A Study of Factors Related to Student Ratings of College Instructors

Ronald M. Wolthuis

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A STUDY OF FACTORS RELATED TO
STUDENT RATINGS OF COLLEGE
INSTRUCTORS

by

Ronald M. Wolthuis

A Dissertation
Submitted to the
Faculty of the Graduate College
in partial fulfillment
of the
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Analysis of Variance Model to Determine the Relationship Between the Type of Feedback and Changes in Student Ratings of Instructors
CHAPTER I
NEED FOR THE STUDY

Introduction

Improving teaching is a continuing concern, an on-going, never-ending enterprise on every college campus. Yet discussions of the subject too often lapse into lamentations about the deterioration of undergraduate teaching, or the poor preparation of scholars for teaching. That this is futile is bad enough, but it is unprofessional for a profession dedicated to inquiry. If there are impediments to good college teaching they should be openly and specifically identified and examined critically. In addition, it is imperative that ways to improve college teaching be devised, explored and appraised. Although solutions to such problems are elusive and concensus is difficult to achieve, a painstaking search obviously is demanded (Lee, 1967, p. 1).

The preceding statement by Lee expresses the feelings of at least some of the persons involved in the 1966 American Council on Education meetings concerned with higher education. The teaching profession as a whole, and college teaching in particular, has never lacked critics or criticism. With increasing conflict over the financing of education, and, particularly on the college campus, the vocal nature of student protests concerning their perceptions of their educational experience, the frequency and intensity of this criticism of teaching does not seem to be decreasing.

Today, then, possibly more than ever before, college teachers should be striving to find ways to improve themselves and their skills as teachers. To stress the need to improve oneself as a professional is not necessary. It would be more
appropriate to discuss or suggest methods one might use to improve himself as a teacher.

Recently, attempts have been made to provide a teacher with informational feedback consisting of student opinions. The rationale for this procedure lies in the realization that student opinions can be an important factor in the teaching-learning process. Teaching involves action and reaction on the part of both the teacher and the learner. The teacher who proclaims that he can, or does, ignore the opinions or reactions of students is missing one important aspect of the teaching-learning process.

It would be difficult, if not impossible, to make any decisions concerning the teaching ability of instructors who do use student opinions or reactions, as opposed to those instructors who do not use student opinions. Hypothetically, however, any two instructors who were equal in ability as instructors but differed in their use of, or reaction to, student opinions as a part of the teaching-learning process might be perceived by the students as differing in teaching ability. It would be reasonable to expect that the teacher who gives evidence that student opinions and reactions are desirable and useful will be perceived by the students to be more effective. In this situation then, the teacher who is perceived by the students to be more effective might be considered to be the "better" teacher.

Few teachers would claim to totally ignore the opinions or reactions of students. Skilled teachers develop various procedures
to assess student reactions. Visual cues alone may provide a teacher with the feedback he desires. Some teachers develop and use student opinion-gathering devices to help them ascertain student reactions, while others use their intuitive judgments or perceptions. The use of intuition or one's own perceptions of a teaching-learning situation, however, involves a certain amount of risk. Riley, Ryan, and Lifshitz, in their study of student ratings of college instructors at Brooklyn University, state: "What the student hears is more important than what the professor says; what the student sees is more important than what the professor does (Riley et al., 1950, p. 33)."

A concerned teacher, one who is interested in improving his effectiveness as a teacher, should be interested in obtaining the opinions of students in his class, if for no other reason than to verify his intuitive information or perhaps to clarify some misconceptions that may have arisen. He may also wish to make some modifications in his teaching style or procedures, based on the information he has obtained.

A systematic procedure of obtaining student opinions could possibly improve his effectiveness as a teacher and would answer the criticism that teachers are totally indifferent to the opinions and concerns of students.
Theoretical Framework

The use of student opinions or student evaluations of instruction and instructors has a long history. Informal student ratings of education have existed since the first teacher-student relationship. By comparison, the use of formal student ratings or evaluations has a relatively brief and stormy history. Resentment and opposition to the use of student opinions as evaluation are common reactions. The term "teacher evaluation" implies a standard by which teachers can be measured. Before accurate and reliable evaluation can take place, agreement on a standard which can be used for comparison must be reached. One group of writers has put the dilemma in the following terms:

Of all the professional careers, teaching, if not the most difficult of them, is surely the most difficult to evaluate. It is a process surrounded with the greatest confusion as to its ends, its arts and its techniques. Only in the most generalized terms can one find agreement upon the goals of classroom instruction, and even then we must be prepared to recognize that the nature of some courses will make the agreement all but meaningless. There is no standardized end toward which the professor works against which his efforts may be clearly weighed, no physician's concept of "normal health," no logical or pragmatic goal as for the jurist (Riley et al., 1950, p. 4).

Evaluation of teaching by any person or group of persons by students, fellow faculty members, department heads, or "impartial trained observers," has the limitation of a lack of an agreeable standard with which to live. This situation does not rule out the use of student opinions or ratings, but rather places a different perspective upon them. Student opinions,
gathered in a systematic fashion, can be used to provide a teacher with information. Students have opinions about the instructor and certain aspects of the teaching-learning situation.

The students' ideas of good teaching, of ideal instructional characteristics, are inevitably part and parcel of any teacher's daily routine. He may attempt to ignore their reality, he may consciously or subconsciously isolate himself, but it is nevertheless clear that his increased effectiveness as a teacher can only be gained through a critical recognition of this element in the educational process--an element which has too often been studiously overlooked and ignored (Riley et al., 1950, p. 32).

Informational feedback as a source of learning is a psychological principle of long standing (Govatos, 1967). One of the most explicit rationales that has been formulated recently has been stated by Gage, Runkel, and Chatterjee (1960), who are concerned with the effects of feedback provided by subordinates. The premise underlying their rationale is that feedback will create an imbalance that a person will attempt to correct. The person's most likely response will be to modify his behavior, or at least modify others' perceptions of his behavior. Bass and Vaughn (1966, p. 21) state: "As one learns to behave in a given manner, knowledge of the effects of the behavior is the important corrective and reinforcing factor in the process of learning."

Several studies have been conducted using student opinions on a formal rating scale as informational feedback to teachers in the junior and senior high schools with apparent success (Gage et al., 1960; Bryan, 1963; Tuckman & Oliver, 1968). Formal student
ratings, for various purposes, have been carried out at the college and university level, and a substantial amount of information is available on factors that seem to influence student ratings.

Statement of the Problem

To date, no studies have been reported which have attempted to measure the effect of formal student opinion summaries as informational feedback to instructors on the college and university level. The need exists to attempt to determine if the favorable results of written student feedback to teachers on the junior and senior high school level can be adapted to college and university teachers.

It is also necessary to determine whether the content of the informational feedback has any significant impact upon the instructor. Is feedback containing both positive and negative student opinions more useful to the instructor than informational feedback consisting only of positive student opinions?

Another question that must be raised is the influence of the instructor in changing the opinions of students. Is it possible for students to observe and report a change in an instructor who has declared an intent to change?

Purpose of the Study

The present study was designed to determine whether student opinion summaries can be used as informational feedback
by college instructors and whether changes made by the instructors as a result of the feedback can be observed and reported by the students. Two different types of informational feedback were used and compared; one type consisted of both positive and negative student opinions, while the other type consisted entirely of positive student opinions.

A second aspect of the study was to determine if a relationship existed between initial student ratings of an instructor and student characteristics, such as student's sex, student's class, student's opinion of the subject matter, and the student's perception of the amount of time the instructor engaged in lecturing. Other variables, such as instructor's sex, rank, status, degree, and declaration of the value of student opinions as information, were also examined to determine if relationships existed between these factors and the initial student ratings of an instructor.

The final aspect of this study was designed to determine whether a declaration of an intent to change, on the part of an instructor who has received informational feedback, can actually bring about change or modify the actions of the instructor to an extent that this change will be reported by students.

The specific hypotheses to be tested will be stated in appropriate research form in Chapter III.
Definition of Terms

In order to focus more clearly on the specific scope of the study, the following definitions were used.

**Instructor Image** The class mean score of all students who rated the instructor on the Instructor Image Questionnaire (Appendix A).

**Informational Feedback** The summary of student ratings which was sent to an instructor in one of the following two forms:

- **Comprehensive Feedback** An Instructor Image Profile (Appendix B) showing in graphic form the mean scores of ratings of class members on each item of the Instructor Image Questionnaire, plus a list of comments made by two or more students on the two open-ended questions.
- **Positive Feedback** An Instructor Image Summary (Appendix C) which lists the strengths of the instructor, as determined by the high points on the Instructor Image Profile.

The following terms were also used.

**Instructor's Sex** Male or female instructor of class participating in study.

**Student's Sex** Male or female student participating in study.

**Student's Class** Classification of students into the following categories, based on semester hours: Freshman, Sophomore, Junior, Senior, or Graduate.

**Student's Opinion of Subject Matter** One portion of the Instructor Image Questionnaire which requested the student
to declare whether he liked or disliked the subject matter of the course.

**Amount of Time Spent in Lecturing** The student's opinion of the amount of time the instructor spends lecturing. The student was requested to choose from the following categories of lecture time: Some (less than fifty percent of the time), Average (between fifty and seventy-five percent of the time), and Much (more than seventy-five percent of the time).

**Instructor's Degree** The degree the instructor held at the time the study was completed. The following categories were designated: MA, MA plus hours, Ed.S., All but dissertation, and Doctorate.

**Instructor's Rank** The rank of the instructor at the time the study was completed. The following categories were used: Instructor, Assistant Professor, Associate Professor, Professor, and Other.

**Instructor's Status** The faculty status of the instructor at the time the study was completed. The categories were Full-time or Part-time status.

**Instructor's Opinion of the Value of Student Opinions** One question on the Instructor Information Form (Appendix D) requesting the instructor to state his opinion of the usefulness and value of student opinions. The instructor was asked to choose one of the following alternatives:
(a) Would find them useful and valuable.
(b) Would find them interesting.
(c) Would find them not valuable.

**Instructor's Intent to Change**  Instructors who received comprehensive informational feedback were visited personally by the principal investigator and asked if they wished to identify two areas from the Instructor Image Profile that they wished to concentrate on, such as fairness, enthusiasm, etc., attempting to change the students' opinions of them in these areas.
CHAPTER II
REVIEW OF SELECTED RELATED LITERATURE

This particular review of the literature will survey the literature that is related to this study in the following areas: (a) current trends in college student ratings of instructors, (b) characteristics of college students as they relate to the rating of instructors, (c) characteristics of college instructors as they relate to student ratings, and (d) written feedback from students as a source of information for teachers.

Current Trends in College Student Ratings of Instructors

Since one of the first comprehensive studies on student reactions to instructors was published by Remmers in 1929, the body of literature on student ratings has continually grown, and student ratings have increasingly been used on the junior and senior high school and college levels.

Several surveys (Mueller, 1951; Stecklein, 1960; American Council on Education, 1961, 1966) have been conducted to obtain information on the number of institutions using student opinions on teaching. Although these surveys have been plagued by the lack of complete returns, they have generally reported that between eighteen and forty percent of the schools responding said that they had used, or planned to use, formal student opinion surveys. Gustad (1967) compared the two surveys by the American Council on Education...
and noted that student ratings were used less in 1966 than they were
in 1961. In fact, in a rank ordering of various sources of informa-
tion, the use of student opinions dropped from fourth place in 1961
to tenth place in 1966 in universities and colleges. The 1966
survey also asked the responding schools to indicate whether any
research on student rating instruments was being attempted, and,
when all institutions were included, only 1.7 percent of the
responding institutions declared that they had done some type of
research on student opinions of instruction.

The controversy surrounding the use and value of student
opinions of instruction is easily understood in the light of the
numbers of institutions actually using this source of information
and the almost total neglect of research in the area. McKeachie
(1969a), however, states that this trend seems to be changing.
Currently, students and faculty members are evidencing an interest
in making more effective use of student ratings in higher education.

Several institutions, such as Purdue University, the
University of Michigan, the University of Minnesota, the University
of Washington, and a few others, have had long-standing policies of
obtaining and using student ratings of instructors. Much of the
information available on student ratings of instructors has been a
result of the research in these institutions, and it is possible
that educators must continue to look to these institutions for
leadership in research on student ratings of teaching in future years.
Characteristics of College Students
As They Relate to Student
Ratings of Instructors

With the attention being focused on the student as the "consumer" of education and the potential value of student ratings, it is important to note any student characteristics that would be related to their rating of an instructor.

One of the most comprehensive series of studies of student ratings of teachers has taken place at Purdue University. In a series of studies beginning in 1927, Remmers and his associates examined many student characteristics and their relationship to the ratings of instructors. A comprehensive list of these findings can be found in his chapter, "Rating Methods in Research on Teaching," in the AERA Handbook of Research on Teaching, where he concluded that "student evaluation is a useful, convenient, reliable, and valid means of self-supervision and self-improvement for the teacher (Remmers, 1963, p. 367)."

