	83.3	5	55.6	5	83.3	4	44.4	1	16.7
BY GRADE AVERAGE												
No Prior	5	83.3	1	50.0	4	66.7	2	100.0	5	83.3	0	00.0
Under 2.1	2	25.0	2	40.0	4	50.0	3	60.0	3	37.5	0	00.0
2.1 - 3.1	7	77.8	4	66.7	7	77.8	6	100.0	7	77.8	2	33.3
3.1 - 4.0	4	44.4	3	50.0	3	33.3	4	66.7	3	33.3	1	16.7
BY CLASSIFICATION												
Freshman	6	100.0	1	50.0	3	50.0	2	100.0	5	83.3	0	00.0
Sophomore	6	75.0	5	83.3	2	25.0	4	66.7	4	50.0	4	66.7
Junior	4	44.4	6	100.0	4	44.4	4	66.7	4	44.4	1	16.7
Senior	4	44.4	2	40.0	3	33.3	2	40.0	3	33.3	0	00.0
BY ENROLLMENT												
Under 7 Hours	3	75.0	2	100.0	0	00.0	0	00.0	3	25.0	1	50.0
7 to 17 Hours	7	77.8	2	33.3	6	66.7	5	83.3	4	44.4	3	50.0
Over 17 Hours	4	44.4	2	33.3	1	11.1	3	50.0	2	22.2	3	50.0
BY EMPLOYMENT												
None	7	77.8	2	33.3	6	66.7	6	100.0	6	66.7	2	33.3
1 to 21 Hours	5	55.6	2	33.3	4	44.4	4	66.7	3	33.3	2	33.3
Over 21 Hours	3	33.3	4	66.7	5	55.6	2	33.3	4	44.4	2	33.3
BY MAJOR												
Business	7	77.8	3	50.0	6	66.7	5	83.3	5	55.6	0	00.0
Non-business	3	33.3	2	50.0	5	55.6	2	50.0	2	22.2	2	50.0
BY SEX												
Male	5	55.6	5	83.3	6	66.7	5	83.3	5	55.6	3	50.0
Female	5	55.6	4	66.7	7	77.8	3	50.0	3	33.3	1	16.7

according to representative scales of the Purdue Rating Scale for Instruction and analyzed by grade average, year of college, enrollment, employment, academic major, and sex variables. Additionally, composite median-response ratings were compared.

Interest in the Subject. On the interest-in-the-subject attribute, no higher over-all median responses were found for the second administration of the evaluative instrument to members of the no-feedback group, and evidence for three feedback teachers, or 33.3 percent, showed that higher median ratings were present on end-of-term evaluations. Three-fourths of these latter-named participants received higher median ratings on the second evaluation from students enrolled in less than seven hours, and based upon responses of seniors, 44.5 percent were given such higher end-of-term ratings. In both instances, data revealed that no member of the feedback group received a higher median rating at the close of the semester.

Sympathetic Attitude Toward Students. On the characteristic of sympathetic attitude toward students, information showed that every feedback teacher received a higher composite median-response rating on data gathered at the close of the semester; two-thirds of the other group of instructors and assistant professors were rated in a similar manner. Several appreciable differences in percents of higher ratings were present. Without exception, these responses pertained to members of the feedback group. As compared to 20 percent of the no-feedback members, two-thirds of the feedback group were given higher median ratings on the second administration by seniors. While 77.8 percent of these latter-named teachers received higher end-of-term median ratings from students with grade averages between 2.1 and 3.1 and

students enrolled in over 17 hours, the comparable figure for remaining teachers in both cases was 33.3 percent. Finally, 88.9 percent of the feedback subjects were given higher median evaluations on the second administration by students who were employed between 1 and 21 hours per week; however, only 33.3 percent of the participants who received no information about fall ratings received such higher second ratings.

Fairness in Grading. Regardless of feedback or no-feedback grouping, no appreciable differences were indicated between initial and second composite median-response ratings for the fairness-in-grading variable. With a single exception, this pattern of no extensive variations was present for subcategory comparisons. According to the data, two-thirds of the feedback instructors and assistant professors were given higher median ratings on the second evaluation by students who carried over 17 hours. Information showed that one no-feedback subject, who represented 16.7 percent of the group, was given such a higher second median rating.

Liberal and Progressive Attitude. No large difference was present between initial and second ratings in either the feedback group or the no-feedback group for composite median-response ratings that pertained to teachers' liberal and progressive attitudes. Nevertheless, based upon answers from students who were employed between 1 and 21 hours weekly, data showed that two-thirds of the feedback group, but only one no-feedback teacher, received higher median ratings on the second evaluation.

Presentation of Subject Matter. Despite feedback or no-feedback grouping, no appreciable dissimilarity was noted between initial and second median-response ratings on the presentation-of-subject-matter

characteristic. However, data revealed that three-fourths of the feedback subjects were given higher median evaluations in December by students who were enrolled in less than seven hours, and 44.4 percent of the same group received higher median ratings on the second administration by non-business students. In both instances, no member of the no-feedback group was rated more highly on the second evaluation. However, based upon responses of students with grade averages between 3.1 and 4.0, results indicated that 83.3 percent of the latter group had higher median ratings in December; for feedback participants, responses showed that only a third were rated accordingly.

Stimulation of Intellectual Curiosity. Even though 44.4 percent of the feedback group of instructors and assistant professors were given higher median-response ratings on the second administration of the rating device, only one no-feedback participant, who represented 16.7 percent of this group, received a higher median rating in December for stimulation of intellectual curiosity. However, every no-feedback teacher was given a higher second median rating by freshmen students; this trend was present for half of the feedback group. Upon analysis of responses of non-business students, this response pattern was replicated.

For three-fourths of the no-feedback group, data revealed higher end-of-term ratings; accordingly, data showed that 22.2 percent of the feedback subjects were given similar ratings. In one instance, ratings by students with grade averages under 2.1, members of the latter classification were accorded appreciably higher ratings on the second administration. While half of the group received a higher median rating,

not a single no-feedback participant was given a higher median rating on the December evaluation.

Sense of Proportion and Humor. On the second administration of the rating instrument, no appreciable dissimilarity was found between higher median-response ratings of feedback and no-feedback groups. Nevertheless, based upon data gathered from freshmen, every participant in the no-feedback classification received a higher median rating at the close of the term; only half of the feedback members were given such higher second ratings.

Personal Peculiarities. For teachers' personal peculiarities, no predominant differences in composite median-response ratings existed for comparisons between the feedback and no-feedback groups of instructors and assistant professors. Likewise, no extensive discrepancies existed for comparisons between data classified according to the various subcategories, such as grade average or year of college.

Self-reliance and Confidence. Comparison of median-rating responses showed that no major difference was present between feedback and no-feedback groups for the characteristic of self-reliance and confidence. However, as compared to half of the no-feedback group, all of the feedback members received higher median ratings on the second evaluation from freshmen students. According to tabulated data, 77.8 percent of the feedback teachers, but only 33.3 percent of the no-feedback group, were given higher end-of-term median ratings by students who had no outside employment and students who carried between 7 and 17 hours.

Personal Appearance. On the personal-appearance attribute, no large differences in higher over-all median responses were found

for the second administration of the evaluative instrument to members of feedback and no-feedback groups. However, while half of the feedback members received higher median ratings on the second administration, each no-feedback instructor or assistant professor who taught freshmen students was given a higher second median rating.

Over-all Teaching Effectiveness. Although 44.4 percent of the feedback group received higher composite median-response ratings on end-of-term evaluations, evidence revealed that only one no-feedback participant, who represented 16.7 percent of this group, was given a higher second rating on teacher's over-all teaching effectiveness. However, for 83.3 percent of the feedback instructors and assistant professors, responses showed higher median ratings were given at the close of the semester by students with no prior grade average and freshmen students. In both of these cases, no single member of the group that did not receive knowledge of initial results was given a higher median rating in December. Additionally, 77.8 percent of the feedback subjects, as compared to 33.3 percent of the no-feedback group, received higher evaluations from students with grade averages between 2.1 and 3.1 on the December administration of the testing instrument. Based upon responses of business majors, no member of the no-feedback group received a higher median rating on the second administration; however, data revealed that five members, or 55.6 percent, of the feedback participants were given such higher median ratings.

Summary. For instructor-assistant professor comparisons, no major dissimilarities were found between ratings on initial and second administrations of the evaluative instrument. As compared

to the no-feedback group, data for feedback teachers indicated higher proportions of composite median-response ratings on the second administration of the testing instrument for these variables: interest in the subject, sympathetic attitude toward students, presentation of subject matter, stimulation of intellectual curiosity, personal peculiarities, and over-all teaching effectiveness. However, for no-feedback teachers, higher second ratings predominated for scales related to fairness in grading, liberal and progressive attitude, self-reliance and confidence, and personal appearance.

A variety of changes was present for data categorized by grade average, year of college, enrollment, employment, academic major, and sex variables. Yet, a pattern of higher second ratings was not consistently associated with either the feedback group or the no-feedback group.

