

THE RELATIONSHIP OF SELECTED TEACHER
CHARACTERISTICS TO THE TEACHER'S RATIONALE ON
GRADING

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ABSTRACT

THE RELATIONSHIP OF SELECTED TEACHER
CHARACTERISTICS TO THE TEACHER'S
RATIONALE ON GRADING

By

Ray Robert Keech

Purpose of the Study

1. To identify teachers' rationale regarding various aspects and practices of grading.
2. To determine if there are possible relationships that may exist between teacher grading practices and selected teacher characteristics.

Design of the Study

The study was designed to explore teachers' rationale for grading practices and the existing relationship between these practices and selected teacher characteristics. Twenty different practices were used to explore teachers' rationale and eleven teacher characteristics were related to these.

The random sample of ninety-six teachers used in the study represented various types of school locations (rural, suburban, and city) and all subjects taught in a typical secondary school.

A Grading Questionnaire was developed and used to obtain information which would indicate the grading rationale held by teachers. Each question was designed to identify grading practices regarding purposes for grading, criteria used in determining grades, methods used in grading, and inferences extracted from grades. The obtained data were placed in frequency tables according to the four aspects mentioned above, making it possible to distinguish between responses and determine the amount of consensus among teachers.

The study was also designed to explore possible relationships that may exist between teacher rationale and teacher characteristics, categorized as psychological, sociological, and philosophical. These possible relationships were included to seek an understanding of the variables that may be instrumental in determining teacher rationale about grading practices.

Each subject completed a Personal Information Form, which was used to collect the philosophical and sociological information. The Rokeach Dogmatism Scale was used to collect information pertaining to the psychological characteristic examined.

The chi-square test was used to determine whether relationships exist between the selected teacher characteristics and grading practices in the questionnaire.

Differences found to be at or beyond the 5 percent level of confidence were accepted as significant.

Findings

1. Teachers hold a wide range of rationale about four aspects of grading: (a) purposes for grading, (b) criteria used in assessing student progress, (c) methods used in determining grades, and (d) inferences extracted from grades.

2. Certain selected teacher characteristics (psychological, sociological, and philosophical) have a statistically significant relationship with the grading practices of teachers.

Conclusions

The fact that each of the practices described in the grading questionnaire did receive statements of agreement would indicate a wide usage of practices in grading. Because each practice did not receive the same proportion of agreement, it can also be inferred that there is a difference of opinion among teachers about the appropriateness of each practice for grading.

Statistically significant relationships between grading practices and certain teacher characteristics were found for 17 of the 220 chi-squares computed. Even though there were only seventeen found to be significant, each relationship did indicate one distinct variable that

may affect grading rationale of teachers. In addition to examining possible relationships between different kinds of characteristics that might be instrumental in affecting grading rationale, these relationships also gave insight into how varied these characteristics can be.

The significant relationships found were distributed among all three characteristics selected for the study, and all four aspects of grading. This not only demonstrated possible explanations for why teachers may have agreed to a variety of practices, but also offered insight into the complications in ascertaining all of the different factors affecting the assignment of grades.

Questions for Further Study

1. Research similar in nature and intent to this study should be conducted to test the validity of the conclusions for other teacher populations.
2. How do grading practices affect behaviors of persons intimately involved with grades (i.e., parents, students, and teachers)?
 - a. What is the relationship between parents' acceptance or rejection of a child and his assigned grades?
 - b. What is the relationship between student insecurity or classroom rebellion and his assigned grades?

c. What is the relationship between a teacher's self-image and his grading practices?

3. What kinds of knowledge, attitudes, and skills do educators and academic scholars feel should be reported through grades?

4. What kinds of grading practices are most appropriate for different types of subject matter?

5. Longitudinal studies on the influence of grades for learning knowledge, skills, and attitudes should also be done.

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CHAPTER I

THE PROBLEM

Introduction

The practice of reporting pupil progress to the home has been an extremely important phase of our public school systems since the 1890's. Strang asserts:

Of all the bridges between the school and community, the report to the parents is the oldest and most widely used. . . . Depending upon the kind of message it bears, this report builds good will or ill will; it enlists or alienates the cooperation of the pupil and parent.¹

Because this particular phase of our educational process has received so much emphasis, there has been a never-ending search for improved methods of informing parents and pupils of the latter's progress in school. The search is continuous because, like all aspects of education, the communication of information to the home must frequently be altered if it is to keep pace with the changing philosophy of education.

It would be a false assumption to imagine or claim that a perfect report, suitable for every school's needs, could ever be devised. As Wrinkle points out:

¹Ruth Strang, Reporting to Parents (New York: Bureau of Publications, Teachers College, Columbia University, 1954), p. 1.

I doubt if there is one. For what might be good for one school might not be good for another. Each school has to work out its own forms and practices on the basis of its own objectives, its own philosophy and its own staff.²

Many changes in methods of reporting pupil progress have taken place during the last seventy years. In discussing the history of grades, Kirshenbaum et al. note:

A variety of different symbols for marking are used by different school systems. Some schools use numbers, others letters. Some use percentage marks, other verbal descriptions.³

Research from the National Education Association shows schools moving from percentage to a letter classification (usually A, B, C, D, and F) to a pass or fail, to check list, to letter writing, to parent conferences, to no grades, descriptive reports, and back to grades. The list is extensive in searching for an effective method to communicate a pupil's progress. However, the literature reveals that the confusion surrounding grades has continued if not increased, in spite of these efforts.

There appears to be no unanimity on what should be graded (i.e., whether it should be skills, behaviors, etc.). There appears to be no strong endorsement for any one type

²William L. Wrinkle, Improving Marking and Reporting Practices in the Elementary and Secondary Schools (New York: Rinehart and Company, 1947), p. 4.

³Kirshenbaum et al., Wad-Ja-Get? The Grading Game in American Education (New York: Hart Publishing Co., Inc., 1971), p. 23.

of grading system. There appears to be no agreement on what grades measure. Furthermore, there seems to be no standard agreement regarding what a grade means.

School administrators and researchers have been more interested in how to report pupil progress than in what to report.

Educators themselves are beginning to admit openly that there is much confusion surrounding the purposes for assigning grades and what to report. It should be clear that, whatever the scheme, the symbols themselves have no inherent meaning. The meaning is assigned to a mark by the people who use it. In a dissertation study, Howard Kingsley states:

Parents, teachers, and students expressed a strong desire for a report card having clearly stated purposes and a marking system readily understood by all concerned with a statement explaining the meaning of the symbols used in marking.⁴

In a recent recommendation (March, 1974) by a study committee composed of students, teachers, parents, and administrators in the East Lansing Public Schools, East Lansing, Michigan, the top priority was a clear understanding of the meaning of whatever symbols are used to report pupil progress.

⁴Howard Kingsley, "Communication Between the School and Home" (Ph.D. dissertation, Boston University, 1959), p. 17.

Within many school systems, the staff has reached no specific agreement about the meaning of the marks they use, so the mark given by one teacher does not mean the same as the identical mark given by another. Ludeman reports: "Many students are given higher marks than they deserve because they conform to the teacher's expectation in social rather than academic areas."⁵

A number of writers have reported that girls tend to be graded more favorably than boys for similar levels of achievement. Where letter grades are employed, there is variability among teachers within the same system. Studies have revealed that the way teachers perceive a child affects their assignment of marks. According to Wrinkle:

Marks are the chief means employed by the school in giving information to students and parents regarding the student's achievement, progress, and success or failure in his school work.⁶

It can be argued that the purpose for grades is motivation, guidance, administrative, etc. However, one point is clear, interpretation of marks is important. According to Ebel:

Only to the degree that marks do have the same meaning for all who use them, it is possible for them to serve the purpose of communication.⁷

⁵W. W. Ludeman, "Overhauling School Evaluation," American School Board Journal 140 (February 1960): 37.

⁶Wrinkle, op. cit., p. 36.

⁷Robert L. Ebel, Measuring Educational Achievement (Englewood Cliffs, New Jersey: Prentice-Hall, 1965), p. 405.

The value of a reported grade will be increased to the extent that the pupil is helped to understand its meaning. This implies that the teacher is prepared to defend its accuracy and to show its significance.