One criticism of student ratings that frequently occurs is that the ratings of the students are influenced by their achievement. Studies by Anikeef (1953) and Weaver (1960) report that there is a relationship between the grade a student has received, or expects to receive, and the subsequent instructor rating. Most of the studies investigating this relationship (Starrack, 1934; Remmers, 1939; Eckert, 1950; Elliott, 1950; Bendig, 1953; Voeks & French, 1960; and Rayder, 1967) report that little or no relationship exists between the rating of an instructor and the expected or
received grade of the student. These findings seem to indicate that a student's past or present academic achievement is not related to his rating of an instructor. A student who does well academically, therefore, does not necessarily rate an instructor higher.

Remmers, Hadley, and Long (1932) suggested that class size does not influence student ratings of the instructor, and this finding was supported by Starrack (1934), Goodhartz (1948), and Guthrie (1954). A study by Lovell and Haner (1955), however, using a forced-choice approach, found that students in classes of over thirty students rated instructors lower than did students in classes of less than thirty. Since large differences in class size are not a factor in the present study, the variability introduced by class size differences was not a source of concern.

Remmers (1929), Riley et al. (1950), and Rayder (1967), in separate studies, found that the sex of the student rater had little or no relationship to his rating of the instructor.

A study by Goodhartz (1948), comparing the student ratings of instructors in required classes with the student ratings in elective classes, found no significant differences, and this finding was supported by Riley et al. (1950). A study by Lovell and Haner (1955), designed to investigate the same relationship, found, however, that instructors of required classes were rated lower. Rayder (1967) found that student ratings of instructors in the student's major area did not differ significantly from the ratings of instructors in a student's non-major area.
The class level of the student (freshman, sophomore, junior, senior) seems to have no relationship to the rating of the instructor (Remmers, 1929; Crannell, 1948). Another study by Clark and Keller (1954), investigating this relationship, reported that college seniors and graduate students consistently rated instructors higher than did students at the other class levels. This study also mentions that college juniors tended to give the lowest rating of all class levels.

One recurring and consistent concern has been the validity of student ratings. No one would attempt to discount the subjective nature inherent in student ratings. Kent states that rating forms "are by their very nature 'biased' in that they depend upon the judgment of human beings who are necessarily subjective in their judgment (in Lee, 1967, p. 339)." When persons are concerned with the evaluation of teaching, which many studies involving student ratings are purporting to accomplish, serious questions should be raised about the validity of student judgments. If, however, student ratings are used for informational purposes, it would seem logical that the responses of the students, as consumers of the teaching, would be valid and useful. One study attempting to compare student ratings with alumni ratings of instructors (Drucker & Remmers, 1950) has found substantial agreement. Studies comparing student and faculty ratings of instructors (Breed, 1923; Starrack, 1934; and Guthrie, 1954) reported high correlations between student and faculty ratings.
Many of the investigations of the reliability of student ratings of instructors agree that student ratings are reliable. Remmers, reporting a study completed in 1960, stated: "If 25 or more student ratings are averaged, they are as reliable as the better educational and mental tests presently available (Remmers, 1963, p. 367)." Guthrie (1954) reported that over the years that they had used student ratings, the reliability of a sample of twenty-five scores had increased from .87 to .94. It is apparent that student rating scales which are highly reliable can be constructed. Several factor analysis studies of student ratings of instructors have resulted in similar findings. Studies by Creager (1950), Gibb (1955), Isaacson, McKeachie, and Milholland (1964), and Coats (1970), have isolated between two and six factors on various student rating instruments.

Generally, one factor has been identified which accounts for a large percentage of the total variance in student ratings of instructors. This factor has been called: (a) rapport (Creager, 1950), (b) friendly, democratic behavior (Gibb, 1955), (c) all-around teaching ability (Isaacson et al., 1964), and (d) charisma (Coats, 1970). Examination of the elements of the components of these factors reveals strong similarities, and the term which might be used to combine all of the elements and describe the behavior might well be called charisma.

Unfortunately, most of the research conducted on student ratings of instructors has concentrated upon the instrument used in that particular institution. No studies have been reported which
attempted to compare the various rating forms used in colleges or universities or to compare the results obtained from the use of the rating forms.

Characteristics of College Instructors
As They Relate to Student Ratings of Instructors

Very few studies on the college and university level have examined characteristics of instructors as they relate to student ratings. As might be expected, the small amount of data that are available from these few studies is contradictory. Perhaps one reason for the lack of consistent findings has been suggested by Remmers, reporting on a study he did in 1928. He stated that "in a given college or university, wide and important departmental differences in teaching effectiveness may exist as judged by student opinion (Remmers, 1963, p. 368)." These departmental differences may obscure any efforts that have been made to obtain demographic relationships between instructor characteristics and student ratings.

The sex of the instructor bears little or no relationship to the way the instructor is rated by the student (Remmers, 1929). This finding was not supported by Rayder (1967), who found that male instructors tended to be rated lower than female instructors. Popularity in extra-class activities on the part of the instructor seems to have little relationship to the way he is rated by the students (Remmers, 1928, 1960). The study by Guthrie (1954) found that the number of years since the instructor completed the requirements for the bachelor's degree (which was used as an indication of
years of experience) did not seem to be related to differences in student ratings. Remmers (1929), however, found that instructors with less than five years of experience tended to be rated lower than those with more than eight years of experience. Riley et al. (1950) reported that instructors above the age of fifty are rated lower than younger instructors. This finding was supported by Rayder (1967).

A few studies have been conducted attempting to find a relationship between the rank of the instructor and student ratings. Elliott (1949) found that Assistant Professors were rated higher than the other ranks. Support for differences in student ratings according to the rank of the instructor was given by Eckert and Keller (1954) who found that Professors and Associate Professors were consistently rated higher by students. Guthrie (1954) found little difference between ranks except that Instructors were rated significantly lower. These studies disagree on the type of rank that is related to differences in student opinions. Rayder (1967) suggested that little relationship exists between the instructor characteristics of rank, degree, and years of teaching experience and student mean ratings.

Riley et al. (1950) found that instructors holding only a bachelor's degree were rated lower than those holding a master's or doctoral degree. A recent study by Hudiberg (1965) found that the degree of the instructor is not a good single predictor of teaching effectiveness. Neither Guthrie (1954) nor Voeks (1962) found any relationship between research published and student ratings.
Kraus (1962) found that no significant differences existed between the ratings of full and part-time faculty members.

The studies attempting to establish any relationship between characteristics of instructors and student ratings are again localized to institutions and various types of individual rating forms. It would be safe to suggest that very little information concerning the characteristics of instructors as these relate to student ratings is presently available.

Written Student Feedback to Teachers

The literature on the effect of written student feedback to teachers is rather meager. The effect of student-written feedback to teachers has been researched only on the junior and senior high school levels. One possible reason for this lack of research has been suggested by Travers who said that teachers are not aware enough of the reasons why they are doing the things they do while teaching, and the possibility of having their behavior determined by students may be very threatening (Travers, 1963, p. 112).

Bryan, at Western Michigan University, has devoted several years to developing an instrument for obtaining student opinions. He has also developed a center which provides written student feedback to teachers who request this service. In a study to determine the effectiveness of written student feedback to teachers, Bryan (1963) found that fifty-seven percent of the teachers receiving this feedback made significant gains in student ratings, compared to
twenty-four percent of the control group. This study covered a
two-year period of time.

Gage et al. (1960) have developed a rationale explaining
why persons are likely to change when they are provided with feed­
back consisting of subordinates' opinions. The premise underlying
this rationale is that feedback will create an imbalance that the
person will attempt to correct. His most likely response would be
to modify his behavior, or at least modify others' perceptions of
his behavior. Bass and Vaughn (1966, p. 21) state: "As one learns to
behave in a given manner, knowledge of the effects of the behavior
is the important corrective and reinforcing factor in the process
of learning."

The rationale by Gage et al. was developed to support a
study on feedback. This study (1963) found that feedback not only
produced changes in behavior but also increased a teacher's self-
awareness in the sense that he was better able to predict his
students' opinions.

Aubertine (1964) conducted a study using student opinion
feedback in teacher training. When the written student opinions
were compared to supervisory feedback, the teacher trainees were
enthusiastically supportive in their preference for written student
feedback.

In a subsequent study, Ryan (1966) compared various types
of feedback to teacher trainees and also attempted to determine
what types of teachers were more receptive to feedback. This study
was not able to conclusively support the use of any type of feedback.
Perhaps feedback is not effective in changing the behavior of beginning teachers. Ryan suggested that further studies involving student feedback use an instrument that would allow students to rate a teacher on several items and also that a section of the instrument allow students to make written comments.

Savage (1957) also conducted a study using student feedback to student teachers. The results of this study did not support the use of student feedback. One limitation of this study, however, was the very brief period of time that the entire study covered. After only five days of the semester had elapsed, the students were asked to rate the teachers, and only twenty days after the student teachers were presented with the feedback, the students were again asked to rate the student teachers. Perhaps this very brief period of time contributed to the lack of support for the use of student opinions as written feedback to teachers.

A study by Lauroesch, Pereira, and Ryan (1969) also used written student feedback to teaching interns from the University of Chicago. This study compared written student feedback, feedback supplemented by an interview, and no feedback, and found that feedback was effective in changing student ratings, but in a direction opposite to that which was expected. Teaching interns who received only written feedback were rated lower than interns who received no feedback or the interns who received feedback and an interview. Interns who received no feedback were rated higher than interns who received any type of feedback. One explanation given for the results obtained was that over the relatively brief period of time which the
study covered (eight weeks), written student feedback can be damaging to young teachers. The authors postulated that if a longer period of time was allowed for the teaching interns to utilize the information, beneficial results might be obtained.

A study conducted by Tuckman and Oliver (1967) used student and supervisory feedback with beginning and experienced vocational teachers. Students taking high school vocational subjects were asked to rate their teachers at the beginning and end of a twelve-week period. The teachers were divided into four groups. Teachers receiving student feedback made significant positive changes in pupil ratings as compared to the teachers who received no feedback, while teachers who received feedback from their superiors made significant negative changes in pupil ratings. The teachers who received both student and supervisory feedback made no significant changes, compared to the teachers who received no feedback. These results somewhat replicate those reported by Bryan. Furthermore, this study seems to indicate that written student feedback is more effective in changing teacher behaviors than is supervisory feedback with both beginning and experienced vocational teachers.

A study by Clark (1970) compared the effects of written student feedback, interaction analysis feedback, research-based statements, and group guidance in modifying the image of high school teachers. He concluded that all experimental treatments were more effective in modifying teacher image than no feedback but that none of the experimental treatments were more effective than written student feedback. Since written student feedback was less expensive
and less time-consuming than the other methods, it would be advantageous to use this rather than the other procedures.

Studies conducted to show the effectiveness of student feedback in changing teacher behaviors have somewhat contradictory results. All of the studies attempting to use student feedback with student teachers or teacher interns report negative results in the persons receiving this information. No studies have been reported which attempted to measure long-range changes.

Written student feedback to "regular" teachers, however, has generally been effective in changing teacher behavior, as reported by students. In fact, written student feedback is more effective in changing teacher behavior than is supervisory feedback.

Summary

In this chapter, an attempt has been made to review the literature on characteristics of students and instructors as these relate to student ratings of instructors. The literature concerned with the use of student feedback to teachers was also reviewed. It would be difficult to identify many significant trends that emerged from this survey because of the frequency of contradictory findings. For organizational purposes, this review concentrated on the literature in four areas.

In the first section, where current trends in student ratings of instructors were considered, the two major studies by the American Council on Education were cited. Even though the trend in colleges and universities seemed to be moving away from
student ratings of instructors, recent evidence points to a reversal in the trend. The current emphasis seems to use student ratings as informational feedback to instructors rather than student ratings as evaluation. With the current emphasis on the improvement of instruction, one part of this process includes the information which can be provided by students.

In the second section of this survey, an attempt was made to review studies that identified characteristics of students and the relationship of these characteristics to the students' ratings of instructors.

Evidence seems to indicate that such variables as student's sex, class, achievement, or type of class in which the student is enrolled, do not significantly alter a student's rating of an instructor. When studies report differences, the population investigated and the instruments used vary to such an extent that one might expect some of these differences to occur by chance. Few repetitions of studies have been reported, and the need for more research on student variables as these relate to student ratings of instructors is evident.

A review of the literature reveals, however, that a strong positive correlation does exist between student and faculty ratings of instructors, as well as between student and alumni ratings. It is also generally concluded that student ratings are reliable, and studies designed to measure this reliability have reported correlation coefficients ranging between .70 and .95.
In the third section of this survey, studies identifying characteristics of college instructors and the relationship of these characteristics to student ratings of instructors were reviewed. The literature in this area is very inconclusive. Part of the reason for inconclusive evidence lies in the limited amount of research that has been done, examining the relationship between instructor characteristics and student ratings of instructors. The only study that is not contradicted by another study reported that there is no difference between full and part-time faculty members in terms of student ratings. Studies on other characteristics, such as instructor's sex, degree, rank, departmental affiliation, and amount of research or number of publications, reported contradictory conclusions. In some studies, a relationship exists between one or more of these characteristics and student ratings, and, in others, there is no relationship between the same characteristics and student ratings. An added complication to conclusive findings results from the widely varied policies, procedures, and types of rating forms used.