Comparison of Initial and Second Ratings for Associate Professors and Professors

For associate professors and professors, Table XVIII presents an indication of the proportion who received higher evaluations from students on the second administration of the rating instrument than they received on the initial administration. The table shows this information for both feedback and no-feedback groups. These data were classified according to representative scales of the Purdue Rating Scale for Instruction and analyzed by grade average, year of college, enrollment, employment, academic major, and sex variables. Additionally, composite median-rating responses were compared.

TABLE XVIII

COMPARISONS OF NUMBER AND PERCENT OF HIGHER MEDIAN RATINGS UPON THE SECOND EVALUATION
FOR ASSOCIATE PROFESSORS AND PROFESSORS

Item	Interest in Subject-FB		Interest in Subject-NFB		Sympathetic Attitude-FB		Sympathetic Attitude-NFB		Fairness in Grading-FB		Fairness in Grading-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	0	00.0	1	16.7	0	00.0	4	66.7	1	33.3	1	33.3
BY GRADE AVERAGE												
Under 2.1	1	33.3	3	25.0	0	00.0	2	50.0	0	00.0	0	00.0
2.1 - 3.1	0	00.0	1	16.7	1	33.3	4	66.7	1	33.3	1	33.3
3.1 - 4.0	2	66.7	3	50.0	1	33.3	4	66.7	3	100.0	3	100.0
BY CLASSIFICATION												
Sophomore	0	00.0	2	40.0	1	33.3	4	80.0	2	66.7	2	66.7
Junior	2	66.7	1	16.7	0	00.0	4	66.7	1	33.3	1	33.3
Senior	0	00.0	3	50.0	1	33.3	4	66.7	1	33.3	1	33.3
BY ENROLLMENT												
7 to 17 Hours	0	00.0	0	00.0	0	00.0	4	66.7	2	66.7	2	66.7
Over 17 Hours	1	33.3	2	40.0	2	66.7	3	60.0	1	33.3	1	33.3
BY EMPLOYMENT												
None	1	33.3	1	16.7	2	66.7	3	50.0	2	66.7	2	66.7
1 to 21 Hours	0	00.0	1	16.7	1	33.3	1	16.7	1	33.3	1	33.3
Over 21 Hours	0	00.0	3	50.0	0	00.0	5	83.3	1	33.3	1	33.3
BY MAJOR												
Business	0	00.0	3	50.0	0	00.0	4	66.7	1	33.3	1	33.3
Non-business	2	66.7	1	16.7	1	33.3	3	50.0	1	50.0	1	50.0
BY SEX												
Male	0	00.0	0	00.0	0	00.0	3	50.0	1	33.3	1	33.3
Female	1	33.3	2	33.3	1	33.3	3	50.0	2	66.7	2	66.7

TABLE XVIII (Continued)

Item	Progressive Attitude-FB		Progressive Attitude-NFB		Presentation of Subject-FB		Presentation of Subject-NFB		Stimulating Intellectual Curiosity-FB		Stimulating Intellectual Curiosity-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE	0	00.0	6	100.0	2	66.7	4	66.7	0	00.0	4	66.7
All Categories												
BY GRADE AVERAGE												
Under 2.1	0	00.0	1	25.0	1	50.0	1	25.0	0	00.0	3	75.0
2.1 - 3.1	1	33.3	6	100.0	2	66.7	2	33.3	0	00.0	3	50.0
3.1 - 4.0	0	00.0	5	83.3	3	100.0	5	83.3	0	00.0	5	83.3
BY CLASSIFICATION												
Sophomore	0	00.0	3	60.0	2	66.7	4	80.0	0	00.0	3	60.0
Junior	0	00.0	4	66.7	1	33.3	4	66.7	2	66.7	5	83.3
Senior	1	33.3	4	66.7	2	66.7	3	50.0	0	00.0	2	33.3
BY ENROLLMENT												
7 to 17 Hours	0	00.0	5	83.3	2	66.7	4	66.7	0	00.0	3	50.0
Over 17 Hours	1	33.3	3	60.0	2	66.7	1	20.0	0	00.0	2	40.0
BY EMPLOYMENT												
None	0	00.0	5	83.3	2	66.7	5	83.3	1	33.3	5	83.3
1 to 21 Hours	0	00.0	2	33.3	2	66.7	3	50.0	0	00.0	2	33.3
Over 21 Hours	0	00.0	4	66.7	1	33.3	3	50.0	1	33.3	5	83.3
BY MAJOR												
Business	0	00.0	6	100.0	2	66.7	3	50.0	0	00.0	3	50.0
Non-business	0	00.0	3	50.0	1	50.0	4	66.7	1	50.0	3	50.0
BY SEX												
Male	0	00.0	5	83.3	1	33.3	5	83.3	0	00.0	2	33.3
Female	2	66.7	2	33.3	1	33.3	2	33.3	0	00.0	3	50.0

TABLE XVIII (Continued)

Item	Proportion and Humor-FB		Proportion and Humor-NFB		Personal Peculiarities-FB		Personal Peculiarities-NFB	
	N	%	N	%	N	%	N	%
MEDIAN RESPONSE								
All Categories	1	33.3	6	100.0	0	00.0	4	66.7
BY GRADE AVERAGE								
Under 2.1	0	00.0	3	75.0	0	00.0	2	50.0
2.1 - 3.1	2	66.7	3	50.0	0	00.0	4	66.7
3.1 - 4.0	1	33.3	5	83.3	0	00.0	6	100.0
BY CLASSIFICATION								
Sophomore	2	66.7	2	40.0	1	33.3	4	80.0
Junior	2	66.7	6	100.0	0	00.0	4	66.7
Senior	1	33.3	5	83.3	1	33.3	3	50.0
BY ENROLLMENT								
7 to 17 Hours	1	33.3	6	100.0	0	00.0	4	66.7
Over 17 Hours	2	66.7	2	40.0	2	66.7	3	60.0
BY EMPLOYMENT								
None	2	66.7	6	100.0	1	33.3	5	83.3
1 to 21 Hours	1	33.3	4	66.7	1	33.3	4	66.7
Over 21 Hours	1	33.3	4	66.7	0	00.0	3	50.0
BY MAJOR								
Business	1	33.3	6	100.0	0	00.0	5	83.3
Non-business	1	50.0	1	16.7	1	50.0	3	50.0
BY SEX								
Male	2	66.7	6	100.0	1	33.3	3	50.0
Female	0	00.0	3	50.0	1	33.3	5	83.3

TABLE XVIII (Continued)

Item	Self-Reliance and Confidence-FB		Self-Reliance and Confidence-NFB		Personal Appearance-NF		Personal Appearance-NFB		Teachers' Over-all Rating-FB		Teachers' Over-all Rating-NFB	
	N	%	N	%	N	%	N	%	N	%	N	%
MEDIAN RESPONSE												
All Categories	1	33.3	3	50.0	1	33.3	5	83.3	0	00.0	3	50.0
BY GRADE AVERAGE												
Under 2.1	0	00.0	2	50.0	1	33.3	2	50.0	0	00.0	3	75.0
2.1 - 3.1	1	33.3	5	83.3	1	33.3	5	83.3	1	33.3	2	33.3
3.1 - 4.0	1	33.3	4	66.7	1	33.3	2	33.3	0	00.0	3	50.0
BY CLASSIFICATION												
Sophomore	1	33.3	2	40.0	1	33.3	3	60.0	1	33.3	3	60.0
Junior	1	33.3	4	66.7	0	00.0	5	83.3	1	33.3	2	33.3
Senior	2	66.7	2	33.3	2	66.7	1	16.7	0	00.0	3	50.0
BY ENROLLMENT												
7 to 17 Hours	2	66.7	4	66.7	0	00.0	4	66.7	1	33.3	2	33.3
Over 17 Hours	1	33.3	3	60.0	1	33.3	2	40.0	1	33.3	2	40.0
BY EMPLOYMENT												
None	3	100.0	4	66.7	0	00.0	6	100.0	0	00.0	4	66.7
1 to 21 Hours	1	33.3	4	66.7	0	00.0	3	50.0	2	66.7	3	50.0
Over 21 Hours	2	66.7	2	33.3	1	33.3	3	50.0	0	00.0	4	66.7
BY MAJOR												
Business	3	100.0	3	50.0	1	33.3	5	83.3	0	00.0	3	50.0
Non-business	1	50.0	0	00.0	1	50.0	3	50.0	1	50.0	4	66.7
BY SEX												
Male	2	66.7	3	50.0	1	33.3	5	83.3	0	00.0	3	50.0
Female	1	33.3	4	66.7	2	66.7	4	66.7	1	33.3	2	33.3

Interest in the Subject. On the interest-in-the-subject characteristic, no higher composite median-response ratings were found on the second administration of the evaluative instrument to members of the feedback group, and one teacher, or 16.7 percent of the no-feedback group of associate professors and professors, received such a higher median rating. While two feedback members, or 66.7 percent, were given higher median ratings on the second administration by juniors and non-business students, only one no-feedback participant, or 16.7 percent, received a higher median rating in each, feedback and no feedback, category. Data showed that half of the no-feedback subjects were given higher end-of-term median ratings by seniors, business majors, and students employed over 21 hours weekly; no higher median ratings were found on ratings gathered at the close of the semester for teachers in the feedback category. Finally, as compared to one no-feedback member, two-thirds of the feedback group were given higher median ratings at the close of the term by non-business students.