The preceding information points to the ambiguity of grading practices and the need for more understanding into teachers' rationale for grades if reporting systems are to be clearly understood and interpreted.

When reviewing the literature on the use of grading systems in American schools today, it becomes quite obvious that one of the major factors contributing to the confusion surrounding grades is that grades are used for so many different purposes. Grading systems have been reported as used for communication of achievement, motivation to learn, measuring of individual differences, prediction of future achievement, promotion of students, grouping of students for instruction, and reporting levels of behavior and personality traits. These purposes for grading can be seen in the use of traditional grading systems and the recent trends which attempt to report behavior and traits.

It seems that a first step in an investigation of the confusion of grading systems and practices would include a study of teachers' rationale to determine the extent to which there is diversity of opinions among teachers about what a grade means. Until we identify grading practices of teachers responsible for assigning grades,

they will have little or no interpretive meaning outside the classroom situation (e.g., parents, counselors, etc.), and there is some question as to how meaningful they are to students in the classroom.

A related concern having importance to teachers' rationale is teacher characteristics affecting grading practices. In the examination of the literature, there were a number of studies discovered which showed the teachers had a tendency to give high grades to certain students depending on sex, likeableness, and whether the student is personally known by the teacher. These studies are a cue that there could be other teacher characteristics which affect grading practices. Knowing the existence of any relationship would be helpful in gaining an understanding of and in clarifying the grading practices of teachers.

Purpose of the Study

1. The purpose of this study is to identify secondary teachers' rationale regarding the four aspects of grading as identified in the literature:

- A. Purposes for grading
- B. Criteria used in assessing student progress
- C. Methods used in determining grades
- D. Inferences extracted from grades

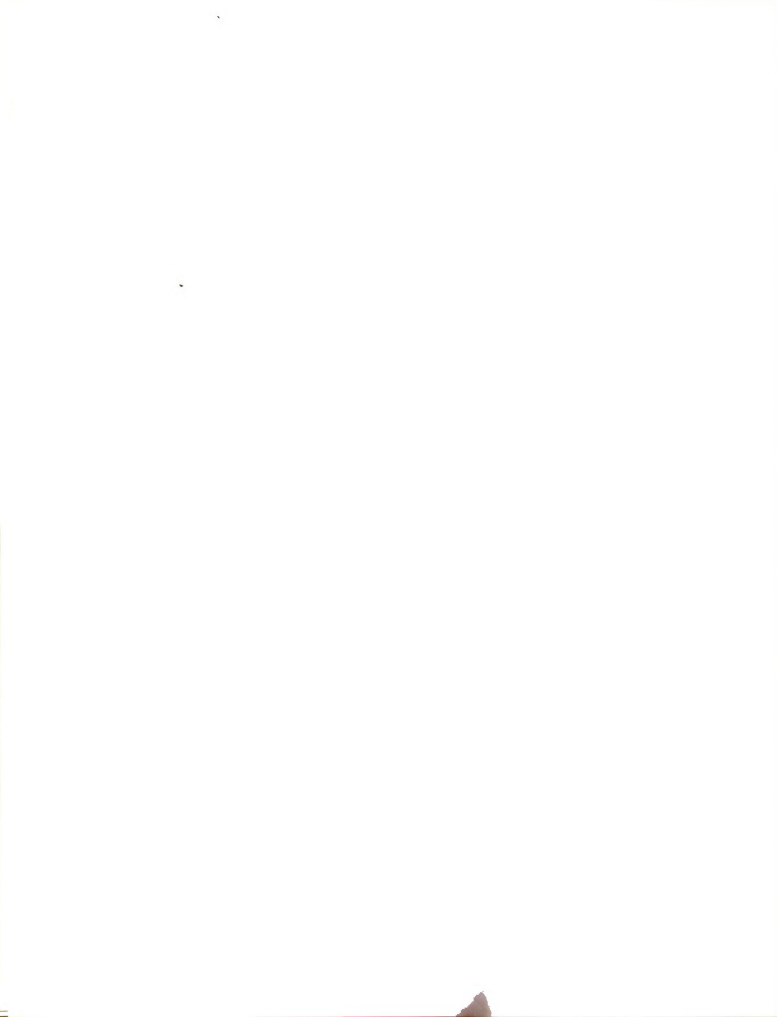
2. To determine if there are relationships between teachers' grading practices and certain selected teacher characteristics, such as psychological, sociological, and philosophical.

Specific Questions and Hypotheses

This dissertation is designed to be an analytic, descriptive research study. It is designed to answer the general research problems stated above. To answer these two problem questions, specific questions listed below will be examined on the basis of teacher responses.

The research is designed to obtain responses to the following four questions:

- Q₁: To what extent do secondary school teachers agree on each of the following purposes for grading:
- A. Communication of student progress regarding individual teacher objectives
 - B. Motivation toward greater student progress
 - C. Measurement of specific aspects of student progress (i.e., aptitude, interest, and achievement)
 - D. Prediction of future student progress (i.e., grouping of students for course instruction and college success)
 - E. Reporting personal-social-moral traits
 - F. A simple system of administrative shorthand for determining promotion and graduation



Q₂: To what extent do secondary school teachers agree on the use of the following criteria in the process of deciding grades:

- A. Aptitude
- B. Teacher-pupil relationships
- C. Punctuality and attendance
- D. Conformity and personal appearance
- E. Effort
- F. Interest
- G. Achievement

Q₃: To what extent do secondary school teachers agree on the methods used in determining grades:

- A. Standard normal curve
- B. Variation of expectations
- C. Danger of inflexible approach

Q₄: To what extent do secondary teachers agree that the following inferences can be extracted from grades:

- A. Mastery of subject matter as measured by actual achievement on recall tests.
- B. Individual differences as measured by teacher observations of motivation, intellectual abilities, and person-social-moral traits.
- C. College success as measured by individual course grades and cumulative grade point averages.
- D. School standards as measured by the percentage of high and low grade point averages in a student body.

In addition to the above questions, these hypotheses will be tested:

HO₁ There will be no significant relationship between the scores on the Rokeach Dogmatism Scale which measures open and closed mind and

R.Q.₁ The purposes for grading

- R.Q.2 Selected teacher criteria for determining grades
- R.Q.3 Methods used in determining grades
- R.Q.4 Inferences extracted from grades
- HO₂ There will be no significant relationship between certain sociological characteristics of teachers (i.e., age, sex, marital status, children, father's occupation, number of teaching years, teaching field, type of school system currently teaching in, and place of teacher training) and
 - R.Q.1 The purposes for grading
 - R.Q.2 Selected teacher criteria for determining grades
 - R.Q.3 Methods used in determining grades
 - R.Q.4 Inferences extracted from grades
- HO₃ There will be no significant relationship between the progressive and traditional philosophical points of view of education, and
 - R.Q.1 The purposes for grading
 - R.Q.2 Selected teacher criteria for determining grades
 - R.Q.3 Methods used in determining grades
 - R.Q.4 Inferences extracted from grades

Definition of Terms

Dogmatism Scale: A scale designed to measure the extent to which the organization of beliefs and disbeliefs in the mind of a person are either open or closed.

Belief system: A set of beliefs that one accepts.

Disbelief system: A series of belief systems that one rejects while in the process of evolving a set of beliefs.

Open belief system: A person is considered to have an open belief system to the extent to which he is able to distinguish between the many beliefs (disbelief subsystems) that exist in opposition to those he has accepted.

Closed belief system: A person is considered to have a closed belief system to the extent to which he is not able to distinguish between the many beliefs (disbelief subsystems) that exist in opposition to those he has accepted. The more closed a system, the more likely a person will view all disbelief subsystems as one, will identify strongly with absolute authorities, will feel threatened by the world and people, and will involve his own unrelated needs when receiving, evaluating, and acting on outside information.

Progressive: Favoring "permissive," "liberal" policies and practices, favoring autonomy and independence for the child, individual differences, discipline from within, etc.

Traditional: Favoring the more traditional outlook in education, teaching, and learning; emphasis is on subject matter, external discipline, conservative social policies, hereronomy and dependence for the child and the teacher.

Actual achievement: Mastery of skills and information which can be measured by memory tests.

Subjective grading criteria: Factors used in grading (e.g., effort) which can only be measured by teachers' intuitive judgments and are affected by personal bias, emotional background, etc.