No studies reported, however, relate any student or instructor characteristics to written student feedback as information to instructors.

The last section of this survey reviewed the studies which have attempted to ascertain the effect of written student feedback on teachers. All of the studies in this area have been conducted with elementary, junior, or senior high school students and teachers. Several studies providing written student feedback to teacher interns
or student teachers reported negative results. On the other hand, studies attempting to use written student feedback to experienced teachers reported positive results. A significant number of experienced teachers who received written feedback from students made changes that students reported as positive. Written student feedback to teachers can be considered useful information by teachers—information which does, in fact, change teacher behaviors, as reported by students.
CHAPTER III

METHODS, DESIGN, AND PROCEDURES

Any study involving student ratings of instructors will invariably generate concern on the part of faculty members. To reduce any negative concern as much as possible, considerable effort was made to enlist the interest and cooperation of the faculty members.

The study proposal was presented to the Executive Committee of the Teacher Education Department of Western Michigan University for discussion and approval. The support of this group made it possible to approach the individual faculty members, informing them of the basic nature of the study and asking them for their cooperation. All data-collecting procedures were formulated with appropriate concern for the interest and convenience of the faculty members.

In this chapter, the format of the study is described. First, the sample is identified, followed by a discussion of the instrumentation, basic research design, hypotheses, and general procedures, and the chapter concludes with a section describing the statistical analyses.

Sample

The population of the study consisted of students and instructors in the Teacher Education Department at Western Michigan University. To insure a measure of uniformity in instructor-class
contact hours, only instructors teaching three and four credit-hour classes were included in the study. The courses included were general Teacher Education courses—those basic or core courses required of all students in the Teacher Education program. All instructors and students participated on a voluntary basis. If an instructor taught more than two classes, only two of his classes were randomly selected to participate in the study. Instructors were randomly assigned to one of three groups—one control group, one experimental group which received comprehensive written student feedback, and an experimental group which received only positive feedback. In one situation, a change in the assignment to a group was necessitated to make sure that office-mates received the same type of informational feedback.

Instrumentation

Instructor Image Questionnaire

Due to questions of validity and reliability, persons using student ratings of instructors tend to disagree on the type of instrument to be used. Nearly every college, university, or department desiring student rating surveys has developed an instrument which it feels meets its needs. Often, unfortunately, these instruments have been developed hurriedly and with very little effort spent in standardizing or validating these instruments. Exceptions to this situation do occur at such institutions as Purdue University, the University of Washington, and other institutions where attempts
have been made to develop reliable and useful instruments for obtaining student opinions.

Bryan, at Western Michigan University, has developed an instrument for obtaining opinions of junior and senior high school students and has spent over thirty years revising and improving this instrument. A recent study by Lauroesch et al. (1969, p. 7), sponsored by the United States Office of Education, used the instrument developed by Bryan with the following endorsement: "... a reliable and useful instrument exists for measuring pupils' opinions of teachers." Bryan not only developed an instrument for measuring student opinions but also a useful procedure for recording these opinions and sending the information back to the teacher in an easy-to-read graphic form.

The present study used Bryan's procedure of recording student opinions as feedback to college instructors and a modification of the Teacher Image Questionnaire developed by Bryan. The modification consisted of changing the wording of some of the scales, the deletion of some scales, and the addition of certain scales. All changes were made to adapt the instrument to the college population. Additional questions were included on the questionnaire to obtain information which might be related to the students' ratings of the instructor. The revision of Bryan's Teacher Image Questionnaire was called the Instructor Image Questionnaire (Appendix A). With fifty-one classes, chance-half reliability indices on the individual items of the revised questionnaire ranged between .49 and .88. Chance-half reliability on all of the items of the questionnaire
(questions 3-19) was .83. With a sample size of 1,469, a factor analysis study revealed two factors that accounted for 54.3 percent of the variance. One of these factors accounted for 46.7 percent of the total variance, with the remaining factor accounting for 7.6 percent of the total variance. The two factors accounted for a minimum of 27.8 percent of the variance and a maximum of 75.4 percent of the variance in a single item. The least amount of variance accounted for by both factors was the item concerning instructor appearance, and the greatest amount of variance accounted for by both factors was the item on overall evaluation. The first factor which accounted for much of the variance in each of the items on the questionnaire, except for the item on instructor appearance, might well be called instructor charisma. The second factor is much more difficult to identify but could be considered a student-centered factor, such as student concern.

Instructor Image Profile

The Instructor Image Profile (Appendix B) is the standard form of informational feedback prepared by the Educator Feedback Center at Western Michigan University. This form contains a summary listing of the information from the Instructor Image Questionnaire, such as the number of students who completed the questionnaire, the number of males and females, and other information. The information from questions 3-19 was summarized in graphic form. Class mean responses were plotted on a graph, and the instructor received a profile of class mean responses. The most frequent responses to the
two open-ended questions on the questionnaire (Questions 20 and 21) were also included as information. Comments mentioned three or more times by students were typed in the space provided. The analysis of responses and the preparation of the Instructor Image Profile were done by the Educator Feedback Center.

Instructor Image Summary

The Instructor Image Summary (Appendix C) was a modified written feedback form sent to instructors selected to receive only positive feedback. This feedback form contained a listing of the high or peak points on the Instructor Image Profile—generally only those above 4.0. The Instructor Image Summary also included the responses to the two open-ended questions (20 and 21).

Instructor Information Form

The Instructor Information Form (Appendix D) was a personal information form completed by the instructor at the time the first Instructor Image Questionnaire was administered to his class.

Design

This study used a pre-post test control group design. Fifty-one classes were divided into three groups—two treatment groups and one control group. Students in each class completed the Instructor Image Questionnaire two times—once near the beginning of the semester and again near the end of the semester. A minimum of eighteen class hours was required to take place prior to the initial
completion of the Instructor Image Questionnaire. The data from the initial administration of the Instructor Image Questionnaire were examined to determine if any relationship existed between several variables and total Instructor Image. Instructors in the control group received no feedback. Instructors in one experimental group received comprehensive feedback—the Instructor Image Profile—while instructors in the other experimental group received only positive feedback—the Instructor Image Summary. A minimum of twenty-four class hours after the instructors received the feedback was required to pass before the Instructor Image Questionnaire was administered for the second time. Differences between pretest and posttest measures were examined to determine what relationship existed between various types of feedback and changes in instructor image.

Hypotheses

The general objectives of this study were to determine the effectiveness of different types of written student feedback in changing the image of college instructors, as reported by students, and to identify variables which might be related to student ratings of college instructors. The specific null hypotheses to be tested were:

\( H_{01} \): No relationship exists between the sex of the student and the student's rating of the instructor.

\( H_{02} \): No relationship exists between the type of class the
student is enrolled in and the student's rating of the instructor.

\[ H_{03} : \text{No relationship exists between the student's opinion of the subject matter of the course and the student's rating of the instructor.} \]

\[ H_{04} : \text{No relationship exists between the classification of the student and the student's rating of the instructor.} \]

\[ H_{05} : \text{No relationship exists between the amount of time for which the student perceives the instructor to be engaged in lecturing and the student's rating of the instructor.} \]

\[ H_{06} : \text{No relationship exists between the sex of the instructor and student ratings of the instructor.} \]

\[ H_{07} : \text{No relationship exists between the status of the instructor and student ratings of the instructor.} \]

\[ H_{08} : \text{No relationship exists between the degree of the instructor and student ratings of the instructor.} \]

\[ H_{09} : \text{No relationship exists between the rank of the instructor and student ratings of the instructor.} \]

\[ H_{10} : \text{No relationship exists between the instructor's opinion of the class and student ratings of the instructor.} \]

\[ H_{11} : \text{No relationship exists between the instructor's opinion of the value of student opinions and student ratings of the instructor.} \]
The following hypotheses were designed to examine the effect of the various types of written informational feedback to college instructors.

$H_{02}^*$: No relationship exists between the type of written student feedback presented to college instructors and changes in student ratings of instructors.

$H_{03}^*$: No relationship exists between instructors' intent to change and changes in student ratings of instructors.

General Procedures

Early in the winter term of 1970, the principal investigator met with the Executive Committee of the Teacher Education Department, and an abstract of the present study was presented. This committee endorsed the study and granted permission for the principal investigator to approach the faculty members of the Teacher Education Department to ask for their cooperation. A letter (Appendix E) was sent to forty-two faculty members, explaining the basic purpose of the study and asking for their support. Also enclosed was a brief abstract of the study and a sample of the Instructor Image Questionnaire (Appendix A) and Instructor Information Form (Appendix D). A personal visit was made to each of the faculty members to whom a letter was sent to confirm the fact that they had received and read the materials and to enlist their cooperation. Of the forty-two faculty members who received the letter and were personally contacted, thirty-one were selected for participation in the study. The reasons
why the other eleven faculty members were not included in the study were:

1. Six instructors were involving their classes in a team-teaching experience, and for this reason were not included. All of these persons volunteered their cooperation, but the additional methodological problems that would have arisen did not appear to warrant the inclusion of these persons.

2. One person was reaching the end of his career as an instructor and asked to be excused from the study unless it was absolutely necessary for him to participate. He was excused from participation.

3. One person was conducting a study of his own in all of the classes he was teaching and expressed concern about the possibility of the contamination of results to both studies if the same group of students were to participate in both. He was excused from participation in the study.

4. Three persons refused to participate in the study. An attempt was made to enlist their cooperation, but, when these persons still asked not to be included, their wish was granted.

When each instructor was visited, those who agreed to participate in the study were informed which of their classes had been randomly selected to be included in the study. In only one instance was another class substituted for the one which had been randomly selected, as a result of a request by an instructor. Dates
and times of the initial administration of the Instructor Image Questionnaire were also agreed upon.

During this visit, all instructors were informed of the possibility of being included in the control group, which would mean that they would receive no feedback until the conclusion of the study. They were assured that if they were randomly selected to be in the control group, they would receive the feedback from both administrations of the Instructor Image Questionnaire at the conclusion of the study.

A minimum of eighteen class hours was allowed prior to the initial administration of the Instructor Image Questionnaire. Two doctoral students were selected to administer the questionnaire. A packet of materials was prepared, containing enough Instructor Image Questionnaires for the class members, an Instructor Information Form, and the date, time, and place the questionnaire was to be given. The test administrator met the instructor at the appointed time, introduced himself, and told the instructor why he was there. The instructor was asked to leave the room for approximately twenty minutes while the students completed the Instructor Image Questionnaire. As the instructor left, he was given a copy of the Instructor Information Form to fill out. The test administrator then went into the classroom and read the following statement to the class.

Your instructor has been requested to leave the room for a few minutes while you are taking part in a study that will include most of the students in Teacher Education 250, 300, and 312 courses. This study has been designed to allow you, as a student, to give your opinion on several items considered important in teaching. Your instructor will not see the forms on which you are writing. The comments

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you make will be recorded on a summary sheet and sent to your instructor for his information.

The Instructor Image Questionnaires were then distributed; the instructions on the questionnaire were read to the class, and the students were requested to write the code number assigned to that class at the top of the Instructor Image Questionnaire. The students were then instructed to complete the questionnaire.

After all students had completed the Instructor Image Questionnaire, the questionnaires were collected and sealed in an envelope. The students were then asked if they had any questions, and these questions were answered as completely as possible without giving away any confidential aspects of the study. In some cases, it was necessary to explain that certain aspects of the study made it impossible to answer a particular question at that time but that later in the semester it would be possible to answer some of these questions. The test administrator then thanked the class for their cooperation, left the class, collected the completed Instructor Information Form (which was sealed in an envelope that had been provided) from the instructor, thanked him for his cooperation, and brought both envelopes to the principal investigator. The packets of completed Instructor Image Questionnaires were taken to the Educator Feedback Center for analysis and feedback preparation.

Instructor Image Profiles were prepared for all instructors by the staff of the Educator Feedback Center. The principal investigator prepared a list of code numbers which identified those persons (by code numbers) who would be in each of the three groups.
and what type of informational feedback they were to receive. Persons whose numbers were in the positive feedback group also had Instructor Image Summaries prepared. The appropriate type of informational feedback was sealed in an envelope; the code number of the instructor was typed on the envelope, and the envelopes were returned to the principal investigator for distribution.

Within one week after the instructor's class had completed the Instructor Image Questionnaire, the instructor had received the appropriate informational feedback with the following letter.

Dear

You have been randomly selected to receive the enclosed informational feedback. This information was received from your TEED_______ class, section_______. For my purposes, I would hope that you do not discuss this feedback with too many persons because, as you know, some persons have been selected to receive no feedback until the conclusion of the study. I want to thank you for your excellent cooperation in every way. Sometime in March, I will be contacting you to make arrangements for the second administration of the Instructor Image Questionnaire.

Sincerely,

Persons in the control group received no feedback and no communication by letter. The total initial testing schedule covered eight school days and twelve calendar days.