Sympathetic Attitude Toward Students. On the characteristic of sympathetic attitude toward students, no associate professor or professor who belonged to the feedback group received a higher composite median-response rating on the second administration. Data showed that four members, or two-thirds of the no-feedback group, were given higher second median ratings. Additionally, the pattern of no higher median ratings on second administration was replicated by members of the feedback classification for responses from students with grade averages below 2.1, students enrolled between 7 and 17 hours, students employed over 21 hours weekly, juniors, males, and business majors. In each of these instances, at least half of the no-feedback subjects were

given higher ratings at the close of the term. Finally, as related to sophomore students, one member of the feedback group was given a higher second rating; however, accumulated information showed that four no-feedback teachers, or 80 percent, were evaluated in a similar manner.

Fairness in Grading. On the fairness-in-grading characteristic, no appreciable dissimilarities in higher composite median-response ratings were found for the second administration of the evaluative instrument to members of feedback and no-feedback groups of associate professors and professors. Likewise, no extensive discrepancies existed for comparisons between data classified according to various subcategories, such as grade average or year of college.

Liberal and Progressive Attitude. On ratings for teachers' liberal and progressive attitudes, at least half of the no-feedback associate professors and professors who had students in these categories were given higher median ratings by them on the second ratings, which were gathered at the close of the semester:

Students with grade averages between 2.1 and 3.1, students with grade averages between 3.1 and 4.0, students enrolled between 7 and 17 hours, students enrolled in over 17 hours, students with no outside employment, students employed over 21 hours weekly, business majors, non-business majors, males, sophomores, juniors, and seniors.

However, in each of the above-named categories, one or fewer feedback participants was given a higher end-of-term median rating.

Presentation of Subject Matter. For teachers' presentations of the subject matter, no predominant differences in composite response ratings were found for comparisons between feedback and no-feedback groups of associate professors and professors. Although evidence revealed that two feedback teachers received higher median

ratings on the second evaluation from students enrolled in over 17 hours, only one no-feedback member, or 20 percent, was given a higher median rating on the second administration. However, as compared to one feedback teacher, five no-feedback teachers, or 83.3 percent, received higher second ratings in December from male students.

Stimulation of Intellectual Curiosity. According to the data, no member of the feedback group was given a higher composite median-response rating at the end of the term on teachers' stimulations of intellectual curiosity; yet, two-thirds of the no-feedback associate professors and professors were given such higher ratings. No higher second evaluations were found for feedback responses from these student classifications:

Students with grade averages below 2.1, students with grade averages between 2.1 and 3.1, students with grade averages between 3.1 and 4.0, students enrolled between 7 and 17 hours students enrolled in over 17 hours, students employed between 1 and 21 hours weekly, business majors, males, females, sophomores, and seniors.

One feedback teacher was given a higher end-of-term rating by students with no outside employment and students employed over 21 hours weekly. In the case of no-feedback teachers, data indicated that five participants, or 83.3 percent, received higher median ratings on the second administration of the Purdue Rating Scale for Instruction from both of the above-named categories of respondents.

Sense of Proportion and Humor. While every no-feedback associate professor or professor received a higher composite end-of-term median response on the sense-of-proportion-and-humor attribute, data for one member of the feedback group indicated a higher second rating.

Based upon replies grouped according to these classifications, data

showed higher evaluations for no-feedback teachers on median ratings gathered in December:

Students with grade averages below 2.1, students with grade averages between 3.1 and 4.0, seniors, students enrolled between 7 and 17 hours, business majors, and females.

Referring to the above classifications, no more than one member of the feedback group of associate professors and professors was given a higher median rating on the second evaluation in any of the respondent categories.

Personal Peculiarities. Even though two-thirds of the no-feedback associate professors and professors received higher second median evaluations on teachers' personal peculiarities, no member of the feedback group was given a higher second rating. For responses categorized according to these student classifications, data for no-feedback teachers showed a pattern of higher second median ratings:

Students with grade averages under 2.1, students with grade averages between 2.1 and 3.1, students with grade averages between 3.1 and 4.0, sophomores, juniors, students enrolled between 7 and 17 hours, students employed over 21 hours weekly, students with no outside employment, business majors, and females.

Self-reliance and Confidence. For the self-reliance and confidence characteristic, no predominant differences in composite median-response ratings were found for comparisons between feedback and no-feedback groups of associate professors and professors. However, every feedback participant, as compared to half of the no-feedback group, was given a higher median score on second evaluations by business students. Yet, none of the teachers who were in the no-feedback category received such a higher median rating in December. At least half of those teachers who received no knowledge of initial ratings were given higher second median ratings by students with grade averages less

than 2.1 and those students with grade averages between 2.1 and 3.1. Accumulated information showed that no more than one feedback subject was given a higher median score.

Personal Appearance. On the personal-appearance attribute, five members, or 83.3 percent, of the no-feedback group received higher median-response ratings on the second administration of the Purdue Rating Scale for Instruction. Only one member of the feedback group was given a higher median rating at the close of the semester. On responses categorized according to the following student classifications, members of the no-feedback grouping were given higher median ratings at the end of the semester:

Students with grade averages between 2.1 and 3.1, students enrolled between 7 and 17 hours, students with no outside employment, students employed between 1 and 21 hours per week, business majors, and males.

For the above classifications, data revealed no circumstance where more than one feedback participant was given a higher median rating on the second administration of the evaluative instrument. Considering replies of seniors, 66.7 percent of the feedback group, but only one no-feedback member, were given higher second median ratings.

Over-all Teaching Effectiveness. Although half of the no-feedback associate professors and professors were given higher median-response ratings on the second evaluation for over-all teaching effectiveness, evidence indicated that no member of the feedback group received a higher rating in December. Additionally, at least half of the no-feedback participants were accorded higher median ratings on the second administration from students in these classifications:

Grade averages below 2.1, grade averages between 3.1 and 4.0, no outside employment, employment over 21 hours weekly, business majors, and males.

For the above comparisons, no instance was found in which more than one feedback participant was given a higher median rating at the close of the semester.

Summary. For associate professor and professor comparisons, higher median-response ratings on the second administration of the rating instrument predominated for the no-feedback group. With the exception of two scales on the rating instrument, fairness in grading and presentation of subject matter, members of the no-feedback category received higher second median ratings.

As compared to initial ratings, a variety of higher ratings was present for data classified by grade average, year of college, enrollment, employment, academic major, and sex variables. None of the higher ratings was exclusively associated with either the feedback group or the no-feedback group.

Teacher Self-image Comparisons

Do significant differences exist between teachers' self images of student ratings collected near the beginning of the course and similar images gathered at the end of the course? Specifically, on initial and second ratings, each participant was asked to indicate what he believed to be the score that most nearly represented the average (median) rating that would be attributed to him by students on each of the first 10 scales of the Purdue Rating Scale for

Instruction. In order to determine if significant differences were present, responses gathered in October were compared to similar responses obtained in December.

Procedure for Analysis of Responses

For both feedback and no-feedback groups, the Wilcoxon test was used to determine if significant differences existed. If the magnitude of dissimilarity between ratings was greater than chance expectation at either the .05 or .01 level of significance, a significant difference was present. Otherwise, any apparent difference in rankings could be attributed to chance expectation.

A \underline{t} value was computed for each comparison studied. Whenever the \underline{t} value was positive, such as +16.5 or +11.0, lower ratings predominated for the second administration of the evaluative instrument. Whenever the \underline{t} value was negative, such as -12.0 or -20.0, higher median ratings prevailed on the second evaluation, since \underline{t} represents the sum of the smaller like-signed rankings (whether positive or negative).

Comparisons of Initial and Second Self-image Evaluations

Table XIX presents comparisons between initial and second self-image ratings for both feedback and no-feedback respondents. For the feedback group, no significant differences were found between teachers' self images of student ratings taken at the beginning of the semester and similar ratings gathered at the close of the term.

Examination of data gathered for no-feedback teachers showed only one significant difference between initial and second ratings. At the close of the term, no-feedback teachers rated themselves higher on their

TABLE XIX

COMPARISONS OF INITIAL AND SECOND SELF-IMAGE EVALUATIONS FOR
FEEDBACK AND NO-FEEDBACK TEACHERS

Factor	Feedback Group			No-feedback Group		
	N	t value	Level of Significance	N	t value	Level of Significance
Interest in Subject	7	-12.0	ns	9	-20.0	ns
Sympathetic Attitude Toward Students	8	+16.5	ns	7	+13.0	ns
Fairness in Grading	7	+11.0	ns	7	+12.0	ns
Liberal and Progressive Attitude	9	-21.0	ns	8	+ 8.0	ns
Presentation of Subject Matter	9	- 9.0	ns	8	+ 7.0	ns
Sense of Proportion and Humor	8	-13.0	ns	8	- 8.5	ns
Self-Reliance and Confidence	9	- 9.0	ns	9	-22.0	ns
Personal Peculiarities	9	-13.5	ns	8	-13.0	ns
Personal Appearance	10	+25.5	ns	9	-22.5	ns
Stimulating Intellectual Curiosity	9	-15.0	ns	10	- 3.0	.01

abilities to stimulate intellectual curiosity. The difference was significant at the .01 level.