Grading practices: The rationale(s) and procedure(s) used by teachers in grading students.

Significance of the Research

Teachers' perceptions of grades and the characteristics of teachers as they are related to these perceptions are the two major areas of concern in this study. Assuming that the results of the study indicate a wide range of teacher perceptions of the purposes, the criteria, the approaches, and the measurements used in determining and interpreting grades, and that there are certain characteristics of teachers which are related to these perceptions, the results may be significant for a number of different people in education.

Teachers who are responsible for assigning grades would be made aware of the variety of perceptions held and any related corresponding teacher characteristics. Since many of the perceptions held may disagree with the review and the discussion of the available literature, the results of this study could be significant help to teachers in making a self-evaluation of their own perceptions. If marking systems are to be understood by everyone concerned, a first step is the teacher's understanding of the purposes,

criteria, approaches, and measurements that are attributed to any method of reporting pupil progress.

School counselors who are responsible for helping students with their vocational and educational plans should understand the basis for the grades given by various teachers, the multiplicity of factors related to marking, and clarify the meaning of grades obtained by students if grades are to be used as sufficient evidence for making decisions about students' abilities or about the courses they should take. Through an awareness of the wide range of teacher perceptions regarding reporting pupil progress, counselors may be encouraged to seek clarification of criteria being used by the individual teacher to assess a student's classroom progress.

Marks are the chief means employed by the school in giving information to students and their parents regarding the student's achievement, progress, and success or failure in his school work. A pupil's knowledge of the results of his study is one of the conditions for effective learning, and hence, interpretation of marks is important. Students and parents should be aware of the many different criteria used by teachers to judge their classroom progress, and encouraged to seek clarification of individual teacher perceptions when they are not sure about the factor related to a grade when attempting to interpret its meaning.

School administrators should recognize the need to have school grading policies which are in line with the philosophy and goals of the local school. Curriculum coordinators should organize inservice seminars to examine individual grading patterns and seek ways in which pitfalls in grading could be avoided. Professors in teacher preparation institutions should seek to create realistic grading viewpoints among preservice students and explain that teachers have a tendency to permit their own subjective biases to enter into the grading process which contributes to the ambiguousness of grades. Researchers in education should be concerned with ways in which grading systems could be improved and the ways in which divergent teacher behavior might be changed.

Assumptions and Limitations of the Study

There are two assumptions important to the design and conduct of the study:

1. That the teacher's self-report of his behavior on the questionnaire will reflect his actual grading rationale and grading practices.
2. That a teacher will report his actual beliefs and give appropriate information when responding to the Rokeach Dogmatism Scale and the information form. The methods selected for scoring the data were not designed as a check to see if there is a difference.

One assumption to be analyzed in the study implies a relationship between grading practices and certain selected teacher characteristics. Because of the nature of the research, however, it is possible only to show whether or not a relationship exists. It is not possible to test the nature of the relationships as to cause and effect.

Overview

It has been the intent in Chapter I to discuss the purpose of the study and explain why it is important to understand teachers' rationale for reporting pupil progress and relationships with selected teacher characteristics. The first chapter also defined terms which will be used throughout the study, stated the general research hypotheses, and recognized limitations of the study.

In Chapter II a review of the related literature will be explored for its pertinence to the study. The major emphasis in this chapter will be teachers' rationale and approaches to reporting pupil progress.

The research design of the study will be discussed in Chapter III. Included in this chapter will be the sample to be used in the study, techniques that will be used to gather data, and the instruments to be used.

Chapter IV will be devoted to an analysis of the data gathered and relate the results to the hypotheses and research questions.

The last chapter will contain a summary of the study and findings. Concluding this chapter will be implications and recommendations for further study.

Having presented the purpose of this study, its need, and some questions to be resolved, it is now essential that a review of the literature be undertaken.

CHAPTER II

REVIEW OF THE LITERATURE

Grading is one of the most controversial topics in American education today. From the elementary to the graduate level, most of the student's or the teacher's life in school revolves, directly or indirectly, around the grading system. In recent years, the traditional grading system using A's, B's, and C's has come under increased criticism. Thousands of schools have been beset by controversies concerning grading and evaluation. As a result, hundreds of schools and colleges have already introduced changes in their grading systems. It is interesting to note, however, that most schools have been more concerned with how to report pupil progress than in what to report.

Is the traditional system of grading, the one most of us experienced throughout many years of schooling, the most educationally useful system of evaluation? This is the basic question the schools and colleges across the country have been grappling with.

Kirshenbaum, who has become an outspoken critic in the field of education, has taken the position that the

present system of grading utilized by educational institutions inhibits rather than promotes learning. His position is well summarized in his statement that:

The following arguments seem representative of much of the criticism concerning grades at the time:

1. Grades are unscientific, subjective and seldom relative to educational objectives.
2. They are misleading and focus only on one aspect of the child.
3. They promote superficial, spurious and insincere scholarship.
4. They lead to uncreative teaching.
5. They form a barrier between students and teachers.
6. Pupils perform for the grade and, as a result, show less initiative and independence.
7. Grades tend to divide students into recognizable groups, reflecting inferior and superior qualities, thus often becoming the basis for social relationships.
8. They establish a competitive system, with grades as the basis for achievement.¹

Goodman's position was well summarized in his statement, "the retaining of grading in the colleges is an interesting use of bureaucratic inertia and subservience to the social climate."² To support his accusation, he referred to the present approach as: (1) a way of appeasing the anxiety of parents; (2) a vehicle for producing structure for the insecurity of students which consequently militates against the development of individual independence; (3) an open invitation to the student

¹Kirshenbaum et al., Wad-Ja-Get? The Grading Game in American Education (New York: Hart Publishing Co., Inc., 1971), p. 62.

²Paul Goodman, "In What Ways Does the Present Marking and Credit System Inhibit or Promote Learning?" Current Issues in Higher Education, 1964, pp. 123-24.

to cheat, to fake, to distort which in turn "destroys the use of testing"; and (4) finally a continuance of the logistic mentality that is "exactly what we do not need in the automated future."³ To those critics who respond to his charges by emphasizing the motivational aspect of grades, he dismisses this as a form of neuroses.⁴

Goodman's criticisms are supported in the writings of Ahmann and Glock.⁵ In discussing motivation, they reported that grades (1) do create defensive behavior in students, (2) do lead to pressures which result in cheating and conformity, (3) do arouse threats of failure which lead to excessive fear causing a disorganization of the student's learning ability, (4) do lead to feelings of inferiority affecting the student's self-concept, and (5) that teachers do use them as an attempt to motivate rather than as a means to provide interesting and worthwhile classroom experiences for pupils.⁶ This is what happens when perspective in the defensible use of marks is lost.⁷

Of course, these accusations are not necessarily new. Lucius Smith writing in 1935 reported after making a

³Ibid., p. 123.

⁴Ibid., p. 124.

⁵J. Stanley Ahmann and Marvin D. Glock, Evaluating Pupil Growth (Boston: Allyn and Bacon, Inc., 1963), pp. 579-80.

⁶Ibid.

⁷Ibid., p. 580.

a review of the research literature on grading systems that there was wide disagreement on the purpose of grades and that grades had little reliability.⁸ Smith reported then that more educators agreed upon the system to be used than on "any other element pertaining to the mark."⁹ She concluded her summary with the statement that there were "some grave problems attached to marks."¹⁰

Rothney, in reviewing the research in 1955, indicated some of these grave problems. He warned that grades are "invalid indexes of growth," and that they "direct attention away from the real purposes of education."¹¹ He also noted that they "frequently permit and encourage the calculation of a meaningless mark."¹²

Smith and Dobbin made a complete review in 1957 and concluded that basically the research focused on two separate, yet related, aspects of grading. The research done in earlier periods of this century was concerned with the variability and unreliability of grades and the mechanical improvement of grading systems. Much of this research

⁸Lucius Smith, The Status of Marking in Negro Colleges (Bluefield, West Virginia: Bluefield State Teachers College, 1935), p. 25.

⁹Ibid., p. 25.

¹⁰Ibid., p. 26.

¹¹John W. M. Rothney, Evaluating and Reporting Pupil Progress (Washington, D.C.: National Education Association, 1955), p. 8.