Within two weeks after the feedback had been sent to the instructors, all the instructors who had received comprehensive informational feedback were personally visited by the principal investigator and asked if they could identify two areas which they would like to concentrate on to see if they could improve their ratings in these areas. They were told to give the number of the
item or area (corresponding to the number on the Instructor Image Questionnaire and the Instructor Image Profile), rather than the word associated with the item. The principal investigator visited eleven instructors who were responsible for seventeen classes in which the Instructor Image Questionnaire was administered. Of the eleven persons, seven instructors, representing thirteen classes, identified two areas on which they planned to concentrate for improvement. One person identified only one area, and three persons did not wish to concentrate on any particular area. The number of the area and the code numbers of the instructors and classes were recorded for later use.

A minimum of twenty-four class-hour sessions was allowed to take place between the time the instructor received the feedback and the time the Instructor Image Questionnaire was administered for the second time. One class was not able to have the Instructor Image Questionnaire administered the second time because of scheduling conflicts. Again each instructor was personally visited, and a time was arranged when the Instructor Image Questionnaire could be administered the second time.

At the arranged time, one of the same graduate students met the instructor, asked him to leave the room for approximately fifteen minutes, and went into the room to administer the Instructor Image Questionnaire for the second time. The following instructions were read to the classes.

Earlier this semester you were asked to fill out a questionnaire asking for your opinion on several variables associated with teaching. Since that time, some instructors
have received information consisting of a summary of the opinions of the students in their classes. Because you do not know if your instructor received this information or not, any changes you have in your opinions should not be biased by what may or may not have happened. You are being asked to complete another questionnaire with the realization that changes in your perceptions may have occurred—-for several possible reasons. The format will be essentially the same as was used the last time with this minor modification: The two open-ended questions (20 and 21) ask you to list one or more strengths and suggestions for improvement. Please do not repeat the comments you made the last time. If you have different comments or different suggestions from the ones you made the last time, please do list these. This will save time for both you and the persons who are recording the comments.

Code numbers were again assigned to the classes, and the students were asked to complete the questionnaire.

After all Instructor Image Questionnaires were completed, collected, and sealed in an envelope, the students were encouraged to ask questions, which were answered if possible. The only questions that were not answered were those concerning the type of feedback which that particular instructor had received, and those questions which would have violated the privacy of any instructor. After all questions had been answered, the students were again thanked for their cooperation, and the test administrator left the room. The instructor was also thanked, and the sealed envelope was returned to the principal investigator. The coded envelopes were taken to the Educator Feedback Center where Instructor Image Profiles were prepared for all instructors. These profiles were sealed in envelopes, and the code numbers were typed on the envelopes. The principal investigator sent the Instructor Image Profile to the appropriate instructor with a letter explaining the intent and various aspects of the study (Appendix F).
Also included was a summary profile that was completed, using the responses of all students who completed the initial Instructor Image Questionnaire. Persons who were randomly selected to be in the control group received two Instructor Image Profiles, as did persons who had been randomly selected to receive only positive feedback. No final feedback was returned until all classes had completed the Instructor Image Questionnaire for the second time.

The individual Instructor Image Profiles were sent to the computer center for IBM card preparation and data analysis.

Statistical Analyses

The responses to questions 3-19 of the Instructor Image Questionnaire were assigned weights from one to five, the lowest score with which an instructor could be rated being 1.00 and the highest being 5.00. Means and standard deviations on the Instructor Image Questionnaire were then computed for each class and each item. In some cases, student mean scores were used for statistical calculation to determine the relationship between student or instructor characteristics and student ratings of instructors, while in the other analyses, class mean scores were used to make comparisons between pretest and posttest scores.
Analysis of Group Differences
Using Total Change Scores

The data of the present study are similar to those obtained by Lauroesch et al. (1969) and Tuckman and Oliver (1968). Class mean change scores between pre-post test measures were computed, and one-way analysis of variance models were calculated, using the following basic design.

<table>
<thead>
<tr>
<th>Type of Feedback</th>
<th>Control</th>
<th>Positive</th>
<th>Comprehensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Mean Change</td>
<td></td>
<td></td>
<td>Scores</td>
</tr>
</tbody>
</table>

Figure 1
Analysis of Variance Model to Determine the Relationship Between the Type of Feedback and Changes in Student Ratings of Instructors

Analyses to Determine Relationship Between Student Ratings of Instructor and Other Variables

Several one-way analyses of variance were made using student mean scores on the initial Instructor Image Questionnaire (Hays, 1963).

Several t tests were also computed, using student mean scores on the initial Instructor Image Questionnaire when only two categories of the independent variables were present (Kerlinger, 1964).
Traditionally, investigators have stated the level of significance at which the null hypothesis would be rejected. Recently, however, a trend in behavioral science research has been to conduct the study, analyze the results, and then report the level at which the null hypothesis can be rejected. This trend arises, in part, from the realization that the .05 and .01 levels of significance are little more than a matter of convention and have little logical or scientific basis (Winer, 1962). The rationale for this trend results from a decision to place more emphasis upon the power of a test than has been done traditionally.

Additionally, because the statistical significance of an association between two variables is directly related to the size of the sample, one meaningful addition to the data analysis is a measure of the strength of association. Frequently, a better decision about the data can be made by using both the significance level and the estimated strength of association than by using the significance level alone (Hays, 1963). When the results of analysis suggest that the strength of association is very low, more support is given to the inference that no meaningful difference exists between this type of treatment and the dependent variables.

The estimate of the strength of association, $\omega^2$, (Hays, 1963) was computed for analysis of variance data and for t test data. The meaningfulness of the significance levels and the importance of the strength of association between the variables are discussed further in Chapter V.
Analyses to Determine Instructor's Intent to Change

Persons in the regular feedback group were asked to identify two areas on which they wished to concentrate for improvement. Several t tests were computed to determine if the differences between pretest and posttest ratings on the selected items were significantly different from items on which the instructor had not declared an intent to change and item changes in the control group.

Summary

This study is an investigation of the effectiveness of various types of written student feedback in changing the behaviors of college instructors, as reported by students. Another aspect of this study is to attempt to identify certain variables which may be related to the rating of instructors by college students.

Thirty-one instructors teaching fifty-one classes were selected from the Teacher Education Department at Western Michigan University. Instructors were randomly assigned to one of three groups--one control group, one experimental group receiving comprehensive feedback, or one experimental group receiving only positive feedback.

Each class completed the Instructor Image Questionnaire two times, once near the beginning of the semester and again near the end of the semester. After the Instructor Image Questionnaire had been administered to an instructor's class, he was randomly selected to receive (a) no feedback, (b) comprehensive feedback, or
(c) positive feedback. Twenty-four class-hour sessions after the instructor had received the appropriate feedback, the class again completed the Instructor Image Questionnaire.

The basic instrument used in this study was the Instructor Image Questionnaire, a scale which students use to rate instructors. Chance-half reliability for the instrument is .83.

Various types of written student feedback were also presented. The Instructor Image Profile is the regular type of feedback form prepared by the Educator Feedback Center, while the Instructor Image Summary was a special type of feedback form designed specifically for this study. This written student feedback form listed only the positive aspects of instructor behavior.

The data were statistically analyzed by means of several one-way analysis of variance models and by the computation of t tests to determine the relationship between each variable and student ratings of instructors.

A one-way analysis of variance model was also used with class change mean scores to ascertain the effect of various types of written student feedback on instructor image, as reported by students.
CHAPTER IV
RESULTS

The data obtained from the procedures described in Chapter III were analyzed by t tests and analysis of variance models. These results will be presented as follows. First, final populations included in the analyses will be described; second, student and instructor characteristics, as these relate to student ratings of instructors, will be presented, and finally, the effects of various types of informational feedback to instructors will be examined.

Populations Included in the Analysis

Student Population

Since essentially the same student population completed the Instructor Image Questionnaire two times, the characteristics of students and the relationship of these characteristics to student ratings of instructors will be described for only the initial administration of the Instructor Image Questionnaire.

The initial Instructor Image Questionnaire was completed by 1,527 students. Fifty-eight questionnaires were discarded because students failed to respond to certain questions asking them to react to aspects of teaching (questions 3-19). Students who skipped or forgot questions asking for non-feedback information (sex, class, etc.) were included in the sample if responses to questions 3-19 were complete. Table 1 describes the student population completing the initial Instructor Image Questionnaire.

46
### TABLE 1
Characteristics and Responses of Students Completing the Initial Instructor Image Questionnaire

<table>
<thead>
<tr>
<th>Total Number of Student Responses Used</th>
<th>Student Opinion of Subject Matter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students Declaring Like</td>
</tr>
<tr>
<td></td>
<td>Students Declaring Dislike</td>
</tr>
<tr>
<td></td>
<td>No Opinion Identified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex of Students</th>
<th>Students Declaring Like</th>
<th>Students Declaring Dislike</th>
<th>No Opinion Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1,323</td>
<td>129</td>
<td>17</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Sex Identified</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification of Students</th>
<th>Student Opinion of Amount of Class Time the Instructor Spent Lecturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>Students Declaring Some</td>
</tr>
<tr>
<td>Sophomores</td>
<td>Students Declaring Average</td>
</tr>
<tr>
<td>Juniors</td>
<td>Students Declaring Much</td>
</tr>
<tr>
<td>Seniors</td>
<td>No Opinion Identified</td>
</tr>
<tr>
<td>Graduates</td>
<td></td>
</tr>
<tr>
<td>No Class Identified</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Selection of Class</th>
<th>Students Declaring Some</th>
<th>Students Declaring Average</th>
<th>Students Declaring Much</th>
<th>No Opinion Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>1,382</td>
<td>706</td>
<td>354</td>
<td>10</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Selection Identified</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second Instructor Image Questionnaire was completed by 1,497 students. Forty-six of the questionnaires were again discarded because of missed responses on questions 3-19. The total number of students included in the second administration was 1,451.
Instructor Population

Thirty-one instructors voluntarily participated in the study. In some instances, more than one class of an instructor completed the Instructor Image Questionnaire. Fifty-one classes of the thirty-one instructors participated in the study. Time limitation prevented one class from completing a second Instructor Image Questionnaire, and this class was dropped from pre-post test comparisons. Even though only thirty-one different persons were instructors of the fifty-one classes, some of the reactions they had to the classes differed, and, for the purposes of this study, they will be considered on an individual basis. Table 2 describes the instructors participating in the study.

<table>
<thead>
<tr>
<th>TABLE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics and Responses of Instructors Who Participated in the Study</td>
</tr>
<tr>
<td>Total Number of Instructors</td>
</tr>
<tr>
<td>Sex of Instructors</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Persons Having Doctoral Degree</td>
</tr>
<tr>
<td>Highest Degree of Instructor</td>
</tr>
<tr>
<td>Persons Having Master's Degree</td>
</tr>
<tr>
<td>Persons Having Master's Degree Plus Hours</td>
</tr>
<tr>
<td>Persons Having Educational Specialist Degree</td>
</tr>
<tr>
<td>Rank of Instructor</td>
</tr>
<tr>
<td>Instructors</td>
</tr>
<tr>
<td>Assistant Professors</td>
</tr>
<tr>
<td>Associate Professors</td>
</tr>
<tr>
<td>Professors</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

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TABLE 2 (continued)

<table>
<thead>
<tr>
<th>Status of Instructor</th>
<th>Instructor's Opinion of the Use of Student Opinions as Informational Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>Would Find them Useful and Valuable</td>
</tr>
<tr>
<td>Part-time</td>
<td>Would Find Them Interesting</td>
</tr>
<tr>
<td>Instructor's Comparison of Present Class to Past Classes</td>
<td>Would Find Them Not Valuable</td>
</tr>
<tr>
<td>Very Favorable</td>
<td>9</td>
</tr>
<tr>
<td>Favorable</td>
<td>21</td>
</tr>
<tr>
<td>About the Same</td>
<td>17</td>
</tr>
<tr>
<td>Unfavorable</td>
<td>3</td>
</tr>
<tr>
<td>Very Unfavorable</td>
<td>1</td>
</tr>
</tbody>
</table>

It will be recalled from the discussion concerning the analysis of the data in Chapter III that two aspects of analysis will be included. The approximate level of probability at which the null hypothesis can be rejected, as well as the estimate of the strength of association, \( \omega^2 \), are presented. The level of probability and strength of association provide the reader with sufficient information which can be used to make a decision concerning the practical significance of the relationship.

Characteristics of College Students
As They Relate to Student Ratings of Instructors

Various student characteristics were examined to determine whether any relationships existed between these characteristics and the student ratings of instructors. Information obtained from the
initial administration of the Instructor Image Questionnaire was examined to determine whether such relationships did exist.

The five null hypotheses in which the relationship between student characteristics and the student ratings of instructors was examined were:

$H_{01}$: No relationship exists between the sex of the student and the student's rating of the instructor.

$H_{02}$: No relationship exists between the type of class the student is enrolled in and the student's rating of the instructor.

$H_{03}$: No relationship exists between the student's opinion of the subject matter of the course and the student's rating of the instructor.

$H_{04}$: No relationship exists between the classification of the student and the student's rating of the instructor.

$H_{05}$: No relationship exists between the amount of time for which the student perceives the instructor to be engaged in lecturing and the student's rating of the instructor.