Teacher Self-image Ratings and Student Ratings

Do significant differences exist between teachers' self images of student ratings and actual ratings gathered from students? In order to answer this question, each teacher was asked to indicate what he believed to be the score that most nearly represented the average (median) rating that would be given by students on the first 10 scales of the Purdue Rating Scale for Instruction and a question related to over-all teaching effectiveness. Responses of teachers were compared to actual ratings given by students.

Procedure for Analysis of Responses

The Mann-Whitney U test was used to determine if significant differences existed between student and teacher ratings for each group, feedback or no feedback, on initial and second ratings. Specifically, if the computed value of U was equal to or less than a value specified in a table of critical values for the Mann-Whitney U statistic, a significant difference existed. In event the computed value of U exceeded the value specified in the table of critical values, there was no significant difference between ratings of students and teachers.

Comparisons Between Initial Self-image and Student Evaluations of No-feedback Teachers

Table XX compares initial self-image ratings of no-feedback teachers and student ratings of these same teachers. For teachers'

TABLE XX

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN INITIAL SELF-IMAGE AND STUDENT EVALUATIONS OF NO-FEEDBACK TEACHERS

Factor	U Value	Level of Significance	Direction of Significance
Interest in Subject	61.0	ns	
Sympathetic Attitude Toward Students	40.0	ns	
Fairness in Grading	39.5	ns	
Liberal and Progressive Attitude	26.0	.01	Self Image Ratings Higher
Presentation of Subject Matter	37.0	.05	Self Image Ratings Higher
Sense of Proportion and Humor	39.0	ns	
Self-Reliance and Confidence	41.5	ns	
Personal Peculiarities	45.0	ns	
Personal Appearance	62.0	ns	
Stimulating Intellectual Curiosity	46.0	ns	
Over-all Teaching Effectiveness	18.0	.01	Self Image Ratings Higher

self-image responses and actual student ratings, three significantly different rating patterns were found. In each instance, teachers in the no-feedback group rated themselves more highly at the beginning of the semester than students rated them. At the .01 level of significance, higher ratings existed for two characteristics: liberal and progressive attitude and over-all teaching effectiveness. At the .05 level of significance, no-feedback teachers attributed higher initial ratings to themselves for their abilities to present subject matter.

Comparisons Between Second Self-image and Student Evaluations of No-feedback Teachers

At the close of the term, each no-feedback teacher was asked to indicate what he believed to be the score that most nearly represented the median rating that would be given by students on the first 10 scales of the Purdue Rating Scale for Instruction and a question related to over-all teaching effectiveness. At the same time, students were asked to rate these teachers on the same instructional factors. Table XXI presents comparisons between teachers' self images of student responses and actual ratings obtained from students.

Similar to ratings gathered in October, teachers' self-image ratings were still significantly higher than student ratings for two characteristics: presentation of subject matter and over-all teaching effectiveness. For ratings on sense of proportion and humor as well as stimulation of intellectual curiosity, teachers' self-image responses were significantly higher than responses given by students.

TABLE XXI

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN SECOND SELF-IMAGE AND STUDENT EVALUATIONS OF NO-FEEDBACK TEACHERS

Factor	U Value	Level of Significance	Direction of Significance
Interest in Subject	42.5	ns	
Sympathetic Attitude Toward Students	39.0	ns	
Fairness in Grading	53.0	ns	
Liberal and Progressive Attitude	46.0	ns	
Presentation of Subject Matter	31.5	.05	Self Image Ratings Higher
Sense of Proportion and Humor	00.0	.01	Self Image Ratings Higher
Self-Reliance and Confidence	39.0	ns	
Personal Peculiarities	49.0	ns	
Personal Appearance	66.0	ns	
Stimulating Intellectual Curiosity	30.0	.05	Self Image Ratings Higher
Over-all Effectiveness	6.0	.01	Self Image Ratings Higher

Comparisons Between Initial Self-image and Student Evaluations of Feedback Teachers

While the previous discussion related to student-teacher ratings of no-feedback teachers, the same procedure was followed in examination of response data for feedback participants. Table XXII shows a comparison of Mann-Whitney U values between teachers' self-image ratings and actual student ratings for data gathered on the first administration of the evaluation instrument. Two significant differences between teachers' self-image ratings and students' ratings were found. Teachers rated themselves significantly higher on characteristics of sympathetic attitude toward students and over-all teaching effectiveness.

Comparisons Between Second Self-image and Student Evaluations of Feedback Teachers

Table XXIII shows comparisons between teachers' self images of student responses and actual ratings gathered from students. These data were obtained on the second administration of the Purdue Rating Scale for Instruction and denote one especially interesting observation. Student ratings were significantly higher than teachers' self-image ratings for the characteristic of personal peculiarities. Of all the various comparisons that involved both feedback and no-feedback groups, this was the only case in which significantly higher ratings by students were found. Similar to ratings gathered in October, these teachers rated themselves significantly higher than students rated them on the attribute of over-all teaching effectiveness.

TABLE XXII

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN INITIAL SELF-IMAGE AND
STUDENT EVALUATIONS OF FEEDBACK TEACHERS

Factor	U Value	Level of Significance	Direction of Significance
Interest in Subject	50.0	ns	
Sympathetic Attitude Toward Students	33.0	.05	Self Image Ratings Higher
Fairness in Grading	49.0	ns	
Liberal and Progressive Attitude	70.5	ns	
Presentation of Subject Matter	71.5	ns	
Sense of Proportion and Humor	59.0	ns	
Self-Reliance and Confidence	57.0	ns	
Personal Peculiarities	52.5	ns	
Personal Appearance	58.5	ns	
Stimulating Intellectual Curiosity	42.0	ns	
Over-all Effectiveness	15.0	.01	Self Image Ratings Higher

TABLE XXIII

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN SECOND SELF-IMAGE AND
STUDENT EVALUATIONS OF FEEDBACK TEACHERS

Factor	U Value	Level of Significance	Direction of Significance
Interest in Subject	45.0	ns	
Sympathetic Attitude Toward Students	52.0	ns	
Fairness in Grading	53.0	ns	
Liberal and Progressive Attitude	67.5	ns	
Presentation of Subject Matter	56.0	ns	
Sense of Proportion and Humor	59.0	ns	
Self-Reliance and Confidence	62.0	ns	
Personal Peculiarities	30.0	.05	Student Ratings Higher
Personal Appearance	50.0	ns	
Stimulating Intellectual Curiosity	63.5	ns	
Over-all Teaching Effectiveness	12.0	.01	Self Image Ratings Higher

Student-Peer Evaluations

Do significant differences exist between student ratings and peer (faculty) ratings of selected instructional factors? In order to answer this question, peer ratings, which were gathered at the close of the term, were compared to initial and second student ratings.

Comparisons Between Initial Student Evaluations and Peer (Faculty) Evaluations of Feedback Teachers

Mann-Whitney U values for comparisons between initial student evaluations and peer (faculty) evaluations of feedback teachers are shown in Table XXIV. When compared to ratings by faculty members, student ratings gathered in October for feedback participants showed only two significant differences. In both instances, students gave higher ratings for these characteristics: liberal and progressive attitudes and personal appearance. While the former difference in ratings was significant at the .05 level, the latter comparison was significant at the .01 level.

Comparisons Between Second Student Evaluations and Peer (Faculty) Evaluations of Feedback Teachers

Table XXV shows comparisons between peer (faculty) ratings and student ratings that were gathered at the close of the semester. The only significant difference among the various instructional factors involved higher ratings by students for the personal-appearance attribute. This difference was significant at the .01 level.

TABLE XXIV

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN INITIAL
STUDENT EVALUATIONS AND PEER EVALUATIONS
OF FEEDBACK TEACHERS

Factor	U Value	Level of Significance	Direction of Significance
Interest in Subject	38.0	ns	
Sympathetic Attitude Toward Students	45.0	ns	
Liberal and Progressive Attitude	36.5	.05	Student Ratings Higher
Self-Reliance and Confidence	65.0	ns	
Personal Peculiarities	54.5	ns	
Personal Appearance	8.0	.01	Student Ratings Higher
Over-all Teaching Effectiveness	71.0	ns	

TABLE XXV

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN THE SECOND
STUDENT EVALUATIONS AND PEER EVALUATIONS
OF FEEDBACK TEACHERS

Factor	U Value	Level of Significance	Direction of Significance
Interest in Subject	51.5	ns	
Sympathetic Attitude Toward Students	45.0	ns	
Liberal and Progressive Attitude	48.5	ns	
Self-Reliance and Confidence	56.0	ns	
Personal Peculiarities	45.0	ns	
Personal Appearance	15.0	.01	Student Ratings Higher
Over-all Teaching Effectiveness	71.0	ns	

Comparisons Between Initial Student Evaluations
and Peer (Faculty) Evaluations of No-feedback Teachers

Initial student ratings, which were gathered early in the semester, were compared to peer (faculty) ratings. As depicted in Table XXVI, only one significant difference was found between these groups of respondents. At the .01 level of significance, students rated no-feedback teachers more highly than peers rated them.