¹²Ibid., p. 9.

was concerned with the adapting of reported grade distributions to the normal probability curve and the analysis of different grading patterns. It did little, however, to increase the reliability or validity.¹³

The emphasis in the literature since 1940 has changed from the mechanical to "a growing conviction that marking practices must be consistent with educational objectives." This new emphasis has led to a concern with grades as they relate to the process of learning. It was found when looking at grades from this perspective that they say little about what the student has learned or his strengths or weaknesses. Consequently, there currently is a need "for greater specificity in what is graded and a broader involvement among all those concerned with grades."¹⁴

Some proponents for the elimination of grades argue as to whether or not poetry should be graded. How can a school grade creativity and originality? An original idea to one person might be a hackneyed idea to another person.

But let's face it. Everyone wants good grades and will do whatever he can to get them. If the school does not give grades for creativity, then students will not make

¹³Ann Z. Smith and John Dobbin, "Marks and Marking Systems," *Encyclopedia of Educational Research*, ed. Chester Harris, 3rd ed. (New York: The Macmillan Company, 1960), p. 782.

¹⁴*Ibid.*, p. 787.

any effort to be creative. They will spend their time and energy doing those things which will be rewarded.

Kirshenbaum outlines some student comments in his book, Wad-Ja-Get?:

The first criticism we have of grades is that they put the emphasis on the type of learning which can be graded easily. That is why we have so many multiple choice, fill-in, matching, and true-false tests--they're easy to grade. (They probably also take less time to grade.) But what does this do to our education? For the convenience of the teachers who are forced to grade us, the more important aspects of our education--the ones which are not easy to grade--are neglected.

Grades also turn students into a bunch of robots. We do whatever teachers want us to do, even if we know that what we are being required to do is only "busy work," and even if we think such work is only a waste of time. The fact is, we're scared of many of our teachers because of the power that grading gives them over us.

Thirdly, we do not feel that grades are fair. For example, if one student has trouble in French and words hard at it and gets a C, and another student finds French easy and doesn't work at it and gets a B, is that fair? If a student really tries hard in a subject and gets a low grade, he might get discouraged and stop trying. We've seen this happen to some of our classmates. So grading isn't fair to kids who have trouble in school but who really try hard. Teachers sometimes say they take effort into account, but how do they know how hard we have worked on something? And how do they know how hard it was for us to do a particular assignment? How can a teacher really be fair when he or she has 130 students to grade?

Finally, we're against grading because it encourages cheating. From what we've seen, most people in this school cheat, in one way or another. How can we pretend this is a good school if so many people care so little about their education that they are willing to cheat their way through it?

Maybe it's time we thought about the problems that grading creates. We think this would be a much better school if marks were completely eliminated."¹⁵

¹⁵Kirshenbaum et al., op. cit., pp. 23-24.

Pressey advocated that many educators felt grading conditioned the student with less ability to accept failure and to accept himself as a failure.¹⁶

When reviewing the literature on the use of grading systems in schools today, it becomes quite obvious that one of the major factors contributing to the confusion surrounding grades is that grades are used for so many different purposes. Grading systems have been reported as used for communication of achievement, motivation to learn, measuring of individual differences, prediction of future achievement, promotion of students, grouping of students for instruction, and reporting levels of behavior and personality traits. These purposes for grading can be seen in the use of traditional grading systems and the recent trends which have attempted to report behaviors and traits.¹⁷

There are four grading systems which are referred to as the traditional one: numerical, combination of numerical and letter, letter system, and pass or fail. The reasons given for the employment of any one of these systems lack agreement. Clark saw the purpose as representing the attempts of the teacher to keep the student

¹⁶S. I. Pressey, "Fundamental Misconceptions Involved on Current Marking Systems?" School and Society 21 (June 1965).

¹⁷William L. Wrinkle, Improving Marking and Reporting Practices in Secondary Schools (New York: Rinehart and Company, 1947), p. 53.

abreast of his accomplishments.¹⁸ Finkelstein concluded that a mark could be defined only in terms of the frequency with which it can be secured by students on a normal probability curve.¹⁹ Smallwood, in studying marking systems in early American universities, found that legislation passed on the adoption of marking systems resulted from an attempt to measure individual differences and establish standards.²⁰ Rothney reported his observations by commenting that marks continue to be the measures of school--the key that opens doors of educational institutions for entrance and for exit.²¹ Burton summarized the traditional purposes by referring to them as a way to motivate the pupil to greater effort and as a simple system of administrative shorthand for such routine purposes as classification and promotion.²²

Among the newer, more descriptive efforts are the checklist, the letter form, and the parent-teacher conference. Two basic purposes for the use of these new methods

¹⁸Paul E. Clark, "Can College Students Grade Themselves?" School and Society 47 (May 1938): 614.

¹⁹E. Finkelstein, The Marking System in Theory and Practice (Baltimore: Warwick and York, Inc., 1913), p. 82.

²⁰Mary Lovett Smallwood, An Historical Study of Examinations and Grading Systems in Early American Universities (Cambridge: Harvard University Press, 1935), p. 111.

²¹Rothney, op. cit., p. 8.

²²William H. Burton, The Guidance of Learning Activities (New York: Appleton-Century-Crofts, Inc., 1962), p. 509.

in reporting are to try to describe levels of behaviors and personality traits rather than just mastery of subject matter. The research literature does not indicate just how effective and worthwhile these new methods are. However, it does mention some of the many obstacles encountered in the use of these new methods (e.g., stereotyping of students; training teachers to conduct interviews, to write meaningful letters, to interpret behavior traits; convincing parents to attend conferences; and developing a standardized system for permanently recording the information).

The traditional approaches are also made questionable by many obstacles. Finkelstein investigated whether grades were a reliable measure of student differences by plotting more than 20,000 marks at Cornell. He discovered the pattern of marks to be disproportionately distributed toward the upper range.²³ In investigating causes, he found that student effort and zeal, professors' personal equations for grades, and cut-off points for failing and honors were uncontrollable variables which made grades an unreliable measure of student differences. Lobaugh investigated the same problem by comparing senior grade point averages and individual scores on standardized tests.²⁴

²³Finkelstein, op. cit., p. 29.

²⁴Lobaugh, "Girls, Grades and I.Q.'s," Nation's Schools 30 (November 1942): 42.

She did this for a period of three years, and found that persons with high grade point averages had a tendency to fall in the average range on standardized tests.

It has been assumed for many years that the best predictor of college success is high school grades. But as early as 1934, Segel questioned this. Even though general mental tests produce a slightly lower coefficient, just what marks from any one high school mean is not known accurately.²⁵ Feder saw grade point averages having an inherent unreliability, since they are computed from teachers' marks with the result that any yielded coefficient will have a large area of unpredicted variability.²⁶ Strang, in her study, reported that a college's acceptance of a high school's evaluation of a student's achievement depends a great deal upon the soundness of the school's recommendations in previous years.²⁷

Endler and Steinberg saw college success as a function of an interaction of many complex factors which include

²⁵David Segel, "Prediction of Success in College," U.S. Bureau of Education Bulletin 20 (1934): 1-98.

²⁶David D. Feder, "Intriguing Problems of Design in Predicting College Success," Educational and Psychological Measurement 25 (Spring 1965): 29-37.

²⁷Ruth M. Strang, "Reporting Pupil Progress," School Executive 72 (August 1953): 38.

personality and health, social factors, parental and familiar attitudes, and maturity.²⁸

Besides these obstacles operating in both traditional approaches and in newer trends in grading, there are also the subjective variables which have a tendency to play an important role in the assignment of grades. These variables relate to the sex and personality ratings of students, conduct and punctuality, conformity and diplomacy, and whether the student is known personally by the teacher.²⁹ In addition, it is found in the research that teachers' evaluations of subject matter vary greatly when subjective judgments are required.

Writers state that it is time educators do something about the problems that grading creates. It is felt that by replacing grades with a more descriptive method of written evaluation, both parents and students would be better informed; relations between parents, students, and teachers would improve; and the school would be seen more as a place of learning. The aim is to change the grading system to a system of better communication, more meaningful evaluation, and more learning.

²⁸Norman S. Endler and Danny Steinbert, "Prediction of Academic Achievement at the University Level," Personnel and Guidance Journal 41 (April 1962-63): 695.