Tables 3 through 7 present summary data and analysis data used to determine the relationship between each of the student characteristics and student ratings of instructors.
TABLE 3
Relationship Between Student's Sex and Student Ratings of Instructors

<table>
<thead>
<tr>
<th>Sex</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>562</td>
<td>4.096</td>
<td>.579</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>899</td>
<td>4.143</td>
<td>.613</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the analysis indicate that female students rated instructors higher than did male students. A difference this large could have been expected by chance only seven times in one hundred if there were no difference between the groups. The strength of association, $\omega^2$, indicates that knowledge of the sex of the student accounted for only eight ten-thousandths of one percent of the variance in student ratings.

TABLE 4
Relationship Between the Type of Class and Student Ratings of Instructors

<table>
<thead>
<tr>
<th>Class</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required</td>
<td>1,382</td>
<td>4.112</td>
<td>.602</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>73</td>
<td>4.178</td>
<td>.561</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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This analysis indicates that students who elected a class rated the instructor higher than did students in a required class. A difference this large could occur thirty times in one hundred if no difference existed between the groups. The strength of association, $\omega^2$, seems to indicate that none of the variance in student ratings of instructors could be accounted for by knowing the type of class in which the student was enrolled.

**TABLE 5**

<table>
<thead>
<tr>
<th></th>
<th>Like</th>
<th>Dislike</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>1,323</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:</td>
<td>4.171</td>
<td>3.648</td>
<td>9.739</td>
<td>.005</td>
<td>.06</td>
</tr>
<tr>
<td>SD:</td>
<td>.568</td>
<td>.699</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examination of the results of this analysis indicates that students who declared that they disliked the subject matter of the course rated the instructor lower than did those students who declared that they liked the subject matter. A difference this large could be expected to occur by chance only five times in one thousand if no difference between groups existed. The strength of association, $\omega^2$, indicates that knowledge of the student's opinion of the subject matter accounted for approximately six percent of the variance in student ratings of instructors.
<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>7.221</td>
<td>4</td>
<td>1.805</td>
<td>5.063</td>
<td>.0005</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>519.496</td>
<td>1,457</td>
<td>.356</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>526.717</td>
<td>1,462</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although the number of students in each of the class
categories varied considerably, it is evident from the table that
there was a relationship between the classification of the student
and the way the student rated an instructor. It is also evident that
the longer a student was in school, the lower he rated the instructor.
The only exception to this pattern was the ratings by graduate
students, who rated instructors higher than did college seniors. A
difference as large as that observed in this study could occur by
chance only five times in ten thousand if there were no difference
between the groups. The strength of association, $\omega^2$, indicates that
approximately one percent of the variance in student ratings of instructors can be accounted for by knowing the classification of the student.

TABLE 7
Summary Data and Analysis of Variance Data for the Relationship Between the Student's Opinion of the Amount of Class Time the Instructor Spends Lecturing and Student Ratings of Instructors

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>17.836</td>
<td>2</td>
<td>3.918</td>
<td>25.619</td>
<td>.0005</td>
<td>.03</td>
</tr>
<tr>
<td>Within Groups</td>
<td>506.827</td>
<td>1,456</td>
<td>.348</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>524.663</td>
<td>1,459</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The analysis presented in Table 7 suggests that a relationship existed between the opinion the student had concerning the amount of time the instructor spent lecturing and student ratings of instructors. Students who perceived the instructor as lecturing much of the time rated the instructor lower than did students who perceived the instructor as lecturing an average amount of time or some of the time. The more class time the student perceived the
instructor to be engaged in lecturing, the lower the student rated the instructor. A difference as large as that observed in this study could occur by chance only five times in ten thousand if no difference existed between the groups. The strength of association, computed from the data, indicates that only three percent of the variance can be accounted for by knowing the student's opinion of the amount of class time the instructor spends lecturing.

From the analyses presented, it is apparent that little relationship existed between the sex of the student or type of class and student ratings of instructors.

A relationship did exist between the student's classification, opinion of the subject matter, opinion of the amount of class time the instructor spent lecturing, and student ratings of instructors.

None of the student characteristics mentioned, however, seem to account for much of the variance in student ratings of instructors. The greatest amount of variance accounted for in student ratings of instructors was six percent, attributed to student like or dislike of the subject matter.

Characteristics of College Instructors
As They Relate to Student Ratings of Instructors

Various characteristics of college instructors were examined to determine whether any relationship existed between these characteristics and the rating of instructors by students. Information
obtained from the initial administration of the Instructor Image Questionnaire was examined to determine whether such relationships did exist.

Because instructors received informational feedback based on class mean scores, analyses to determine the relationships between instructor characteristics and student ratings of instructors were computed using class mean ratings rather than individual student ratings.

The six null hypotheses in which the relationship between instructor characteristics and class mean student ratings of instructors was examined were:

\( H_{06} \): No relationship exists between the sex of the instructor and student ratings of the instructor.
\( H_{07} \): No relationship exists between the status of the instructor and student ratings of the instructor.
\( H_{08} \): No relationship exists between the degree of the instructor and student ratings of the instructor.
\( H_{09} \): No relationship exists between the rank of the instructor and student ratings of the instructor.
\( H_{10} \): No relationship exists between the instructor's opinion of the class and student ratings of the instructor.
\( H_{11} \): No relationship exists between the instructor's opinion of the value of student opinions and student ratings of the instructor.

Tables 8 through 13 present summary data and analysis data used to determine the relationship between each of the instructor characteristics and student ratings of instructors.
TABLE 8
Relationship Between Instructor's Sex and Student Ratings of Instructors

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>33</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:</td>
<td>4.099</td>
<td>4.171</td>
<td>.685</td>
<td>.25</td>
<td>.00</td>
</tr>
<tr>
<td>SD:</td>
<td>.361</td>
<td>.352</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is evident from this analysis that female instructors were rated higher than were male instructors but that a difference this large could occur by chance twenty-five times in one hundred if no difference between groups existed. None of the variance in student ratings of instructors could be accounted for by knowing the sex of the instructor.

TABLE 9
Relationship Between the Status of the Instructor and Student Ratings of Instructors

<table>
<thead>
<tr>
<th></th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>41</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:</td>
<td>4.168</td>
<td>3.959</td>
<td>.946</td>
<td>.22</td>
<td>.00</td>
</tr>
<tr>
<td>SD:</td>
<td>.591</td>
<td>.604</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examination of this analysis reveals that students rated full-time faculty members higher than part-time faculty members. A
difference this great could be expected by chance twenty-two times in one hundred if there were no difference between the groups. The strength of association, $\omega^2$, indicates that none of the variance in student ratings of faculty members could be accounted for by knowledge of the status of the instructor.

Because of the limited number of instructors in some of the instructor degree categories, only two categories of instructor degree were compared--those who held a doctoral degree and those who did not hold the doctoral degree.

**TABLE 10**

**Relationship Between the Degree of the Instructor and Student Ratings of Instructors**

<table>
<thead>
<tr>
<th></th>
<th>Less than Doctorate</th>
<th>Doctorate</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>24</td>
<td>27</td>
<td>.806</td>
<td>.21</td>
<td>.00</td>
</tr>
<tr>
<td>M:</td>
<td>4.086</td>
<td>4.163</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD:</td>
<td>.375</td>
<td>.275</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examination of this analysis suggests that instructors with doctoral degrees were rated higher by students than were instructors without doctoral degrees. A difference as large as the difference observed here could occur by chance twenty-one times in one hundred if no difference existed between the groups. The strength of association, $\omega^2$, computed from the data, reveals that none of the
variance in student ratings of instructors could be accounted for by the degree of the instructor.

TABLE 11

Summary Data and Analysis of Variance Data for the Relationship Between the Rank of the Instructor and Student Ratings of Instructors

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Assistant Prof.</th>
<th>Assoc. Prof.</th>
<th>Prof.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>10</td>
<td>17</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>M:</td>
<td>4.019</td>
<td>4.159</td>
<td>4.262</td>
<td>4.042</td>
</tr>
<tr>
<td>SD:</td>
<td>.245</td>
<td>.423</td>
<td>.227</td>
<td>.239</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>( \omega^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.45370</td>
<td>4</td>
<td>.1134</td>
<td>1.0347</td>
<td>.42</td>
<td>.003</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5.0425</td>
<td>46</td>
<td>.1096</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.49621</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examination of the results of this analysis reveals that students rated an instructor with the rank of Associate Professor higher than instructors with other ranks. There seemed to be a relationship between the rank of the instructor and the rating he received, with those instructors with lower ranks receiving lower ratings. One exception to this pattern was the rating of instructors with the rank of Professor, who were rated lower than instructors with the rank of Assistant or Associate Professor. A difference as
great as was observed in this study could occur by chance forty-two times in one hundred if no difference between groups existed. Only three one-thousandths of one percent of the variance in student ratings of instructors could be accounted for by knowing the rank of the instructor.

When asked to compare his present class to past classes, only one instructor said the class was very unfavorable. This category was dropped from the analysis, and a one-way analysis of variance was computed, using the remaining four categories.

### TABLE 12

Summary Data and Analysis of Variance Data for the Relationship Between the Instructor's Opinion of the Class and Student Ratings of Instructors

<table>
<thead>
<tr>
<th></th>
<th>Very Favorable</th>
<th>Favorable</th>
<th>About the Same</th>
<th>Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>9</td>
<td>21</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>SD:</td>
<td>.239</td>
<td>.334</td>
<td>.302</td>
<td>.457</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.215</td>
<td>3</td>
<td>.071</td>
<td>.6339</td>
<td>.58</td>
<td>.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5.184</td>
<td>46</td>
<td>.112</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5.399</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From an examination of this analysis, it is evident that instructors who viewed the present class as comparing very favorably to past classes were also rated highest by students. Instructors who viewed the class as comparing unfavorably to past classes were rated lowest by students. The other comparison choices by instructors and the ratings by students did not reveal any pattern. A difference as large as that observed in this analysis could be expected to occur by chance fifty-eight times in one hundred if there were no difference between the groups. None of the variance in student ratings of instructors could be accounted for by knowing how the instructor compared his present class to his past classes.

When instructors were asked to give their opinion of the value of student opinions as information, only two instructors said that student opinions would not be valuable. For purposes of analysis, the categories interesting and not valuable were combined, and a $t$ test was used to compare the means of these two groups.

**TABLE 13**

<table>
<thead>
<tr>
<th></th>
<th>Useful and Valuable</th>
<th>Interesting and Not Valuable</th>
<th>$t$</th>
<th>$p$</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$n$:</td>
<td>40</td>
<td>11</td>
<td>.166</td>
<td>.50</td>
<td>.00</td>
</tr>
<tr>
<td>$M$:</td>
<td>4.130</td>
<td>4.115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$SD$:</td>
<td>.349</td>
<td>.231</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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The results of this analysis reveal that instructors who felt that student opinions were useful and valuable were rated higher than instructors who stated that student opinions were interesting or not valuable. A difference as large as was observed here could happen by chance fifty times in one hundred if no difference existed between the groups. None of the variance in student ratings of instructors could be accounted for by knowledge of the instructor's opinion of the value of student feedback.

From the analyses presented, it is evident that no strong relationship existed between the instructor characteristics investigated and student ratings of instructors. Often differences did exist in the way students rated instructors, but little consistency is evident in the data presented.

It is interesting to note, however, that the actual differences in student ratings of instructors in some of the instructor characteristics categories were as large as the differences observed in the previous section where the relationships between student characteristics and student ratings of instructors were examined. The reason why no significant differences between instructor characteristics and student ratings of instructors were observed was the difference in sample size. If individual student means instead of class means would have been used, significant differences would have been observed. This lack of significant differences points out one of the obvious limitations of inferential statistics, in which sample size influences the significance of the differences.
Written Student Feedback to Instructors

The hypotheses which were related to written student feedback to instructors were:

\[ H_{02} \]: No relationship exists between the type of written student feedback presented to college instructors and changes in student ratings of instructors.

\[ H_{03} \]: No relationship exists between instructors' intent to change and changes in student ratings of instructors.

For the sake of comparison, all instructors in each of the three groups were compared on the pre-post test administrations of the Instructor Image Questionnaire. Table 14 contains pre-post test mean scores of persons in each of the three groups.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Comprehensive Feedback</th>
<th>Positive Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>4.064</td>
<td>4.146</td>
<td>4.163</td>
</tr>
<tr>
<td>Post</td>
<td>4.036</td>
<td>4.015</td>
<td>4.017</td>
</tr>
<tr>
<td>Mean Change</td>
<td>-.028</td>
<td>-.131</td>
<td>-.146</td>
</tr>
</tbody>
</table>

It is immediately evident that the mean scores of instructors in each of the three groups were lower on the posttest than they were on the pretest. Students tended to be less complimentary the
second time they rated the instructor than they were the first time they rated him on the Instructor Image Questionnaire.

Table 15 presents summary data and analysis of variance data on the mean differences between pretest and posttest measures for the control group and the experimental groups.

<table>
<thead>
<tr>
<th>TABLE 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Data and Analysis of Variance Data on the Mean Differences Between Pretest and Posttest Measures for the Control Group and the Experimental Groups</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.14070</td>
<td>2</td>
<td>.070</td>
<td>1.626</td>
<td>.23</td>
<td>.02</td>
</tr>
<tr>
<td>Within Groups</td>
<td>2.033</td>
<td>47</td>
<td>.043</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.17370</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From an examination of this analysis, it is apparent that instructors who received no feedback declined least in the second rating. Instructors who received positive written feedback declined most. A difference as large as was observed in this analysis could occur by chance twenty-three times in one hundred if no difference between groups existed. The strength of association, $\omega^2$, reveals...
that two percent of the variance in change scores could be accounted for by knowing the type of feedback the instructor received.