Comparisons Between Second Student Evaluations
and Peer (Faculty) Evaluations of No-feedback Teachers

Student ratings, which were gathered at the close of the semester, were compared to peer (faculty) ratings. These comparisons are presented in Table XXVII. As shown, only one significant difference was found. In this case, students rated no-feedback teachers more highly than faculty members rated them. The difference between ratings was significant at the .01 level.

Summary

As compared to median-response ratings gathered from students early in the semester, both feedback and no-feedback participants received significantly lower second ratings on the interest-in-subject variable. While feedback members were not accorded any significantly higher median-response ratings at the close of the term, no-feedback teachers showed significantly higher median-response ratings on two scales: sense of proportion and humor and personal appearance. Predominately different rating patterns were not associated with these

TABLE XXVI

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN INITIAL
STUDENT EVALUATIONS AND PEER EVALUATIONS
OF NO-FEEDBACK TEACHERS

Factor	Value	Level of Significance	Direction of Significance
Interest in Subject	33.0	ns	
Sympathetic Attitude Toward Students	28.0	ns	
Liberal and Progressive Attitude	25.0	ns	
Self-Reliance and Confidence	26.0	ns	
Personal Peculiarities	27.0	ns	
Personal Appearance	9.0	.01	Student Ratings Higher
Over-all Teaching Effectiveness	27.0	ns	

TABLE XXVII

MANN-WHITNEY U VALUES FOR COMPARISONS BETWEEN THE SECOND
STUDENT EVALUATIONS AND PEER EVALUATIONS
OF NO-FEEDBACK TEACHERS

Factor	Value	Level of Significance	Direction of Significance
Interest in Subject	38.5	ns	
Sympathetic Attitude Toward Students	33.0	ns	
Liberal and Progressive Attitude	26.0	ns	
Self-Reliance and Confidence	35.0	ns	
Personal Peculiarities	33.5	ns	
Personal Appearance	6.0	.01	Student Ratings Higher
Over-all Teaching Effectiveness	21.0	ns	

classifications; grade average, year of college, amount of enrollment, extent of employment, academic major, and sex of student.

Despite categorization into feedback and no-feedback groups, data for teachers who were under age 45 did not show any consistent differences between student ratings gathered early in the term and those ratings collected at the end of the semester. For the teachers who were over 45 years of age, higher end-of-term median-response ratings were primarily associated with no-feedback participants.

Even though some variations were present, no extensive dissimilarities were found on student ratings for feedback and no-feedback groups of instructors and assistant professors. Ratings for professors and associate professors indicated that no-feedback members tended to receive higher median-response ratings for evaluations gathered at the close of the semester.

With one exception, no significant differences were found, regardless of feedback or no-feedback grouping, between teachers' self images of student responses on the first and second evaluations. The one exception involved no-feedback teachers who perceived significantly higher end-of-term evaluations for their abilities to stimulate intellectual curiosity.

On both October and December ratings, no-feedback teachers perceived their ratings for presentation of subject matter and over-all teaching effectiveness to be significantly higher than actual student responses recorded for them. Only three additional significantly different ratings were found for these teachers; in each case, teachers' perceived ratings were higher than actual student ratings. Feedback participants also perceived their ratings for over-all teaching

effectiveness to be higher than actual student ratings. For this latter group, only two additional significantly different ratings were found.

Initial and second ratings were compared for teachers who were given feedback information and also taught the same course during two consecutive semesters. Without exception, no significant differences were found between student ratings gathered at the end of the first semester and ratings obtained at the close of the second semester.

In order to determine if student and faculty ratings differed, ratings collected in October and ratings gathered in December were compared for feedback and no-feedback groups. In the only significant comparison, students rated teachers more highly than faculty members on the personal-appearance variable. On the initial evaluation, students rated feedback teachers significantly higher than did faculty members on the scale related to teachers' liberal and progressive attitudes.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents conclusions of the study and includes recommendations for additional research.

Conclusions

Student Evaluations

A principal purpose of this study was to determine whether knowledge of student ratings collected early in a business course influenced the instructor's teaching performance during the remaining portion of the course. To accomplish this purpose, business instructors were rated by students early in the course on selected instructional factors. Half of the instructors were given immediate knowledge of the ratings; the other half of the instructors were not given knowledge of the ratings. The study determined whether significant differences existed between ratings collected from each group during the early part of the course and ratings collected at the close of the term.

Comparisons of ratings taken early in the course and those ratings gathered at the end of the semester revealed only four significant response patterns. While no significantly higher evaluations were found for feedback teachers, significantly low ratings were present for evaluations on the characteristics of interest in the subject.

Therefore, provision of feedback information did not serve to promote significantly higher end-of-term ratings on the second administration of the Purdue Rating Scale for Instruction.

The study determined whether significant differences between initial and second student ratings were related to any of the following characteristics of students: (1) cumulative student grade average, (2) student classification (year of college), (3) sex of student, (4) amount of employment, (5) number of academic hours carried, and (6) academic field of study. Regardless of feedback or no-feedback classifications, predominately consistent differences in ratings were not associated with any particular variable. Therefore, feedback information did not effectively promote higher student ratings in these categories.

A further purpose of the study was to determine whether different student ratings were associated with age and academic rank of business instructors.

As compared to no-feedback teachers, feedback members who were under 45 years of age received higher second median-response evaluations on these characteristics: interest in subject matter, stimulation of intellectual curiosity, self-reliance and confidence, and personal peculiarities. Additionally, as compared to ratings gathered in the early portion of the semester, data obtained at the close of the semester for no-feedback members showed higher median-response ratings on these factors: fairness in grading, liberal and progressive attitude, sense of proportion and humor, and personal appearance. Except for ratings on the stimulation-of-intellectual-curiosity attribute, higher median-response ratings were associated with no-feedback participants on data gathered at the close of the semester. In the

classification of teachers who were over 45 years of age, higher over-all median responses predominated for second ratings of no-feedback participants.

In the instructor-assistant professor dichotomy, feedback teachers, as compared to no-feedback participants, showed a pattern of higher median-response ratings on the second administration of the evaluative instrument for these characteristics: interest in the subject, sympathetic attitude toward students, presentation of subject matter, stimulation of intellectual curiosity, and personal peculiarities. However, the no-feedback group was given higher ratings at the close of the term on these factors: fairness in grading, liberal and progressive attitude, self-reliance and confidence, and personal appearance.

For the associate professor-professor classification, higher median-response ratings predominated for the no-feedback participants on the second administration of the Purdue Rating Scale for Instruction. Except for the attributes of presentation of subject matter and fairness in grading, no-feedback members of this group received higher median-response evaluations at the close of the semester.

For age and academic rank considerations, provision of feedback information did not serve to promote consistently higher student ratings. In fact, as previously noted, higher median-response ratings collected at the close of the semester predominated for no-feedback teachers who were over 45 years of age and for no-feedback participants who were members of the associate professor-professor classification.

Another purpose of the study was to compare student ratings collected at the end of the first semester with student ratings collected at the end of the second semester for those business instructors who were given immediate knowledge of the student ratings during

the first semester. This final comparison was made for instructors who taught the same course for two consecutive semesters. Without exception, no significant differences were found between student ratings gathered at the end of the first semester and similar ratings collected at the close of the second semester. Therefore, knowledge of results from initial student ratings did not appear to promote higher subsequent ratings.

Teacher Self-image Comparisons

Discovering whether instructors' perceived images of student ratings collected near the beginning of the course differed significantly from those images near the end of the course was another aim of the study. Specifically, on both initial (fall) and second (winter) evaluations, each participant was asked to indicate what he believed to be the average (median) rating that would be given by students, and these responses were compared to determine if significant differences were present.

Examination of data collected for no-feedback teachers revealed only one significant difference between initial and second ratings. For feedback teachers, evidence did not show any significant differences to be present. Therefore, provision of feedback information did not serve to promote significantly higher median ratings.

Teacher Self-image Ratings and Student Ratings

The study determined whether significant differences existed between instructors' perceived images of student ratings and the actual student ratings.

On the first administration of the rating instrument, no-feedback teachers perceived their ratings to be significantly higher than actual student ratings on these characteristics: presentation of subject matter, liberal and progressive attitude, and over-all teaching effectiveness. Additionally, feedback teachers rated themselves more highly than student respondents on attributes of over-all teaching effectiveness and sympathetic attitude toward students.

Despite segmentation into categories and time of administration for the evaluative instrument, teachers perceived median ratings of their over-all teaching effectiveness to be higher than actual ratings given by students. With the additional exception of no-feedback median ratings for presentation of subject matter, which were significantly higher than student responses on both initial and second evaluations, no congruity for significant responses was prevalent in either the feedback or the no-feedback classifications. Therefore, for the other characteristics that were rated, perceptions of participants did not consistently differ from student ratings, and, where divergent, significant discrepancies between perceived and actual ratings were not present on separate administrations of the rating instrument.

Student-Peer Evaluations

Another purpose of the study was to compare faculty ratings (peer ratings) with student ratings, both those collected early in the course and those collected late in the course, to determine whether any significant differences existed.