²⁹J. L. Holland, "Prediction of College Grades From Personality and Aptitude Variables," Journal of Educational Psychology 51 (1960): 245-254.

There have been several studies which have explored possible relationships that may exist between selected teacher characteristics and grading practices. Rokeach has investigated open and closed mindedness as it related to teachers' rationale for grading.³⁰ Vreeval has found age to be related to conservative attitudes and opinions.³¹ Russell found that factors which determine individual perceptions of environment and people (i.e., marital status, having or not having children) to have some differences in teachers' judgments.³²

Starch and Elliot investigated the subjective variable of teacher's judgments in the subjects of English, mathematics, and science and found wide variations and differences among teachers in evaluating the same examination papers. Their investigation showed even more variation among science papers than those in language, which was contrary to what was generally supposed.³³ Carter investigated teachers' marks in beginning algebra and

³⁰ Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960), p. 71.

³¹ Lawrence E. Vreeval, "How May We Make the Recording and Reporting of Pupil Achievement More Meaningful?" National Association of Secondary Principals Bulletin (1953), 179-82, 191-98.

³² Ivan L. Russell and Wellington A. Thalman, "Personality: Does It Influence Teachers' Marks?" Journal of Educational Research 48 (1955), 561-64.

³³ Daniel Starch and Edward C. Elliott, "Reliability of Grading Work in Mathematics," School Review 21 (1913): 254-59.

observed these same significant differences in teachers' judgments. He also noted that girls made significantly higher marks than did the boys.³⁴

There have been a number of studies conducted which have shown that girls as a group have a tendency to receive from both women and men teachers higher grades than boys. Lentz investigated sex differences in school grades by comparing them with achievement test scores. He found that while boys excelled the girls by 8 percent in achievement test scores, the boys' marks were 8 percent lower than the girls' marks.³⁵ Hadley noted this same difference and found because of it that average students tended to be marked on a chance basis.³⁶ Newton, in addition to finding that girls are graded higher than boys, also found in examining some 4,255 grades that women teachers as a group record higher grades than men teachers.³⁷ Douglas and Olson in their research concluded that

³⁴Robert S. Carter, "How Invalid Are Marks Assigned by Teachers?" Journal of Educational Psychology 43 (April 1952): 218-28.

³⁵T. J. Lentz, Jr., "Sex Differences in School Marks With Achievement Test Scores Constant," School and Society 29 (January 1929): 65-68.

³⁶Trevor Hadley, "School Mark--Fact or Fancy," Educational Administration and Supervision 40 (May 1954): 305-312.

³⁷Robert F. Newton, "Do Men Teachers Record Higher Grades Than Women Teachers?" School and Society 50 (June 1942): 72.

this slight overrating of girls and general underrating of boys by women teachers were probably influenced by the more acceptable behaviors demonstrated by girls.³⁸

Hadley investigated the relationship between marks and the ranking of students by teachers according to the most liked and least liked. The results clearly demonstrated the tendency for most liked pupils to be marked higher than their accomplishments would justify.³⁹ Russell and Thalman investigated this same relationship and noted a similar result.⁴⁰ Wood investigated the effect of personal acquaintance on the grading of essay examinations and found that the student known to the reader obtains the better results.⁴¹

In reviewing the literature, it becomes quite evident why grades have become a topic of concern. There appears to be no unanimity on what should be graded (i.e., whether it should be skills, behaviors, etc.). There appears to be no strong endorsement for any one type of grading system. There appears to be no agreement on what

³⁸Harl R. Douglas and Newman E. Olson, "The Relation of High School Marks to Sex in Four Minnesota Senior High Schools," School Review 45 (April 1937): 288.

³⁹Hadley, op. cit., p. 311.

⁴⁰Russell and Thalman, op. cit., pp. 561-64.

⁴¹Ben D. Wood, "Measurement of College Work," Educational Administration and Supervision 7 (September 1921): 322.

grades measure. Furthermore, there seems to be no standard agreement regarding what a grade means, even though actual achievement seems to be one factor common to all grading situations.

Consequently, the only justifiable conclusion for the use of grading systems without advocating their abolishment as suggested by Goodman⁴² seems to be one of saying that grading systems can only serve the role of communication between the student and the teacher. What is graded will depend purely upon the individual objectives of the teacher for teaching the course. A grade can only be interpreted in relationship to these individual class objectives.

If grades are to have any utility for others besides the teacher and the pupil (e.g., employers, admission people, etc.), it would seem from the literature that teacher objectives should be centered in actual achievement. Other factors (e.g., effort, attitude, aptitude, teacher-pupil relationships, and attendance) are either subjective appraisals or too difficult to translate directly into grades.

Strang viewed this position as an appropriate solution to the dilemma of marking so long as achievement was kept separate from social and emotional factors.⁴³ Burton

⁴²Goodman, op. cit.

⁴³Strang, op. cit., p. 44.

saw this position in relationship to one of two theories of education, the one being the mastery of subject matter and the other being concerned with the development of personal-social-moral traits, abilities, attitudes, and appreciation of the learner.⁴⁴ Smith and Dobbin reviewed extensively the research literature, and reported that the development of such a system for the latter theory awaits wider agreement of the goals of instruction.⁴⁵

A summary of the research on grading practices is well stated in the following "Definition of a Grade (A, B, C)."

A grade can only be regarded as an inadequate report of an inaccurate judgement by a confused and variable judge of the extent to which a student has attained an undefined level of mastery of an unknown proportion of an indefinite amount of material.

Anonymous

⁴⁴Burton, op. cit.

⁴⁵Smith and Dobbin, op. cit., p. 783.

CHAPTER III

THE DESIGN AND PROCEDURES

Introduction

Exploration of the literature on the subject of grading practices has produced two interesting observations. First, there is mentioned a variety of purposes to warrant the use of grades, criteria for determining grades, methods for actual assignment of grades, and information thought to be extracted from grades. There appeared to be no strong endorsement for any particular set of practices. The primary reason for this lack of agreement seems to extend from the fact that different teachers perceive grades as serving a multitude of purposes.

Secondly, in the examination of the literature, there were a number of studies discovered which indicated that various teacher characteristics (i.e., sex, subject taught) may have a relationship with teachers' opinions and rationale in grading practices and procedures. These studies are a cue that there could be other teacher characteristics which affect grading practices. Knowing the existence of any relationship would be helpful in gaining an understanding of and in clarifying the grading practices of teachers.

Purpose of the Study

1. The purpose of this study is to identify secondary teachers' rationale regarding the four aspects of grading as identified in the literature.

- A. Purposes for grading
- B. Criteria used in assessing student progress
- C. Methods used in determining grades
- D. Inferences extracted from grades

2. To determine if there are relationships between teachers' grading practices and certain selected teacher characteristics, such as psychological, sociological, and philosophical.

Specific Questions and Hypotheses

This dissertation is designed to be an analytic, descriptive research study. It is designed to answer the general research problems stated above. To answer these two problem questions, specific questions listed below will be examined on the basis of teacher responses and the hypotheses listed following the questions will be tested.

The research is designed to obtain responses to the following four questions:

- Q₁: To what extent do secondary school teachers agree on each of the following purposes for grading:
- A. Communication of student progress regarding individual teacher objectives
 - B. Motivation toward greater student progress

- C. Measurement of specific aspects of student progress (i.e., aptitude, interest, and achievement)
 - D. Prediction of future student progress (i.e., grouping students for course instruction and college success)
 - E. Reporting personal-social-moral traits
 - F. A simple system of administrative shorthand for determining promotion and graduation
- Q₂: To what extent do secondary school teachers agree on the use of the following criteria in the process of deciding grades:
- A. Aptitude
 - B. Teacher-pupil relationships
 - C. Punctuality and attendance
 - D. Conformity and personal appearance
 - E. Effort
 - F. Interest
 - G. Achievement
- Q₃: To what extent do secondary school teachers agree on the methods used in determining grades:
- A. Standard normal curve
 - B. Variation of expectations
 - C. Danger of inflexible approach
- Q₄: To what extent do secondary teachers agree that the following inferences can be extracted from grades:
- A. Mastery of subject matter as measured by actual achievement on recall tests
 - B. Individual differences as measured by teacher observations of motivation, intellectual abilities, and personal-social-moral traits
 - C. College success as measured by individual course grades and cumulative grade point averages.