Table 16 contains the total and cell means for the difference between pretest and posttest scores for the various types of feedback and the instructor's opinion of the value of student feedback.

TABLE 16

Mean Difference Scores for the Type of Feedback and Instructors' Opinions of the Value of Student Feedback

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Comprehensive</th>
<th>Positive</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful &amp; Valuable</td>
<td>-.003</td>
<td>-.120</td>
<td>-.093</td>
<td>-.216</td>
</tr>
<tr>
<td>Interesting</td>
<td>-.225</td>
<td>-.158</td>
<td>-.485</td>
<td>-.868</td>
</tr>
<tr>
<td>Total</td>
<td>-.228</td>
<td>-.278</td>
<td>-.578</td>
<td></td>
</tr>
</tbody>
</table>

The category of not valuable was dropped from the analysis because only two instructors selected that category.

Table 17 contains the results of a 2 X 3 analysis of variance model used to test for the relationship between change scores and instructors' opinions of student feedback.
TABLE 17
Analysis of Variance for Mean Change Scores
and Instructors' Opinions of the Value
of Student Feedback

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rows</td>
<td>.296</td>
<td>1</td>
<td>.296</td>
<td>7.484</td>
<td>.025</td>
<td>.11</td>
</tr>
<tr>
<td>Columns</td>
<td>.151</td>
<td>2</td>
<td>.076</td>
<td>1.907</td>
<td>.15</td>
<td>.03</td>
</tr>
<tr>
<td>Interaction</td>
<td>.131</td>
<td>2</td>
<td>.065</td>
<td>1.651</td>
<td>.20</td>
<td>.02</td>
</tr>
<tr>
<td>Error</td>
<td>1.663</td>
<td>42</td>
<td>.039</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of this analysis reveal that instructors who said student feedback would be useful and valuable made less negative changes than instructors who said that student feedback would be interesting. A difference as large as was observed would occur by chance twenty-five times in one thousand if there were no difference between the groups. The strength of association, $\omega^2$, computed from the data, revealed that eleven percent of the variance in change scores in instructor ratings could be accounted for by knowing the instructor's opinion of student feedback.

Instructors who received positive feedback made larger negative changes than the instructors who received no feedback or comprehensive feedback. A difference as large as was observed in the study could be expected to occur by chance fifteen times in one hundred if no difference existed between the groups. Three percent of the variance in change scores in instructor ratings could be accounted for by knowing the type of feedback the instructor received.
An interaction effect between the instructors' opinions of the value of student feedback and the type of feedback also was observed. It appears that instructors who said that student feedback was useful and valuable and received no feedback or positive feedback made the least negative changes, while instructors who said that student feedback would be interesting and received no feedback or positive feedback made the greatest negative changes. An interaction effect as large as was observed in this study would occur by chance twenty times in one hundred if no difference between groups existed. Only two percent of the variance in change scores in instructor ratings could be accounted for by knowing the interaction between the type of feedback received and the instructor's opinion of the value of student feedback.

Table 18 presents the cell and total means for the difference between pretest and posttest means for the various types of feedback and the rank of the instructor. Two categories of instructor rank (Professor and Other) were dropped from the analysis because of the lack of persons in some cells.
TABLE 18

Mean Difference Scores for the Type of Feedback and Instructor Rank

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Control</th>
<th>Comprehensive</th>
<th>Positive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor</td>
<td>0.00</td>
<td>-.040</td>
<td>.145</td>
<td>.105</td>
</tr>
<tr>
<td>Assistant Prof.</td>
<td>-.185</td>
<td>-.125</td>
<td>-.150</td>
<td>-.460</td>
</tr>
<tr>
<td>Associate Prof.</td>
<td>0.00</td>
<td>-.175</td>
<td>-.290</td>
<td>-.465</td>
</tr>
<tr>
<td>Total</td>
<td>-.185</td>
<td>-.330</td>
<td>-.295</td>
<td></td>
</tr>
</tbody>
</table>

Table 19 contains the results of a 3 X 3 analysis of variance model used to test the relationship between mean change scores and instructor rank.

TABLE 19

Analysis of Variance for Mean Change Scores, Instructor Rank, and Type of Feedback

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>ω²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rows</td>
<td>.227</td>
<td>2</td>
<td>.114</td>
<td>2.149</td>
<td>.17</td>
<td>.06</td>
</tr>
<tr>
<td>Columns</td>
<td>.012</td>
<td>2</td>
<td>.006</td>
<td>.119</td>
<td>.88</td>
<td>.04</td>
</tr>
<tr>
<td>Interaction</td>
<td>.189</td>
<td>4</td>
<td>.047</td>
<td>.897</td>
<td>.48</td>
<td>.0005</td>
</tr>
<tr>
<td>Error</td>
<td>1.534</td>
<td>29</td>
<td>.053</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is apparent from this analysis that Instructors made less negative changes than either Assistant or Associate Professors.
A change as large as was observed in this study would occur by chance seventeen times in one hundred if there were no difference between the groups. Six percent of the variance in mean change scores could be accounted for by knowing the rank of the instructor.

Column and interaction effects were not observed in the analysis.

Table 20 presents cell and total mean change scores for the type of feedback and the sex of the instructor.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Comprehensive</th>
<th>Positive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>-.064</td>
<td>-.155</td>
<td>-.274</td>
<td>-.493</td>
</tr>
<tr>
<td>Female</td>
<td>.146</td>
<td>-.074</td>
<td>-.082</td>
<td>-.010</td>
</tr>
<tr>
<td>Total</td>
<td>.082</td>
<td>-.229</td>
<td>-.356</td>
<td></td>
</tr>
</tbody>
</table>

Table 21 contains the results of a 2 X 3 analysis of variance model used to test the relationship between the type of feedback and the sex of the instructor.
TABLE 21

Analysis of Variance for Mean Change Scores,
Sex of Instructor, and Type of Feedback

<table>
<thead>
<tr>
<th>Source</th>
<th>ss</th>
<th>df</th>
<th>ms</th>
<th>F</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rows</td>
<td>.237</td>
<td>1</td>
<td>.237</td>
<td>5.875</td>
<td>.025</td>
<td>.02</td>
</tr>
<tr>
<td>Columns</td>
<td>.311</td>
<td>2</td>
<td>.116</td>
<td>3.862</td>
<td>.05</td>
<td>.04</td>
</tr>
<tr>
<td>Interaction</td>
<td>.029</td>
<td>2</td>
<td>.014</td>
<td>.369</td>
<td>.45</td>
<td>.00</td>
</tr>
<tr>
<td>Error</td>
<td>1.776</td>
<td>44</td>
<td>.040</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is evident from an examination of this analysis that female instructors made less negative changes than male instructors. A difference as large as was observed in this study would occur by chance only twenty-five times in one thousand if no difference existed between the groups. The strength of association, $\omega^2$, computed from the data, indicates that three percent of the total variance in change scores could be attributed to knowledge of the sex of the instructor.

There was also a relationship between the type of feedback and mean change scores, which is very similar to a previously-reported finding. The instructors receiving no feedback made positive changes, while those who received comprehensive or positive feedback made negative changes. The changes observed in the analysis could be expected to occur by chance only five times in one hundred if no difference between the groups existed. Only four percent of the
total variance in change scores could be accounted for by knowing the type of feedback the instructor received.

No significant interaction effect was observed.

Other two-way analysis of variance models to determine the relationship between the status of the instructor, type of feedback, and mean change scores, as well as the degree of the instructor, type of feedback, and mean change scores, were also computed. These analyses did not reveal any meaningful relationships.

Instructor's Intent to Change

Instructors who received comprehensive informational feedback were asked to identify one or two areas in which they wished to see an improvement in student ratings. Eight instructors identified one or two areas on which they declared an intent to concentrate to attempt to do something which might result in changing the students' perceptions of them in those areas. The item mean scores were compared to the mean scores of the same items for all instructors who took part in the study, and only the scores which were the same as, or lower than, the group mean scores were used as data for the intent analysis. The rationale for this selection of items was that if an instructor was already above the total group means, it would be unrealistic to expect him to be able to change more. The intent items which were selected for inclusion in the intent analysis group were compared to item changes on which the same instructor did not declare an intent to change and to item changes in the control group.
Table 22 presents the summary data used for the intent analysis.

<table>
<thead>
<tr>
<th>Control</th>
<th>Intent</th>
<th>Non-Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>n: 18</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>M: -.028</td>
<td>-.012</td>
<td>-.192</td>
</tr>
<tr>
<td>SD: .158</td>
<td>.209</td>
<td>.153</td>
</tr>
</tbody>
</table>

Examination of this table reveals that students rated instructors lower the second time but that the mean change scores on the intent items showed a smaller negative change than the negative change scores on the control group or the non-intent items.

Tables 23 and 24 present the results of the t tests used to determine the relationship between the mean change scores on the control, intent, and non-intent group items.

<table>
<thead>
<tr>
<th>Control</th>
<th>Intent</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>n: 18</td>
<td>8</td>
<td>.194</td>
<td>.60</td>
<td>.00</td>
</tr>
<tr>
<td>M: -.028</td>
<td>-.012</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD: .158</td>
<td>.209</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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An examination of the results of this analysis reveals that the negative mean change scores on the intent items were smaller than the negative mean change scores in the control group. A difference as large as was observed could occur by chance sixty times in one hundred if no difference between the groups existed. None of the variance in mean difference scores could be accounted for by knowing the type of feedback that was received.

**TABLE 24**

<table>
<thead>
<tr>
<th></th>
<th>Intent</th>
<th>Non-Intent</th>
<th>t</th>
<th>p</th>
<th>$\omega^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>n:</td>
<td>8</td>
<td>8</td>
<td>1.78</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>M:</td>
<td>-.012</td>
<td>-.192</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD:</td>
<td>.209</td>
<td>.152</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From an examination of the results of this analysis, it is evident that negative mean changes on the intent items were smaller than negative mean changes on the non-intent items. A difference as large as was observed could occur by chance five times in one hundred if there were no difference between the groups. The strength of association analysis, $\omega^2$, indicates that five percent of the variance in change scores could be accounted for by knowing whether or not the instructor declared an intent to change on the items.
Summary

A strong relationship did exist between student ratings of instructors and student opinions of the subject matter and student opinions of the amount of time the instructor spent lecturing. Very little relationship seemed to exist between student ratings of instructors and sex of the student or type of class in which the student was enrolled. The relationship between student ratings of instructors and the classification of the student was not evident. The trend seemed to indicate that the longer a student was enrolled in school, the lower he rated the instructor. Graduate students seemed to reverse this trend and rated instructors higher than did college seniors.

Even though a strong relationship existed between some student characteristics and student ratings of instructors, the strength of association analysis revealed that only six percent of the variance in student ratings of instructors could be accounted for by knowledge of a student's opinion of the subject matter. The other characteristics accounted for less of the total variance.

No strong relationships were determined to exist between student ratings of instructors and the instructor's sex, degree, status, rank, opinion of the class, or opinion of the value of student opinions as feedback. Computation of strength of association data reveals that virtually none of the variance in student ratings of instructors could be accounted for by knowing any of the previously-mentioned instructor characteristics.
All instructors were rated lower the second time the students completed the Instructor Image Questionnaire. Instructors who received no feedback, however, evidenced the least negative change; instructors who received only positive feedback evidenced the greatest negative change, and instructors who received comprehensive feedback were in between the other two groups.

Instructors who stated that student opinion feedback would be useful and valuable evidenced less negative change than did instructors who stated that student opinion feedback would be interesting.

College instructors with the rank of Instructor exhibited positive changes while instructors with the rank of Assistant or Associate Professor made negative changes. Female instructors evidenced less negative changes than did male instructors.

Virtually none of the variance in mean change scores could be accounted for by knowing instructor characteristics or the type of feedback the instructor received.

When mean change scores on the items on which instructors declared an intent to change were compared to control group changes, no significant differences were detected. When intent items and non-intent items were compared, however, the items on which the instructors declared an intent to change showed a significantly lower negative mean change. Five percent of the variance in mean change scores could be accounted for by knowing whether the items were ones on which the instructors had declared an intent to change.
Summary

A review of the literature indicates that one of the continuing problems in higher education is discovering and implementing methods of improving instruction. Student opinion feedback, obtained from student rating forms, has been used on the junior and senior high school levels to provide information to teachers. Teachers who have received this information have made changes that have been reported by students. No studies attempting to use written student feedback to teachers at the college or university level have been reported.

Student ratings of teachers have been reported to be both reliable and valid, and, of all the sources of informational feedback to teachers, student ratings might be considered as one of the most appropriate sources.