Examination of initial response data collected early in the course showed that student ratings for teachers' personal appearances were significantly higher than peer evaluations in both feedback and no-feedback groups; this rating pattern also was found for data gathered at the close of the semester. Additionally, the only other significantly different rating involved the initial rating of feedback members on their liberal and progressive attitudes. In this case, students assessed business teachers significantly higher than peers rated them. At the close of the semester, there was no significant difference between student and faculty ratings on this characteristic.

Of the significant differences between faculty and student ratings, student ratings were higher than those ratings collected from teachers' peers. Regardless of grouping, feedback or no feedback, students awarded higher median ratings on the attribute of personal appearance.

Except for ratings on the personal-appearance characteristic, data revealed that students and faculty members did not exhibit consistently different rating preferences on remaining scales of the evaluative instrument. Despite feedback or no-feedback grouping, no predominant differences in respondent ratings were denoted.

Recommendations

As a result of the data reported in this study, these recommendations are made:

- (1) Educators and administrators should not be overly optimistic about further results to be obtained, in terms of higher student ratings, from presenting past evaluative results to teachers.

Provision of feedback information is informative and useful; however, a teacher may not possess, be aware of, or be able to avail himself to procedures for improvement of instructional competencies. Therefore, specific delineation of suggestions and guidelines would be beneficial in provision of direction for possible routes to future improvement.

- (2) As improvement of instruction should be a continual goal of all educators, provision of formally-structured presentations devoted to improvement of teaching effectiveness might facilitate achievement of this objective.

For example, interim sessions devoted to seminars and guest specialists may serve to provide informative data to obviate potentially troublesome aspects of teaching. Awareness of various educational techniques and approaches may serve to stimulate adoption and implementation into effective teaching strategies.

- (3) While interest in student evaluation continues to be present on many college campuses, educators should devote additional consideration to the value of fellow-faculty (peer) consensus in circumstances that involve evaluation of teaching potential and competence.

As the study found considerable consistency between student and faculty responses, combined judgments may serve as valuable input information in assessment of teachers.

- (4) Compared to student ratings of over-all teaching effectiveness, teachers' perceived ratings were significantly higher. Therefore, it is recommended that educators devote additional

effort toward delineation of effective teaching from students' viewpoints.

- (5) As students rated personal appearance more highly than did faculty members, educators might profitably dedicate additional research toward the influence of this particular characteristic upon the educational process.

Possibly, the assessment of appearance may be important to students who view the instructor in the classroom, and, yet, be negated by teachers who do not continually view one another. If this characteristic is esteemed by students, additional examination of the variable is important.

- (6) Additional studies should be conducted to examine the influence of feedback data.

This study involved business teachers who taught at one institution of higher education. Further studies should examine the relationship between student-teacher responses in other subject-matter areas. Also, comparisons among respondent categories at different types of institutions is recommended. Finally, additional research should incorporate a larger sample basis that would permit conclusions to be formulated from a larger number of cooperating participants.

- (7) In order to examine the importance of the source of feedback data, further studies should consider utilization of a department head or dean as the origin of information relative to rating results.

The authoritative position of department heads or deans and their influence in rendering decisions pertinent to a faculty member's future

could feasibly strengthen the importance of improved performance in the various rating categories.

- (8) Future studies should examine the relationship between student opinions on other characteristics that were not directly considered on the rating instrument used in this study.

Pertinent items might include questions directed specifically toward characteristics such as preparation for class, willingness to help outside of class, and knowledge of the subject. According to designated purposes of the researcher, additional characteristics of instructional importance should be incorporated into the research.

- (9) Further studies should not be restricted by comparisons used in this study.

For example, an interesting facet to be studied involves whether there is a significant difference between ratings of students who are required to take a course and those students who are not required to take the course. Additionally, with the increasing concern about interaction between business and society, it would be valuable to compare ratings gathered in a course taught with an interdisciplinary approach and those ratings assimilated in a similar course conducted in the traditional manner.

- (10) Future studies of the influence of feedback on teacher improvement should provide additional information with the scaled scores.

The studies should provide respondents with the relative importance of various rating scales in the assessment of instructional capabilities.

In addition, information pertaining to ways in which the teacher may improve on the factors evaluated could be included with the feedback material.

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APPENDIX A

STUDENT RATING SCALE

Note to Instructors: To keep conditions as nearly uniform as possible, it is imperative that no instructions be given to the students. The rating scale should be passed out without comment at the beginning of the period.

Note to Students: Following is a list of qualities that, taken together, tend to make any instructor the sort of instructor that he is. Of course, no one is ideal in all of these qualities, but some approach this ideal to a much greater extent than do others. To provide information which may lead to the improvement of instruction, you are asked to rate your instructor on the indicated qualities by darkening one of the spaces on the line at the point which most nearly describes him with reference to the quality you are considering. For example, under Interest in Subject if you think your instructor is not as enthusiastic about his subject as he should be, but is usually more than mildly interested, darken the space marked 0D on the answer card. Fill the chosen space solidly with a special electrographic or soft lead pencil; leave no stray marks.

	<u>0A</u>	<u>0B</u>	<u>0C</u>	<u>0D</u>	<u>0E</u>	<u>0F</u>	<u>0G</u>	<u>0H</u>	<u>0I</u>	<u>0J</u>
0. Interest in Subject.....	Always appears full of his subject.				Seems mildly interested.			Subject seems irksome to him.		

DO NOT WRITE ON THIS PAGE—MARK ALL RESPONSES ON THE ANSWER CARDS.

This rating is to be entirely impersonal. Do not sign your name or make any other mark on the paper which could serve to identify the rater.

1. Interest in Subject.....	<u>1A</u>	<u>1B</u>	<u>1C</u>	<u>1D</u>	<u>1E</u>	<u>1F</u>	<u>1G</u>	<u>1H</u>	<u>1I</u>	<u>1J</u>
	Always appears full of his subject.				Seems mildly interested.			Subject seems irksome to him.		
2. Sympathetic Attitude toward Students.....	<u>2A</u>	<u>2B</u>	<u>2C</u>	<u>2D</u>	<u>2E</u>	<u>2F</u>	<u>2G</u>	<u>2H</u>	<u>2I</u>	<u>2J</u>
	Always courteous and considerate.				Tries to be considerate but finds it difficult at times.			Entirely unsympathetic and inconsiderate.		
3. Fairness in Grading.....	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>3D</u>	<u>3E</u>	<u>3F</u>	<u>3G</u>	<u>3H</u>	<u>3I</u>	<u>3J</u>
	Absolutely fair and impartial to all.				Shows occasional favoritism.			Constantly shows partiality.		
4. Liberal and Progressive Attitude.....	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>4D</u>	<u>4E</u>	<u>4F</u>	<u>4G</u>	<u>4H</u>	<u>4I</u>	<u>4J</u>
	Welcomes differences in viewpoint.				Biased on some things but usually tolerant.			Entirely intolerant, allows no contradiction.		
5. Presentation of Subject Matter.....	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>5D</u>	<u>5E</u>	<u>5F</u>	<u>5G</u>	<u>5H</u>	<u>5I</u>	<u>5J</u>
	Clear, definite and forceful.				Sometimes mechanical and monotonous.			Indefinite, involved, and monotonous.		
6. Sense of Proportion and Humor.....	<u>6A</u>	<u>6B</u>	<u>6C</u>	<u>6D</u>	<u>6E</u>	<u>6F</u>	<u>6G</u>	<u>6H</u>	<u>6I</u>	<u>6J</u>
	Always keeps proper balance; not over-critical or over-sensitive.				Fairly well balanced.			Over-serious; no sense of relative values.		
7. Self-reliance and Confidence.....	<u>7A</u>	<u>7B</u>	<u>7C</u>	<u>7D</u>	<u>7E</u>	<u>7F</u>	<u>7G</u>	<u>7H</u>	<u>7I</u>	<u>7J</u>
	Always sure of himself; meets difficulties with poise.				Fairly self-confident; occasionally disconcerted.			Hesitant, timid, uncertain.		
8. Personal Peculiarities.....	<u>8A</u>	<u>8B</u>	<u>8C</u>	<u>8D</u>	<u>8E</u>	<u>8F</u>	<u>8G</u>	<u>8H</u>	<u>8I</u>	<u>8J</u>
	Wholly free from annoying mannerisms.				Moderately free from objectionable peculiarities.			Constantly exhibits irritating mannerisms.		
9. Personal Appearance.....	<u>9A</u>	<u>9B</u>	<u>9C</u>	<u>9D</u>	<u>9E</u>	<u>9F</u>	<u>9G</u>	<u>9H</u>	<u>9I</u>	<u>9J</u>
	Always well groomed; clothes neat and clean.				Usually somewhat untidy; gives little attention to appearance.			Slovenly; clothes untidy and ill-kept.		
10. Stimulating Intellectual Curiosity.....	<u>10A</u>	<u>10B</u>	<u>10C</u>	<u>10D</u>	<u>10E</u>	<u>10F</u>	<u>10G</u>	<u>10H</u>	<u>10I</u>	<u>10J</u>
	Inspires students to independent effort; creates desire for investigation.				Occasionally inspiring; creates mild interest.			Destroys interest in subject; makes work repulsive.		