- D. School standards as measured by the percentage of high and low grade point averages in a student body.

In addition to the above questions, these hypotheses will be tested:

- HO₁ There will be no significant relationship between the scores on the Rokeach Dogmatism Scale which measures open and closed mind and

R.Q.₁ The purposes for grading

R.Q.₂ Selected teacher criteria for determining grades

R.Q.₃ The methods used in determining grades

R.Q.₄ Inferences extracted from grades

- HO₂ There will be no significant relationship between certain sociological characteristics of teachers (i.e., age, sex, marital status, children, father's occupation, number of teaching years, teaching field, type of school system currently teaching in, and place of teacher training) and

R.Q.₁ The purposes for grading

R.Q.₂ Selected teacher criteria for determining grades

R.Q.₃ Methods used in determining grades

R.Q.₄ Inferences extracted from grades

- HO₃ There will be no significant relationship between the progressive and traditional philosophical points of view of education and

R.Q.₁ The purposes for grading

R.Q.₂ Selected teacher criteria for determining grades

R.Q.₃ Methods used in determining grades

R.Q.₄ Inferences extracted from grades

Design of the Study

The literature indicates the lack of agreement for the purpose of reporting pupil progress extends from the fact that grades are abstract symbols which can serve numerous purposes, without ever becoming an actual agent for causing the establishment of standard agreements. Given these actual conditions and without advocating abolishment as has been suggested by some critics, the predominant point of view as expressed in the literature is that the most appropriate purpose for grading is the communication of information regarding student progress in relation to specified objectives.¹ The basic rationale here is that communication as a purpose would require an accompanying interpretation of any abstract symbol assigned as a grade.

The purposes which will be used to identify teachers' rationale in this study are:

- A. Communication of student progress regarding individual teacher objectives
- B. Motivation toward greater student progress
- C. Measurement of specific aspects of student progress (i.e., aptitude, interest, and actual achievement)
- D. Prediction of future student progress (i.e., grouping of students for course instruction and college success)

¹William L. Wrinkle, Improving Marking and Reporting Practices in Secondary Schools (New York: Rinehart and Company, 1947).

E. Reporting personal-social-moral traits

F. A simple system of administrative shorthand for determining promotion and graduation

These purposes were extracted from a study of the literature as related to grading practices.

Teachers' rationale is examined in terms of these different purposes. In order to examine the extent to which secondary school teachers agree on each of these listed purposes, teacher subjects were asked to respond to questions describing each one. Questions 1 through 6 in the Grading Questionnaire (see Appendix) present statements describing purposes for grading. Specifically, the questions examine these purposes:

- Question 1. Communication
- Question 2. Motivation
- Question 3. Measurement
- Question 4. Prediction
- Question 5. Personal traits
- Question 6. Promotion

Teacher rationale of several grading criteria typically used in assessing student progress is also ascertained. Although each of these several criteria appearing below was mentioned in the literature, the consensus of the literature is that criteria should be restricted to actual achievement.² Other criteria are either based on teacher subjective appraisals, or seem to have little relevance to any of the purposes given for the use of

²Robert L. Ebel, Measuring Educational Achievement (Englewood Cliffs, New Jersey: Prentice-Hall, 1965), p. 405.

grades. The amount of agreement with the other criteria should give some indication of the magnitude of the problems involved in trying to understand grading practices.

The criteria which are typically used in determining classroom grades are as follows:

- A. Aptitude
- B. Teacher-pupil relationships
- C. Punctuality and attendance
- D. Conformity and personal appearance
- E. Effort
- F. Interest
- G. Actual achievement

These criteria were extracted from a study of the literature as related to grading practices.

Teacher rationale is examined on the basis of these criteria. Teacher subjects were asked to respond to questions describing each criterion. Questions 7 through 13 in the Grading Questionnaire (see Appendix) present statements describing criteria used in grading. Specifically, the questions examine these criteria:

- Question 7. Aptitude
- Question 8. Teacher-pupil relationships
- Question 9. Punctuality and attendance
- Question 10. Conformity and personal appearance
- Question 11. Effort
- Question 12. Interest
- Question 13. Actual achievement

It was found in examining the literature that teachers apply both rigid and flexible approaches to the assignment of grades. A rigid approach implies the use of one approach for all students. One rigid approach that is typically used is the "standard normal curve." A more



flexible approach implies a variation of expectations for students depending on their capabilities. The literature supports the latter approach as long as it is restricted to reporting actual achievement in mastery of subject matter.³ A completely flexible approach implies one that recognizes some of the significant dangers present in using an inflexible standard of grading. Another significant part of this study, then, is to determine to what extent teachers as a group agree on the use of rigid and flexible approaches in the assignment of classroom grades.

In order to examine teacher rationale for methods used in determining grades, the study seeks to determine teacher agreement regarding the following methods:

- A. The principle of the standard normal curve
- B. That classroom performance expectations for determining grades should be dependent on individual student intellectual capabilities
- C. The dangers present when an inflexible standard of grading is applied to grading practices

These methods were extracted from a study of the literature as related to grading practices.

Questions 14 through 16 in the Grading Questionnaire (see Appendix) present statements describing methods used in grading. Specifically, the questions examine these methods:

³Harriet Frenkel, "Individualized Report Cards," Instructor 75 (September 1965): 38.

- Question 14. Standard Normal Curve
 Question 15. Variation of expectations
 Question 16. Dangers of inflexible approach

In relation to information extracted from grades, the literature indicates that grades are thought to be measures of certain characteristics of students and school standards. Those measures are:

- A. Mastery of subject matter as measured by actual achievement tests
- B. Individual differences as measured by teacher observations of motivation, intellectual abilities, and personal-moral-social traits
- C. College success as measured by individual course grades and cumulative grade point averages in a study body
- D. School standards

These inferences were extracted from a study of the literature as related to grading practices.

All of the measurements attributed to grades are seriously questioned because of the number of variables involved which prevent the establishment of reliabilities. Mastery of subject matter, when restricted to actual achievement tests, comes the closest to being accepted as a measurement of grades.⁴ This study will be significant, then, from the standpoint of determining to what extent teachers perceive mastery of subject matter with its restriction as the only appropriate information extracted from grades. Each measurement listed will be represented

⁴Ruth M. Strang, "Reporting Pupil Progress," School Executive 72 (August 1963): 38.

by a question to which the subjects participating in the study were asked to respond. Questions 17 through 20 in the Grading Questionnaire (see Appendix) present statements describing inferences extracted from grades. Specifically, the questions examine these measures:

- Question 17. Mastery of subject matter
- Question 18. Individual differences
- Question 19. College success
- Question 20. School standards

Specifically, the questionnaire included statements to examine purposes, criteria, methods of grading, and inferences extracted from grades. They are as follows:

<u>Purposes</u>	<u>Criteria</u>
1. Communication	7. Aptitude
2. Motivation	8. Teacher-pupil relationships
3. Measurement	9. Punctuality and attendance
4. Prediction	10. Conformity and personal appearance
5. Personal Traits	11. Effort
6. Promotion	12. Interest
	13. Actual achievement

<u>Methods of Grading</u>	<u>Inferences</u>
14. Standard normal curve	17. Mastery of subject matter
15. Variation of expectations	18. Individual differences
16. Dangers of inflexible approach	19. College success
	20. School standards

The second part of the problem being studied is teacher characteristics. The selected teacher characteristics have been chosen to explore possible relationships that may exist between these and the identified grading practices. The identified grading practices representing

the dependent variables for exploring these relationships are those areas of grading described above. The selected independent variables are categorized into the three most common ways of viewing human behavior: a psychological measurement, certain sociological variables, and a philosophical variable.

The independent variable to be used in determining different psychological characteristics of teachers is the Rokeach Dogmatism Scale,⁵ which measures the extent to which a person's belief system is open or closed. It has been selected for four specific reasons:

1. It focuses on the belief system as a whole rather than the measurement of single beliefs and attitudes.
2. It measures general authoritarianism and general intolerance and has been found to be closely associated with opinionation.
3. It measures the extent to which a person can receive, evaluate, and act on relevant information without involving his own unrelated needs.
4. It measures the extent to which a person experiences the world as threatening.

⁵Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960), p. 71.