The purpose of this study was to determine what effect written student feedback would have on college instructors. Two different types of written feedback were compared. One type consisted of both positive and negative information, while the other type contained only positive information. A second aspect of the study was to determine if any relationship existed between student ratings of instructors and student characteristics, such as sex, grade classification, type of class, opinion of the subject matter,
and opinion of the amount of time the instructor spent lecturing. The third aspect of the study was to determine whether any relationship existed between student ratings of instructors and the instructor's sex, degree, status, rank, opinion of the class, and opinion of the value of student opinion feedback. The final aspect of the study was to determine whether instructors who received the informational feedback, and who declared an intent to change, could actually change in the time allotted to such a degree that the change would be reflected in the student ratings of the instructor.

Thirty-one instructors teaching fifty-one classes in the Teacher Education Department at Western Michigan University participated in the study. One thousand four hundred sixty-nine students completed the Instructor Image Questionnaire the first time, and 1,451 students completed the same questionnaire the second time. Instructors were randomly selected to receive (a) no feedback, (b) comprehensive feedback, or (c) positive feedback. Eight weeks, or twenty-four class hours, after the instructor received the feedback, the students again completed the Instructor Image Questionnaire.

The basic instrument used in the study was the Instructor Image Questionnaire (IIQ). This instrument is a modified version of the Teacher Image Questionnaire developed by Bryan. This form asked the students to give their opinion of the instructor on several items associated with teaching. Chance-half reliability on the IIQ was .83. A factor analysis study identified two distinct factors, accounting for fifty-five percent of the variance. One
factor, accounting for forty-seven percent of the variance, was called instructor charisma, while the other factor, accounting for eight percent of the variance, was identified as student concern.

Two types of instruments were used to present informational feedback. The regular feedback form was called the Instructor Image Profile—a graphic presentation of the class mean scores of the instructor on each item of the IIQ. Recurring student responses to the open-ended questions were also included. Instructors who were selected to receive the positive informational feedback were sent the Instructor Image Summary, which was a summary listing of the high or peak class mean items on the Instructor Image Profile, plus a listing of recurring comments on the open-ended questions. All instructors also completed an Instructor Information Form, which asked for information such as sex, degree, rank, and other items.

The data obtained from the first administration of the IIQ were analyzed to determine whether any relationship between student ratings of instructors and student or instructor characteristics did exist. Pre-post test mean difference scores were examined to determine the relationship between the type of feedback and mean change scores. Items on which an instructor who received comprehensive feedback declared an intent to change were compared to items on which the same instructor had not declared an intent to change and also to control group changes.

Several t tests and one-way analysis of variance models were computed to determine whether relationships existed between student ratings of instructors and student or instructor characteristics.
One and two-way analysis of variance models were computed to compare the effects of the various types of informational feedback and instructor characteristics. To compare intent, non-intent, and control items, t tests were used.

In addition to the t or F values that were obtained, the approximate level of probability for that t or F value was determined, as well as an estimate of the strength of association.

Conclusions

Discussion of the results of the analyses will be divided into two sections. The first section will be concerned with examining the relationship between student ratings of instructors and various student and instructor characteristics. The second section will contain a discussion of the effect of various types of informational feedback on student ratings of instructors.

**Student and Instructor Characteristics as They Relate to Student Ratings of Instructors**

Female students rated college instructors higher than did male students, even though the difference was not highly significant. The ratings of instructors by students in required classes were very little different from the ratings by students in elective classes. This lack of a significant difference would seem to indicate that students who are required to take a class will not necessarily be more harsh or negative in their attitude toward the instructor or class content than will those students who elect classes.
A highly significant relationship seemed to exist between the classification of the student and student ratings of instructors. Freshmen students rated instructors higher than did students in the other classes, and the longer the student remained in school, the lower he rated the instructor. As students progressed in grade classification, they became more critical in their ratings of college instructors. Graduate students seemed to reverse this trend. They rated college instructors lower than college freshmen, sophomores, or juniors did, but higher than college seniors did.

A strong relationship existed between student opinions of the subject matter and student ratings of college instructors. Students who declared that they disliked the subject matter rated the college instructor significantly lower than did students who declared that they liked the subject matter. It would not be possible to state that student dislike of the subject matter results in lower ratings of instructors or that students who rate instructors low will dislike the subject matter. A highly significant relationship, however, did exist between the student opinion of the subject matter and student ratings of instructors. It should be noted, however, that only eight percent of the students declared that they disliked the subject matter, while ninety-two percent of the students stated that they liked the subject matter. The difference in the size of the two groups may influence the practical significance of this finding.

A strong relationship also existed between the amount of class time the instructor spends lecturing, as perceived by the
students, and the student ratings of the instructor. The greater
the amount of time the instructor was perceived to be lecturing, the
lower the students rated the instructor. These results seem to
indicate that students react more favorably to instructors who do
not use the lecture method as their primary method of instruction.

None of the instructor characteristics investigated was
significantly related to student ratings of instructors. Female
instructors were rated higher than male instructors; full-time
instructors were rated higher than part-time instructors, and
instructors with a doctoral degree were rated higher than those
without doctorates, but none of the differences were significant.
These findings seem to indicate that students do not react positively
or negatively to the sex, status, or degree of an instructor.

No significant relationship between an instructor's rank
and student ratings of the instructor was observed; however, it is
interesting to note that Associate Professors received the highest
ratings, with Assistant Professors receiving the second highest
ratings. Professors and Instructors received the lowest ratings.
One possible explanation for the observed results could be that
persons with Assistant or Associate Professor ranks are still
attempting to improve themselves and their rank, while persons with
the rank of Instructor are showing their lack of experience, and those
persons with the rank of Professor feel the least pressure to improve
their teaching or to be concerned with student ratings. The
differences in student ratings of instructors in the various ranks,
however, were not significant.
No significant relationship was found to exist between the instructor's opinion of the class and student ratings of the instructor. The instructors who said the class compared very favorably to past classes were rated highest by the students, while instructors who said the class compared unfavorably were rated lowest by the students. Even though the observed differences were not significant, they do exist and should be noted.

An instructor's opinion of the value of student feedback was not significantly related to student ratings of the instructor. Instructors who declared that student opinion feedback would be useful and valuable were not rated significantly higher than instructors who declared that student opinion feedback would be interesting.

It was previously mentioned that the lack of significant relationships between instructor characteristics and student ratings can be partially explained by the use of class means rather than individual student means. This lack of statistical significance between instructor characteristics and student ratings because of smaller sample size points out one obvious limitation of the inferential model and supports the use of strength of association measures.

Written Student Feedback to College Instructors

Even though some instructors were rated higher the second time the students completed the Instructor Image Questionnaire, when
all scores were grouped together, instructors in all groups were rated lower the second time than they were the first time. All group changes were in the negative direction. Instructors who received only positive feedback made the greatest negative change; instructors who received comprehensive feedback made the second largest negative change, and instructors who received no feedback made the smallest negative change. Even though the changes made were not found to be significantly different, a very real difference existed between the groups in a direction that was opposite from what was expected. Apparently, positive feedback and comprehensive feedback are less valuable than no feedback when the criterion for determining the value of feedback is student ratings of instructors. Several possible explanations could be given to interpret these results. The fact that instructors in all groups were rated lower the second time could reflect regression toward the mean tendency where instructors who were high on the initial rating scale were rated lower, and those who were rated below the mean stayed about the same in the second rating. The lower student rating the second time could also reflect the students' growing dissatisfaction with, and disinterest in, school and school-related activities, which coincided with the approaching end of the semester. The question could also be raised as to whether or not the control group was actually a true control group. All instructors in the control group were aware of the fact that they were in the control group, and knowledge of this fact may have introduced some changes that would not have occurred in a true control group.
When the control group and experimental groups' ratings on the initial Instructor Image Questionnaire were compared, no statistically significant differences were observed. Instructors in the comprehensive and positive feedback groups, however, had mean scores above the total mean score. In these two experimental groups, the lower rating the second time could realistically reflect a regression toward the mean. Informational feedback, either the positive or comprehensive type, did not reverse the trend toward negative changes. Lower student ratings the second time could also reflect a general disgust with rating scales. During the course of the semester, several rating scale studies were being carried on, and students in some classes had completed as many as six different rating scales.

When instructor opinions of the value of student opinion feedback and type of feedback were compared to mean change scores, it was interesting to note that instructors who stated that student opinion feedback would be useful and valuable made significantly less negative changes than did instructors who stated that student opinion feedback would be interesting. No differences in the type of feedback were observed, but the instructors who declared that they were concerned about, or wanted to use, student opinions, no matter what type of feedback they received, experienced less negative changes than instructors who declared that student opinion feedback would be interesting. It is possible that students are perceptive to an instructor's interest in the students and the opinions they
may have, and this appreciation for the instructor's interest in
them is reflected in student ratings.

As a group, college instructors with the rank of Instructor
were rated higher on the second Instructor Image Questionnaire, while
the groups of Assistant and Associate Professors made large negative
changes. Persons with the rank of Instructor who received positive
feedback made relatively large positive changes, while the mean
change scores of those who received comprehensive feedback were
much less negative than were the mean change scores of Assistant and
Associate Professors who received comprehensive student opinion
feedback.

It seems that college Instructors, who are relatively "new"
to the college teaching profession, possibly have not yet established
teaching habits or procedures and may be searching for ways to
improve themselves as instructors. These Instructors are more
receptive to positive feedback and react less negatively to
comprehensive student opinion feedback. College instructors with
the ranks of Assistant or Associate Professors might not take the
results of the information provided by student ratings seriously,
which could account for the large negative changes in these groups.
The differences in change scores between Instructors and Assistant
or Associate Professors were not statistically significant, but the
observed differences might have implications for persons interested
in the results of feedback to college instructors.

The negative mean change scores of female instructors were
significantly smaller than the negative mean change scores of male

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instructors. In every type of feedback category, the mean change scores were either less negative or more positive than the mean change scores of the male instructors.

None of the student or instructor characteristics or feedback variables accounted for a large amount of variance in student ratings of instructors. One is not able to say, from the results obtained in the study, that one or more student or instructor characteristics, even though it might be related to student ratings of instructors, accounted for a great deal of the variance in student ratings of instructors. Perhaps the only strength of association that is worthy of particular notice is the eleven percent of variance in mean change scores accounted for by an instructor's statement that written student feedback would be useful and valuable.

The intent analysis section reveals that instructors who decided to concentrate on one or two areas by declaring that they intended to change in these areas did change enough so that students reported these changes. Even though the difference between negative mean changes in the control group and intent group was not significant, the difference between intent and non-intent items was significant. Instructors were able to modify student ratings of themselves in selected areas.

Implications

It is difficult to discuss the implications of a study when the results seem to contradict the usefulness of written student
feedback. Written student feedback was not effective in changing student ratings of instructors. It was apparent, however, that positive feedback was less effective than comprehensive feedback, with the exception of persons with the rank of Instructor.

Perhaps the results of this study imply that any type or any one type of written student feedback is not appropriate for all college instructors. New or inexperienced instructors seem to react more favorably to positive written feedback. When a number of instructors were approached at the conclusion of the study and asked to comment on their reaction to the written student feedback, all of the instructors approached verbalized an appreciation for the feedback. The instructors who received positive feedback said that they felt the comprehensive written feedback was more useful and informative than the positive feedback.

One serious limitation of the present study was the voluntary participation of instructors. It is therefore difficult to generalize the results to anyone other than the group who participated in the study. Another limitation was the lack of information about what use the instructors made of the written student feedback. Even though the instructors were asked to state their opinion about the value of written student feedback, no check could be made of the actual use each instructor made of the written feedback. Possibly a study examining the relationship between the dogmatism or rigidity of the instructor and the change in student ratings could provide some information about the type of instructor who might make effective use of written student feedback. It would
also be interesting to compare the changes in student ratings of instructors who have tenure and those who do not have tenure.

It is apparent that instructors can change or modify students' ratings of them if they desire. It should be noted that when instructors chose to concentrate on a maximum of two areas, the changes on items on which the instructor had declared an intent to change were significantly different from changes on those items on which he had not declared an intent to change. It might be impossible, however, for an instructor to concentrate on improving his ratings in several, or all, areas, but the important implication is that an instructor can modify students' perceptions of him in some areas.

None of the instructor characteristics investigated was significantly related to initial student ratings of instructors. Very little of the variance in student ratings of instructors could be accounted for by knowing any of the instructor characteristics investigated. Instructor characteristics such as sex, degree, and rank, however, do seem to be related to the type or amount of change in student ratings of instructors, and these relationships must be investigated further.

The relationship between student opinion of subject matter, student opinion of the amount of class time the instructor spent lecturing, and initial student ratings of instructors also deserves more study.

The finding that students who disliked the subject matter or who perceived the instructor to be lecturing a great deal rated
the instructor lower has implications for both course content and types of instruction. No new directions were suggested by this study, but problem areas were identified.

The last implication involves curricular consideration for the Teacher Education Department. Examination of the Instructor Image Profile of the initial student ratings of all instructors (Appendix F) reveals low student ratings in Interest (Is this class interesting and challenging?), Assignments (Are assignments [out-of-class, required] sufficiently challenging without being unreasonably long?), and Variety in Teaching Procedures. The students seem to be saying that the curriculum in Teacher Education may not be as relevant as it could be and that assignments and teaching procedures should be evaluated. One possible plan of curriculum evaluation might be to have the instructors who were rated significantly above the mean in one or more of the three areas identify themselves. An attempt could then be made to examine the content of these classes, as well as the teaching methods which are being employed.