PLEASE USE THIS ANSWER SHEET

The rating form that you have is reusable; therefore, after you consider each of the qualities on the front side (questions 1-10) of the form, please record your responses on this answer sheet. Draw a CIRCLE around the answer of your choice. DO NOT answer any questions on the reverse side (questions 11-26) of the rating form.

To illustrate the procedure for recording your answers, the highest possible rating for INTEREST IN SUBJECT would be indicated as follows:

EXAMPLE: INTEREST IN SUBJECT

	(1A)	(1B)	(1C)	(1D)	(1E)	(1F)	(1G)	(1H)	(1I)	(1J)
<hr/>										
1. INTEREST IN SUBJECT	(1A)	(1B)	(1C)	(1D)	(1E)	(1F)	(1G)	(1H)	(1I)	(1J)
<hr/>										
2. SYMPATHETIC ATTITUDE TOWARD STUDENTS	(2A)	(2B)	(2C)	(2D)	(2E)	(2F)	(2G)	(2H)	(2I)	(2J)
<hr/>										
3. FAIRNESS IN GRADING	(3A)	(3B)	(3C)	(3D)	(3E)	(3F)	(3G)	(3H)	(3I)	(3J)
<hr/>										
4. LIBERAL AND PROGRESSIVE ATTITUDE	(4A)	(4B)	(4C)	(4D)	(4E)	(4F)	(4G)	(4H)	(4I)	(4J)
<hr/>										
5. PRESENTATION OF SUBJECT MATTER	(5A)	(5B)	(5C)	(5D)	(5E)	(5F)	(5G)	(5H)	(5I)	(5J)
<hr/>										
6. SENSE OF PROPORTION AND HUMOR	(6A)	(6B)	(6C)	(6D)	(6E)	(6F)	(6G)	(6H)	(6I)	(6J)
<hr/>										
7. SELF-RELIANCE AND CONFIDENCE	(7A)	(7B)	(7C)	(7D)	(7E)	(7F)	(7G)	(7H)	(7I)	(7J)
<hr/>										

(please turn to next page)

 8. PERSONAL PECULIARITIES

(8A) (8B) (8C) (8D) (8E) (8F) (8G) (8H) (8I) (8J)

9. PERSONAL APPEARANCE

(9A) (9B) (9C) (9D) (9E) (9F) (9G) (9H) (9I) (9J)

10. STIMULATING INTELLECTUAL CURIOSITY

(10A) (10B) (10C) (10D) (10E) (10F) (10G) (10H) (10I) (10J)

Which of the following choices best represents your over-all evaluation of the instructor as a teacher? Please place a check mark(✓) by your response.

____ Superior ____ Very Good ____ Average ____ Fair ____ Poor

SUPPLEMENTARY INFORMATION

In order to better analyze your responses, please give the following information about yourself by placing a check mark (✓) by the item that is most applicable to you.

- (1) My approximate cumulative (over-all) grade point average in college is:

____ No prior cumulative average (attending college for first time)
 ____ under 2.1 (A = 4.0)
 ____ 2.1 to 3.1 (A = 4.0)
 ____ 3.1 or higher (A = 4.0)

- (2) My student classification for the current semester is:

____ Freshman
 ____ Sophomore
 ____ Junior
 ____ Senior

(please turn to next page)

- (3) During the current semester, I am carrying the following number of academic credit hours:

less than 7 hours
 7 to 17 hours
 17 hours or more

- (4) At the present time, I am employed (work) the following number of hours each week:

none (no "outside" employment)
 1 to 21 hours weekly
 over 21 hours weekly

- (5) My major area of study is:

business
 non-business

- (6) Please indicate your sex:

male
 female

APPENDIX B

TEACHER RATING SCALE

Note to Instructors: To keep conditions as nearly uniform as possible, it is imperative that no instructions be given to the students. The rating scale should be passed out without comment at the beginning of the period.

Note to Students: Following is a list of qualities that, taken together, tend to make any instructor the sort of instructor that he is. Of course, no one is ideal in all of these qualities, but some approach this ideal to a much greater extent than do others. To provide information which may lead to the improvement of instruction, you are asked to rate your instructor on the indicated qualities by darkening one of the spaces on the line at the point which most nearly describes him with reference to the quality you are considering. For example, under Interest in Subject if you think your instructor is not as enthusiastic about his subject as he should be, but is usually more than mildly interested, darken the space marked 0D on the answer card. Fill the chosen space solidly with a special electrographic or soft lead pencil; leave no stray marks.

	0A	0B	0C	0D	0E	0F	0G	0H	0I	0J
0. Interest in Subject	Always appears full of his subject.				Seems mildly interested.			Subject seems irksome to him.		

DO NOT WRITE ON THIS PAGE—MARK ALL RESPONSES ON THE ANSWER CARDS.

This rating is to be entirely impersonal. Do not sign your name or make any other mark on the paper which could serve to identify the rater.

1. Interest in Subject	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J
	Always appears full of his subject.				Seems mildly interested.			Subject seems irksome to him.		
2. Sympathetic Attitude toward Students	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J
	Always courteous and considerate.				Tries to be considerate but finds it difficult at times.			Entirely unsympathetic and inconsiderate.		
3. Fairness in Grading	3A	3B	3C	3D	3E	3F	3G	3H	3I	3J
	Absolutely fair and impartial to all.				Shows occasional favoritism.			Constantly shows partiality.		
4. Liberal and Progressive Attitude	4A	4B	4C	4D	4E	4F	4G	4H	4I	4J
	Welcomes differences in viewpoint.				Biased on some things but usually tolerant.			Entirely intolerant, allows no contradiction.		
5. Presentation of Subject Matter	5A	5B	5C	5D	5E	5F	5G	5H	5I	5J
	Clear, definite and forceful.				Sometimes mechanical and monotonous.			Indefinite, involved, and monotonous.		
6. Sense of Proportion and Humor	6A	6B	6C	6D	6E	6F	6G	6H	6I	6J
	Always keeps proper balance; not over-critical or over-sensitive.				Fairly well balanced.			Over-serious; no sense of relative values.		
7. Self-reliance and Confidence	7A	7B	7C	7D	7E	7F	7G	7H	7I	7J
	Always sure of himself; meets difficulties with poise.				Fairly self-confident; occasionally disconcerted.			Hesitant, timid, uncertain.		
8. Personal Peculiarities	8A	8B	8C	8D	8E	8F	8G	8H	8I	8J
	Wholly free from annoying mannerisms.				Moderately free from objectionable peculiarities.			Constantly exhibits irritating mannerisms.		
9. Personal Appearance	9A	9B	9C	9D	9E	9F	9G	9H	9I	9J
	Always well groomed; clothes neat and clean.				Usually somewhat untidy; gives little attention to appearance.			Slovenly; clothes untidy and ill-kept.		
10. Stimulating Intellectual Curiosity	10A	10B	10C	10D	10E	10F	10G	10H	10I	10J
	Inspires students to independent effort; creates desire for investigation.				Occasionally inspiring; creates mild interest.			Destroys interest in subject; makes work repulsive.		

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Purdue University
Form 2 (Card)

THE PURDUE RATING SCALE FOR INSTRUCTION
H. H. Remmers and D. N. Elliott

PLEASE USE THIS ANSWER SHEET

After you consider each of the qualities on the front side (questions 1-10) of the rating form, please rate yourself by placing a CIRCLE around the answer that in your opinion most nearly represents the AVERAGE (median) rating that students will assign to you for each of the various qualities. DO NOT answer any questions on the reverse side (questions 11-26) of the rating form.

To illustrate the procedure for recording your answers, the highest possible rating for INTEREST IN SUBJECT would be indicated as follows:

EXAMPLE: INTEREST IN SUBJECT

(1A) (1B) (1C) (1D) (1E) (1F) (1G) (1H) (1I) (1J)

1. INTEREST IN SUBJECT

(1A) (1B) (1C) (1D) (1E) (1F) (1G) (1H) (1I) (1J)

2. SYMPATHETIC ATTITUDE TOWARD STUDENTS

(2A) (2B) (2C) (2D) (2E) (2F) (2G) (2H) (2I) (2J)

3. FAIRNESS IN GRADING

(3A) (3B) (3C) (3D) (3E) (3F) (3G) (3H) (3I) (3J)

4. LIBERAL AND PROGRESSIVE ATTITUDE

(4A) (4B) (4C) (4D) (4E) (4F) (4G) (4H) (4I) (4J)

5. PRESENTATION OF SUBJECT MATTER

(5A) (5B) (5C) (5D) (5E) (5F) (5G) (5H) (5I) (5J)

6. SENSE OF PROPORTION AND HUMOR

(6A) (6B) (6C) (6D) (6E) (6F) (6G) (6H) (6I) (6J)

7. SELF-RELIANCE AND CONFIDENCE

(7A) (7B) (7C) (7D) (7E) (7F) (7G) (7H) (7I) (7J)

(please turn to next page)

8. PERSONAL PECULIARITIES

(8A) (8B) (8C) (8D) (8E) (8F) (8G) (8H) (8I) (8J)

9. PERSONAL APPEARANCE

(9A) (9B) (9C) (9D) (9E) (9F) (9G) (9H) (9I) (9J)

10. STIMULATING INTELLECTUAL CURIOSITY

(10A) (10B) (10C) (10D) (10E) (10F) (10G) (10H) (10I) (10J)

SUPPLEMENTARY QUESTIONS

From the viewpoint of your students, which of the following choices best represents the over-all evaluation of yourself as a teacher? Please place a check mark (✓) by your response.