It would seem that the teachers obtaining the high scores and the teachers receiving the low scores on the scale might perceive grading practices differently.

There is a rationale for each of the sociological variables. Age has been included because it has been found to be related to conservative attitudes and opinions.⁶ Sex has been included because it has already been found in the research to be a factor in determining grading practices.⁷ Marital status, children, and father's occupation have been included because they are believed to be factors which determine individual perceptions of environment and people.⁸ The number of teaching years, the type of school in which the teacher is teaching, and the type of institution in which the teacher was prepared (private and public college) have been included because each has the potential of influencing a teacher's attitude toward grading practices. Teaching field has been included because it offers a way of examining whether different

⁶Lawrence E. Vreeval, "How May We Make the Recording and Reporting of Pupil Achievement More Meaningful?" National Association of Secondary Principals Bulletin (1953): 179-82, 191-98.

⁷Robert F. Newton, "Do Men Teachers Record Higher Grades Than Women Teachers?" School and Society 50 (1942): 72.

⁸Ivan L. Russell and Wellington A. Thalman, "Personality: Does It Influence Teachers' Marks?" Journal of Educational Research 48 (1955): 561-64.



curricula or training in different curricula might have a relationship to grading practices.⁹

The philosophical variable describes two well-known philosophies of education: the progressive and traditional philosophies of education. The variable has been included because it represents two popular philosophic positions in education and has been found by Kerlinger to be a measure on which teachers can be expected to differ.¹⁰ Each position represents basically a different view of the learner (the child).

Instrumentation

The instrumentation for the investigation involved the use of the Rokeach Dogmatism Scale (Appendix), a Personal Information Form (Appendix), and a Grading Questionnaire (Appendix).

The Rokeach Dogmatism Scale

The scale measures the differences in openness and closedness of belief systems, and has gone through five editions. The final form, as tested and reported by

⁹Samuel P. Kelly and Ralph Thompson, "Grading and the Nature of the Discipline," Journal of Higher Education 39 (December 1968): 511-18.

¹⁰Fred Kerlinger, "Attitude Structure of the Individual: A Q-Study of the Educational Attitudes of Professors and Laymen," Genetic Psychology Monographs 53 (May 1965): 283-329.

Roekach, has reliabilities ranging from .68 to .93.¹¹ The reliabilities were obtained by a test-retest, with five to six months between tests.

The scale is based on the theoretical concept that every ideological system forms from a belief-disbelief structure operative in the mind of a person. The belief-disbelief structure has various dimensions that make it possible to determine the extent to which a belief system is open or closed. These various dimensions are related to the way in which one experiences the world in which he lives, the authorities represented by people who hold systems of authority, and the beliefs and disbeliefs espoused by people in authority. These dimensions are seen in all the beliefs, sets, expectancies, and hypotheses accepted or rejected by a person.

The scale is designed to yield a total score with high scores representing closed-mindedness and low scores representing open-mindedness. Once the total score for each participant is determined, the participating group was equally divided into three relatively equal categories (i.e., high, middle, and low dogmatism scores). Participants scoring 87-125 were designated as the low group (open-mindedness), 126-150 as the middle group, and 151-197

¹¹Roekach, op. cit., p. 72.

as the high group (closed-mindedness). These three categories represented one independent variable in the study.

The Personal Information Form

The form was designed by the investigator. It was used to collect, by use of fill-in-type questions, sociological variables and the categories for each variable are:

- A. Sex (male and female)
- B. Age (under twenty-five, twenty-five to thirty-five, and over thirty-five)
- C. Marital status (yes and no)
- D. Children (yes and no)
- E. Father's occupation (unskilled, skilled, and professional)
- F. Experience as a teacher (zero to two, three to six, seven to twelve, and over twelve)
- G. Subjects taught (English and language, social studies, mathematics and science, special subjects and other)
- H. Type of school system employed (rural, suburban, and city)
- I. Undergraduate training in a public college (yes or no)

The Personal Information Form also was used to collect information for the philosophical variable. On the second page of this form, two well-known philosophies of education were described. The two philosophies described are the traditional and progressive approaches to educational theory. Participants were asked to check the one closest to their own personal philosophy.

The Grading Questionnaire

The first step in constructing the Grading Questionnaire was to consult the pertinent literature on grading practices in order to develop items representing the most

frequently identified patterns of grading which teachers used. The questionnaire devised was based on this information and consisted of fixed alternative questions. Each question was designed to identify grading practices regarding purposes for grading, criteria used in determining grades, approaches to grading, and measurements attributed to grades. The Likert Scale¹² has been used in designing the response categories so participants were able to register the degree to which they agree or disagree with the questions.

The pilot tests were first done with ten graduate students on an individual basis. When completing the questionnaire each student was asked to comment on the clarity of the separate questions and to ascertain whether they understood the content. These comments were noted by the investigator as they were made and changes in item format and content were made. A pilot test was also conducted with a class of graduate students enrolled in an educational administration course offered by the College of Education, Michigan State University, during the spring term, 1974. The class was very helpful and offered much constructive criticism. These comments were noted and the Grading Questionnaire was revised as a result of the pilot test.

¹²Anna Anastasi, Psychological Testing (New York: The Macmillan Company, 1961), p. 551.



Sample

The sample population for the study was those teachers selected from a random selection of secondary teachers currently teaching in a suburban school system, a city school district, and in a rural district in the state of Michigan. The three participating schools were:

1. Rural: Concord Community High School, Concord Michigan (Jackson County)
2. Suburban: Wyoming Park High School, Wyoming Michigan (Kent County)
3. City: Lansing Everett High School, Lansing, Michigan (Ingham County)

The principals of these schools were contacted and the purpose of the study described to them. After gaining the support and understanding of the building principals, a random selection for the sample population was identified from the alphabetical faculty rosters. In order to reach an equal proportion of male and female teachers, the rosters were divided into two groups, male and female. By this method, an equal proportion of male and female school teachers were secured to represent the three types of schools (rural, suburban, and city). There was no attempt to diversify other sociological variables appearing in the study.

In each of the three schools a meeting of the faculty was subsequently held, at which time the researcher identified himself, gave a brief statement about the purpose

of the study, and solicited the cooperation and participation of those named in the random sample. Thirty-two teachers were involved from each of the three schools, with the number of teachers participating in the study at ninety-six.

Collection of Data

The administration of the instruments took place within three types of schools (rural, suburban, and city). Each school was visited by the investigator and a meeting held with the participating teachers to explain the purpose of the study and clear up any questions before responding to the questionnaire. Each teacher was then provided with the instruments in a classroom testing situation and asked to follow the instructions as printed. It was explained that it was not necessary to give one's name unless the participant wished to receive a summary of the results of the study. Participants were asked to give an honest opinion when responding and to fill in every item. The instruments were collected directly following the administration by the investigator.

Treatment of Data

Frequencies for each category (strongly agree, agree, disagree, strongly disagree) were recorded for every question on the Grading Questionnaire, and placed in tables according to the classification of the content of the

questions. There are four tables used to show the frequency of the categorical response for the twenty questions:

- A. Degree of responses for purposes of grading
- B. Degree of responses to criteria for grading
- C. Degree of responses to approaches to grading
- D. Degree of responses to measurements attributed to grades

This procedural approach permitted an examination of the extent to which there was agreement among the ninety-six teachers for each question.

Since there were ninety-six responses to each question, the actual frequency for each question was accepted as representing a percentage statistic. Therefore, the categorical responses were referred to in later chapters as being a percentage statistic. The use of this statistic permitted the investigator to consider the percentage differences between the responses to each question and draw inferences for discussion.

The statistic used in determining whether relationships exist between the philosophical, the psychological, and the sociological variables and the separate questions in the grading questionnaire is the chi-square test. Differences found to be at or beyond the 5 percent level of confidence are accepted in this study as significant.

The procedures for determining relationships were to compute chi-square on the basis of the independent variables for each question appearing in the questionnaire. Since there were eleven independent variables, each with its separate categories, this called for eleven chi-squares for every questionnaire item. (See Appendix for a listing of the dependent and independent variables.)

In reporting the data for the chi-square, two kinds of tables were used. In the Appendix there is included a master table that shows only the chi-square for each dependent and independent variable in the study. The table was so constructed that dependent variables are listed at the top and independent variables are listed in the right-hand column on the side. Those chi-squares found to be significant at the .05 level of confidence or less were so designated by use of asterisks.