Student ratings of instructors are an inexpensive way to provide college instructors with informational feedback of student opinions. The effect of written student feedback is largely unknown. Some instructors change, while others do not change when they receive written feedback, and little information is available which might account for this change or lack of change. Educators must decide whether student opinion feedback is desirable and useful in college
teaching. Only when this decision has been reached will institutions and individuals feel compelled to further examine the factors that seem to be related to the effectiveness of written student feedback.
REFERENCES


Crannell, C. W. An experiment in the rating of instructors by their students. *College and University*, 1948, 24, 5-11.


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Remmers, H. H. The college professor as the student sees him. Purdue University Studies in Higher Education, 1929, 29, 75.


Tuckman, B. W., & Oliver, W. F. *Effectiveness of feedback to teachers as a function of source.* Journal of Educational Psychology, 1968, 54, 297-301.


INSTRUCTOR IMAGE QUESTIONNAIRE

Sex: _____Male, _____Female

Student Classification: _____Fr., _____Soph., _____Jr., _____Sr., _____Grad.

Type of Class: _____Required, _____Elective

Please answer the following questions honestly and frankly. Do not give your name. To encourage you to be frank, your regular instructor should be absent from the class while these questions are being answered.

The person in charge of the class will collect all reports, seal them in an envelope and return them to the Educator Feedback Center for analysis. At no time will your identity be revealed to your instructor.

Circle the appropriate responses to questions 1-19. Write out your responses to 20 and 21.

1. OPINION OF SUBJECT MATTER: (Please try to react only to the subject matter of this course, ignoring the instructor or class itself as much as possible.)

   LIKE SUBJECT MATTER               DISLIKE SUBJECT MATTER

2. AMOUNT OF CLASS TIME SPENT IN LECTURING. (How much of the class time does the instructor spend lecturing?)

   Some (under fifty percent of the time)

   Average (between fifty and seventy-five percent of the time)

   Much (over seventy-five percent of the time)

WHAT IS YOUR OPINION CONCERNING THIS INSTRUCTOR'S:

3. KNOWLEDGE OF SUBJECT: (Does this instructor have a thorough knowledge of the subject matter of this course?)  poor fair ave. good exc.

4. CLARITY OF PRESENTATION: (Are ideas and explanations presented at a level which you can understand?)  poor fair ave. good exc.
5. FAIRNESS: (Is this instructor fair and impartial in his treatment of all students in the class?) poor fair ave. good exc.

6. ATTITUDE TOWARD STUDENTS: (Do you feel that this instructor respects you as a person?) poor fair ave. good exc.

7. SUCCESS IN STIMULATING INTEREST: (Is this class interesting and challenging?) poor fair ave. good exc.

8. ENTHUSIASM: (Does this instructor show interest in and enthusiasm for the subject?) poor fair ave. good exc.

9. ATTITUDE TOWARD STUDENT IDEAS: (Does this instructor have respect for the things you have to say in class?) poor fair ave. good exc.

10. SENSE OF HUMOR: (Does this instructor see and share with students amusing incidents and experiences?) poor fair ave. good exc.

11. ENCOURAGEMENT OF STUDENT PARTICIPATION: (Does this instructor encourage you to raise questions and express your own ideas in class?) poor fair ave. good exc.

12. ASSIGNMENTS: (Are assignments [out-of-class, required] sufficiently challenging without being unreasonably long?) poor fair ave. good exc.

13. APPEARANCE: (Are this instructor's dress and grooming in good taste?) poor fair ave. good exc.

14. OPENNESS: (Is this instructor able to see things from your point of view?) poor fair ave. good exc.

15. SELF-CONTROL: (Does this instructor remain poised when little problems arise in class?) poor fair ave. good exc.
16. CONSIDERATION OF OTHERS: (Is this instructor patient, considerate and courteous?) poor fair ave. good exc.

17. VARIETY IN TEACHING PROCEDURES: (Is much the same teaching procedure used in class after class or are different and appropriate methods used at times?) poor fair ave. good exc.

18. DYNAMISM OF LECTURES: (Does this instructor use a considerable amount of vocal inflection, hand gestures, body movement and eye contact while lecturing?) poor fair ave. good exc.

19. EVALUATION: (What is your overall opinion of this instructor?) poor fair ave. good exc.

20. PLEASE LIST ONE OR MORE STRENGTHS OF YOUR INSTRUCTOR:

21. PLEASE LIST ONE OR MORE SUGGESTIONS FOR IMPROVEMENT:

Educator Feedback Center, Western Michigan University Kalamazoo, Michigan 49001

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### INSTRUCTOR IMAGE PROFILE

**Instructor** ___________________________ **No.** _____ **Date** ____________

**Class A:** ___________________________ **Time** ____________________

**Class B:** ___________________________ **Time** ____________________

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INSTRUCTOR IMAGE PROFILE (Continued)

KEY TO ITEMS

3. Knowledge
4. Clarity of presentation
5. Fairness
6. Attitude toward students
7. Interest
8. Enthusiasm
9. Attitude toward student ideas
10. Sense of humor
11. Encouragement
12. Assignments
13. Appearance
14. Openness
15. Self-control
16. Consideration
17. Variety
18. Dynamism
19. Overall
20. Suggestions for improvement listed by a significant number of students:
21. Strengths listed by a significant number of students:

SUMMARY OF COMMENTS:

1. Opinions of subject matter:
   A. LIKE ________________ Class A, ________________ Class B
   B. DISLIKE ________________ Class A, ________________ Class B

   Total number of students completing ratings ____________ Class A
                            ____________ Class B

2. Amount of class time spent in lecturing:
   A. SOME ________________ Class A, ________________ Class B
   B. AVERAGE ________________ Class A, ________________ Class B
   C. MUCH ________________ Class A, ________________ Class B

20. Suggestions for improvement listed by a significant number of students:

21. Strengths listed by a significant number of students:
INSTRUCTOR IMAGE SUMMARY

CONFIDENTIAL—For the use of the instructor only

Instructor _____________________________  Number ________

Class _____________________________  Section _________

Number of class members participating: _______ Males _______ Females ________ Total

1. Strengths of instructor as noted by students on the Instructor Image Questionnaire:
   a.  
   b.  
   c.  
   d.  
   e.  
   f.  
   g.  

2. Specific strengths of the instructor listed on the open-ended question of the Instructor Image Questionnaire (Number 20):

3. Suggestions for improvement listed by a significant number of students on the open-ended question of the Instructor Image Questionnaire (Number 21):

   

Educator Feedback Center, Western Michigan University
Kalamazoo, Michigan 49001

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Instructor Information Form

To complete the present study some basic information is needed. Your assistance and cooperation in providing the following information would be greatly appreciated.

I. Present Faculty Rank: _____Instructor, _____Assistant Professor, _____Associate Professor, _____Full Professor, _____Other

II. Present Faculty Status: _____Full-Time, _____Part-Time

III. Present Degree: _____M.A., _____M.A. Plus 30 Hours, _____Ed.S., _____All But Dissertation, _____Doctorate

IV. Number of Students in Your Class __

Approximate Number of Males ____

Approximate Number of Females ____

V. In relationship to past classes you have taught in this subject area, how would this class compare?

_____Very Favorable

_____Favorable

_____About the Same

_____Unfavorable

_____Very Unfavorable

VI. What is your reaction to the use of student opinions or perceptions?

_____Find Them Useful and Valuable

_____Find Them Interesting

_____Find Them Not Valuable
January 15, 1970

Dear Teacher Education Faculty Member,

During the Winter, 1970, semester I plan to conduct a study involving the instructors and students in Teacher Education 250, 300, and 312 courses. Permission to conduct the study has been received from the Teacher Education Executive Committee. Your participation in the study will be strictly voluntary. Personally however, I need, and would very much appreciate, your cooperation. The amount of class and personal time required has been kept to a minimum and should take less than a total of forty minutes for each person involved. Enclosed is a brief abstract of the study and a sample of the instruments that will be used. It is anticipated that some minor revisions will take place and the form of these instruments will be changed.

Your cooperation is needed to provide class time to administer the Instructor Image Questionnaire twice--once near the beginning of the semester (late January or early February) and again near the end of the semester (late March or early April). As the instructor you will be asked to complete the Instructor Information Form only once--at the time of the initial administration of the Instructor Image Questionnaire. All data will be processed by the Educator Feedback Center, and at all times your anonymity will be protected. I personally will have to have some means of identification to be able to provide you with the appropriate informational feedback. If you are teaching more than two sections of the above courses, only two sections will be randomly selected for inclusion in the study. Because of the nature of the study, a group of instructors will be randomly selected to receive no informational feedback until the end of the study.

I regret that I am not able to provide you with more detailed information but to do so might lessen the effectiveness of the study. If you have any questions that I can answer, please contact me or tell me where I can contact you, and I will be happy to provide you with as much information as possible. Upon the completion of the study a summary will be made available to anyone who might desire this information. Thank you.

Sincerely,

Morvin A. Wirtz

Approved for Distribution

Ronald M. Wolthuis
Graduate Associate
Student Personnel Services
3312 Sangren, 383-1692
Home Phone, 381-1251

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ABSTRACT

Problem and Objectives

One source of continual concern in higher education has been that of the improvement of college teaching. Unfortunately most attempts at improving college teaching in the past have been linked with various types of evaluation. The consumers of college teaching (i.e. the students) have recently become very vocal in their praise or condemnation of this aspect of their education. To ignore their part in providing information which may be of some assistance in the total improvement process may be both foolish and impossible. This study proposes to use student perceptions of both college teachers and the teaching-learning situation as informational feedback which college instructors can use to make changes that they feel are necessary.

Procedures

The instructors selected to participate in this study will be from the Teacher Education Department at Western Michigan University. Various types of informational feedback will be used and compared. Several other variables such as the degree of the instructor, the opinion of the instructor concerning the value of student opinions or perceptions, and the amount of time the instructor engages in lecturing will be examined to determine the relationship between these variables and the initial perceived image of the instructor by the students. A test-retest format will be used for the basic design. Analysis of variance will be used to determine treatment effects.

Significance

The significance of this study lies in the fact that this is the first attempt to utilize group student perceptions in a systematic manner for college instructors. If it is determined that informational feedback does improve the instructor's teaching, as perceived by the students, the basic format for obtaining the perceptions of the students and the method of utilizing these perceptions could be used by various colleges or departments as one part of the process of improving college teaching.
Dear

Enclosed is a copy of the results of the Instructor Image Questionnaire that was recently administered to your TEED class, section . Also enclosed is a norm profile of all instructors who took part in the study. The information used to compute the norm profile was taken from the first administration of the Instructor Image Questionnaire.

This particular study had several aspects in which you might be interested. As you know, some instructors were randomly selected to receive no feedback from the first administration of the Instructor Image Questionnaire; this group will serve as a control group. Changes that did occur in the control group will be used as baseline material to which changes in the experimental group will be compared. Persons in the experimental group, who did receive feedback, were randomly assigned to one of two sub-groups. Persons in group A received what might be called "regular" feedback—that is, the Instructor Image Profile, the traditional type of feedback sent out by the Educator Feedback Center. Persons in group B received what might be called "positive" feedback—a summary listing of the peak or high points on the Instructor Image Profile. These persons were sent a copy of the Instructor Image Summary and are now receiving both copies of the Instructor Image Profile for their information. The rationale underlying the different types of feedback was to ascertain whether the difference in feedback format or content would have any influence on the changes that might occur. Persons in the control group are also receiving both copies of the Instructor Image Profile.

Comments on the open-ended questions of the second Instructor Image Questionnaire should be explained. Students were told not to repeat comments they had made the first time. The only comments they made were additions or changes they noticed. One could assume that the comments they made the first time would be applicable the second time also, unless there is information to the contrary. Comments that are repeated probably came from students who did not note these the first time.

I also want to thank all of you for your excellent cooperation in every respect. From my conversations with other doctoral students, it has become apparent that this type of cooperation would not be available in many other universities. If you have found this information useful or valuable, this service will be available from the Educator Feedback Center in the future. Cost for this particular
service will be approximately ten dollars for each class. Summaries of this particular study will be available sometime this summer, and I will make sure that all of you receive a copy. If you have any questions, please contact me, and I will do my best to provide you with the information you desire. Thanks again.

Sincerely,

Ronald M. Wolthuis
Student Personnel Services
3312 Sangren Hall
383-1985
INSTRUCTOR IMAGE PROFILE

Instructor TEED 250, 300, 312 No. Date Jan-Feb '70

Class A: Participating in study Time 51 classes

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</tr>
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</table>

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INSTRUCTOR IMAGE PROFILE (Continued)

KEY TO ITEMS

3. Knowledge
4. Clarity of presentation
5. Fairness
6. Attitude toward students
7. Interest
8. Enthusiasm
9. Attitude toward student ideas
10. Sense of humor
11. Encouragement
12. Assignments
13. Appearance
14. Openness
15. Self-control
16. Consideration
17. Variety
18. Dynamism
19. Overall evaluation