____ Superior ____ Very Good ____ Average ____ Fair ____ Poor

APPENDIX C

PEER RATING SCALE

Note to Instructors: To keep conditions as nearly uniform as possible, it is imperative that no instructions be given to the students. The rating scale should be passed out without comment at the beginning of the period.

Note to Students: Following is a list of qualities that, taken together, tend to make any instructor the sort of instructor that he is. Of course, no one is ideal in all of these qualities, but some approach this ideal to a much greater extent than do others. To provide information which may lead to the improvement of instruction, you are asked to rate your instructor on the indicated qualities by darkening one of the spaces on the line at the point which most nearly describes him with reference to the quality you are considering. For example, under **Interest in Subject** if you think your instructor is not as enthusiastic about his subject as he should be, but is usually more than mildly interested, darken the space marked **0D** on the answer card. Fill the chosen space solidly with a special electrographic or soft lead pencil; leave no stray marks.

	<u>0A</u>	<u>0B</u>	<u>0C</u>	<u>0D</u>	<u>0E</u>	<u>0F</u>	<u>0G</u>	<u>0H</u>	<u>0I</u>	<u>0J</u>
0. Interest in Subject.....	Always appears full of his subject.				Seems mildly interested.			Subject seems irksome to him.		

DO NOT WRITE ON THIS PAGE—MARK ALL RESPONSES ON THE ANSWER CARDS.

This rating is to be entirely impersonal. Do not sign your name or make any other mark on the paper which could serve to identify the rater.

1. Interest in Subject.....	<u>1A</u>	<u>1B</u>	<u>1C</u>	<u>1D</u>	<u>1E</u>	<u>1F</u>	<u>1G</u>	<u>1H</u>	<u>1I</u>	<u>1J</u>
	Always appears full of his subject.				Seems mildly interested.			Subject seems irksome to him.		
2. Sympathetic Attitude toward Students.....	<u>2A</u>	<u>2B</u>	<u>2C</u>	<u>2D</u>	<u>2E</u>	<u>2F</u>	<u>2G</u>	<u>2H</u>	<u>2I</u>	<u>2J</u>
	Always courteous and considerate.				Tries to be considerate but finds it difficult at times.			Entirely unsympathetic and inconsiderate.		
3. Fairness in Grading.....	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>3D</u>	<u>3E</u>	<u>3F</u>	<u>3G</u>	<u>3H</u>	<u>3I</u>	<u>3J</u>
	Absolutely fair and impartial to all.				Shows occasional favoritism.			Constantly shows partiality.		
4. Liberal and Progressive Attitude.....	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>4D</u>	<u>4E</u>	<u>4F</u>	<u>4G</u>	<u>4H</u>	<u>4I</u>	<u>4J</u>
	Welcomes differences in viewpoint.				Biased on some things but usually tolerant.			Entirely intolerant, allows no contradiction.		
5. Presentation of Subject Matter.....	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>5D</u>	<u>5E</u>	<u>5F</u>	<u>5G</u>	<u>5H</u>	<u>5I</u>	<u>5J</u>
	Clear, definite and forceful.				Sometimes mechanical and monotonous.			Indefinite, involved, and monotonous.		
6. Sense of Proportion and Humor.....	<u>6A</u>	<u>6B</u>	<u>6C</u>	<u>6D</u>	<u>6E</u>	<u>6F</u>	<u>6G</u>	<u>6H</u>	<u>6I</u>	<u>6J</u>
	Always keeps proper balance; not over-critical or over-sensitive.				Fairly well balanced.			Over-serious; no sense of relative values.		
7. Self-reliance and Confidence.....	<u>7A</u>	<u>7B</u>	<u>7C</u>	<u>7D</u>	<u>7E</u>	<u>7F</u>	<u>7G</u>	<u>7H</u>	<u>7I</u>	<u>7J</u>
	Always sure of himself; meets difficulties with poise.				Fairly self-confident; occasionally disconcerted.			Hesitant, timid, uncertain.		
8. Personal Peculiarities.....	<u>8A</u>	<u>8B</u>	<u>8C</u>	<u>8D</u>	<u>8E</u>	<u>8F</u>	<u>8G</u>	<u>8H</u>	<u>8I</u>	<u>8J</u>
	Wholly free from annoying mannerisms.				Moderately free from objectionable peculiarities.			Constantly exhibits irritating mannerisms.		
9. Personal Appearance.....	<u>9A</u>	<u>9B</u>	<u>9C</u>	<u>9D</u>	<u>9E</u>	<u>9F</u>	<u>9G</u>	<u>9H</u>	<u>9I</u>	<u>9J</u>
	Always well groomed; clothes neat and clean.				Usually somewhat untidy; gives little attention to appearance.			Slovenly; clothes untidy and ill-kept.		
10. Stimulating Intellectual Curiosity.....	<u>10A</u>	<u>10B</u>	<u>10C</u>	<u>10D</u>	<u>10E</u>	<u>10F</u>	<u>10G</u>	<u>10H</u>	<u>10I</u>	<u>10J</u>
	Inspires students to independent effort; creates desire for investigation.				Occasionally inspiring; creates mild interest.			Destroys interest in subject; makes work repulsive.		

PLEASE USE THIS ANSWER SHEET

Name of teacher _____

After considering your opinion of the above-named teacher, please rate him (her) on several of the instructional qualities listed on the front side (questions 1-10) of the rating form, and record your responses on this answer sheet. DO NOT answer any questions on the reverse side (questions 11-26) of the rating form.

To illustrate the procedure for recording your answers, the highest possible rating for INTEREST IN SUBJECT would be indicated as follows:

EXAMPLE: INTEREST IN SUBJECT

(1A) (1B) (1C) (1D) (1E) (1F) (1G) (1H) (1I) (1J)

1. INTEREST IN SUBJECT

(1A) (1B) (1C) (1D) (1E) (1F) (1G) (1H) (1I) (1J)

2. SYMPATHETIC ATTITUDE TOWARD STUDENTS

(2A) (2B) (2C) (2D) (2E) (2F) (2G) (2H) (2I) (2J)

3. FAIRNESS IN GRADING

Please omit this question.

4. LIBERAL AND PROGRESSIVE ATTITUDE

(4A) (4B) (4C) (4D) (4E) (4F) (4G) (4H) (4I) (4J)

5. PRESENTATION OF SUBJECT MATTER

Please omit this question.

6. SENSE OF PROPORTION AND HUMOR

(6A) (6B) (6C) (6D) (6E) (6F) (6G) (6H) (6I) (6J)

7. SELF-RELIANCE AND CONFIDENCE

(7A) (7B) (7C) (7D) (7E) (7F) (7G) (7H) (7I) (7J)

(please turn to next page)

8. PERSONAL PECULIARITIES

(8A) (8B) (8C) (8D) (8E) (8F) (8G) (8H) (8I) (8J)

9. PERSONAL APPEARANCE

(9A) (9B) (9C) (9D) (9E) (9F) (9G) (9H) (9I) (9J)

10. STIMULATING INTELLECTUAL CURIOSITY

Please omit this question.

Which of the following choices best represents your over-all evaluation of the instructor as a teacher? Please place a check mark (✓) by your response.

Superior Very Good Average Fair Poor

VITA

Donald Stanley Miller

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF STUDENT-FACULTY RATINGS RELATED TO SELECTED
INSTRUCTIONAL FACTORS

Major Field: Business Education

Biographical:

Personal Data: Born at Horton, Kansas, April 15, 1942, the only child of Mabel Alice and Donald Schock Miller. Married Anita Dian Stephens, May 24, 1969.

Education: Graduated from Hiawatha High School, Hiawatha, Kansas, in May, 1960; received the Associate in Arts degree from Highland Junior College, Highland, Kansas, in 1962; received the Bachelor of Science in Business degree from Kansas State Teachers College, Emporia, Kansas, in 1965, with a major in Business; received the Master of Science degree from the same institution in May, 1966, with a major in Business Administration; completed the requirements for the Doctor of Education degree at Oklahoma State University, Stillwater, Oklahoma in July, 1972.

Professional Experience: Graduate Assistant, Department of Business and Business Education, Kansas State Teachers College, Emporia, Kansas, 1965-1966; Instructor of Business and Business Education at the same institution, 1966-1970; part-time Instructor of Business, College of Emporia, Emporia, Kansas, September 1968 to May, 1970; Graduate Assistant, Department of Administrative Services and Business Education, Oklahoma State University, Stillwater, Oklahoma, September, 1970, to May, 1971; Assistant Professor of Business and Business Studies, Kansas State Teachers College, Emporia, Kansas, September, 1971, to the present.

Professional Organizations: Pi Omega Pi, National Honorary Undergraduate Fraternity in Business Education; Delta Pi Epsilon, National Honorary Graduate Fraternity in Business Education; Kansas Business Education Association; American Association of University Professors.