Summary

The purpose of Chapter III was to present the research design of the study. Included in this chapter was the sample population, techniques used to gather data, and the instruments used.

Chapter IV will be devoted to an analysis of the data gathered and will relate the results to the hypotheses and research questions.



CHAPTER IV

ANALYSIS OF DATA

Chapter IV is divided into two parts. Data obtained from the Grading Questionnaire are presented in the first part. The second part contains data obtained on relationships between teacher characteristics and grading rationale found to be significant at or beyond the .05 level. The final section also presents a discussion of the findings and additional analysis of variables found to have a statistically significant relationship.

Frequency Responses to Grading Questionnaire

One very important focus of this research was to ascertain the extent to which there is agreement or disagreement among secondary teachers regarding the four aspects of grading. The four aspects viewed as pertinent to the process of determining grades were:

- A. Purposes for grading
- B. Criteria used in assessing student progress
- B. Methods used in determining grades
- D. Inferences extracted from grades

In order to show the extent of agreement or disagreement, a separate table is used to present the frequency



of responses to each of these different aspects of the grading process.

Each table was designed to present the different grading rationale being examined for that table and to give the frequency of responses to the four response categories (strongly agree, agree, disagree, strongly disagree) for each grading rationale. As is indicated in each table pertaining to these different aspects of grading, the frequencies of responses are the actual number of responses to which there is agreement or disagreement among teachers in the study.

Findings for Purposes of Grading

In Table 1, the responses according to category are given for each of the separate purposes described in the questionnaire. The research question to which these purposes pertained is as follows:

Q₁: To what extent do secondary teachers agree on each of the following purposes for grading:

1. Communication of student progress regarding individual objectives
2. Motivation toward greater student progress
3. Measurement of specific aspects of student progress (i.e., aptitude, interest, and actual achievement)
4. Prediction of future student progress (i.e., grouping of students for course instruction and college success)



5. Reporting personal-social-moral traits
6. A simple system of administrative shorthand for determining promotion and graduation

Table 1.--Frequencies of responses to purposes for grading.

Question	Purposes	Number of Responses				Total
		Strongly Agree	Agree	Disagree	Strongly Disagree	
1	Communication	10	66	18	2	96
2	Motivation	6	64	23	3	96
3	Measurement	7	60	26	3	96
4	Prediction	1	27	47	31	96
5	Reporting personal-social-moral traits	0	9	50	37	96
6	Promotion and graduation	3	17	53	23	96

In Table 1 the "strongly agree" and "agree" statements were combined for analysis, as was true of the "strongly disagree" and "disagree." Seventy-six of 79 percent of the respondents agreed that communication of student progress regarding individual objectives was a purpose of grading. Seventy or 73 percent of the respondents agreed that motivation toward student progress was a purpose of grading. Sixty-seven or 70 percent of the respondents agreed that measurement of specific aspects of student progress was a purpose of grading. Sixty-eight or 71 percent



of the respondents disagreed that prediction of future student progress was a purpose of grading. Eighty-seven or 91 percent of the respondents disagreed that reporting personal-social-moral traits was a purpose of grading while seventy-six or 79 percent of the respondents disagreed that a simple system of administrative shorthand for determining promotion and graduation was a purpose of grading. On the basis of the findings the following were considered to be purposes for grading: communication of student progress regarding individual objectives, motivation toward greater student progress, and measurement of specific aspects of student progress.

Findings for Criteria in Determining Grades

In Table 2, the responses according to category are given for each of the separate criteria described in the questionnaire. The research question to which these criteria pertained is as follows:

Q₂: To what extent do secondary school teachers agree on the use of the following categories of criteria in the process of deciding grades:

7. Aptitude
8. Teacher-pupil relationships
9. Punctuality and attendance
10. Conformity and personal appearance
11. Effort
12. Interest
13. Actual achievement



Table 2.--Frequencies of responses to criteria for grading.

Question	Criteria	Number of Responses				Total
		Strongly Agree	Agree	Disagree	Strongly Disagree	
7	Aptitude	0	15	36	45	96
8	Teacher-pupil relationships	2	14	48	32	96
9	Punctuality and attendance	2	24	64	6	96
10	Conformity and personal appearance	0	4	75	17	96
11	Effort	8	38	49	2	96
12	Interest	1	15	73	7	96
13	Actual achievement	5	40	44	7	96

In Table 2 the "strongly agree" and "agree" statements were combined for analysis, as was true of the "strongly disagree" and "disagree." Eighty-one or 84 percent of the respondents stated that aptitude should not be used as a criterion in the process of deciding grades. Eighty or 83 percent of the respondents stated that teacher-pupil relationships should not be used as a criterion in the process of deciding grades. Seventy or 70 percent stated that punctuality and attendance should not be used as a criterion in the process of deciding grades. Ninety-two or 96 percent of the respondents stated that conformity and personal appearance should not be used as a criterion in the



process of deciding grades. Fifty or 52 percent of the respondents stated that effort should not be used as a criterion in the process of deciding grades. Eighty or 83 percent of the respondents stated that interest should not be used as a criterion in the process of deciding grades, while 51 or 53 percent of the respondents stated that achievement should not be used as a criterion in the process of deciding grades. In summary, the secondary teachers agreed that aptitude, teacher-pupil relationships, punctuality and attendance, conformity and personal appearance, and interest should not be used as a criterion in the process of deciding grades. There was no clear decision on the criteria effort and achievement. There were approximately 50 percent of the respondents who agreed that effort and achievement should be used as criteria in the process of deciding grades, while 50 percent of the respondents disagreed.

Findings for Methods Used in Determining Grades

In Table 3, the responses according to category are given for each of the separate methods described in the questionnaire. The research questions to which these methods pertained are as follows:

Q₃: To what extent do secondary school teachers agree on the following methods in determining grades:

14. The standard normal curve
15. Variation of expectations
16. Dangers of inflexible standard of grading



Table 3.--Frequencies of responses to methods of grading.

Question	Approaches	Number of Responses				Total
		Strongly Agree	Agree	Disagree	Strongly Disagree	
14	The standard normal curve	1	19	57	19	96
15	Variations of expectations	10	54	29	3	96
16	Dangers of inflexible standard of grading	23	60	11	2	96

In Table 3 the "strongly agree" and "agree" were combined for analysis, as was true of the "strongly disagree" and "disagree." Seventy-six or 79 percent of the respondents stated that the standard normal curve should not be used as a method in determining grades, while 64 or 67 percent and 83 or 86 percent agreed that variation of expectations and danger of inflexible approach, respectively, should be used as methods in determining grades.

Findings for Inferences Extracted From Grades

In Table 4, the responses according to category are given for each of the inferences described in the questionnaire. The research question to which these inferences pertained is as follows:



Q₄: To what extent do secondary teachers agree that certain inferences are extracted from grades:

17. Mastery of subject matter as measured by actual achievement on memory tests
18. Individual differences as measured by teacher observations of motivation, intellectual abilities, and personal-social-moral traits
19. College success as measured by individual course grades and cumulative grade point averages
20. School standards as measured by the percentage of high and low grade point averages in a student body

Table 4.--Frequencies of responses to inferences extracted from grades.

Question	Inferences	Number of Responses				Total
		Strongly Agree	Agree	Disagree	Strongly Disagree	
17	Mastery of subject matter	8	55	32	1	96
18	Individual differences	10	57	26	3	96
19	College success	2	49	37	8	96
20	School standards	4	59	30	3	96

In Table 4 the "strongly agree" and "agree" statements were combined for analysis as was true of the "strongly disagree" and "disagree." Sixty-three or 66 percent of the respondents stated that mastery of subject matter as measured by actual achievement on recall tests



and school standards as measured by the percentage of high and low grade point averages in the student body are inferences that can be extracted from grades. Sixty-seven or 70 percent of the respondents stated that individual differences as measured by teacher observations of motivation, intellectual abilities, and personal-social-moral traits are an inference that can be extracted from grades. While fifty-one or 53 percent stated that college success as measured by individual course grades and cumulative grade point averages is an inference which can be extracted from grades. In summary, there was common agreement that the following inferences can be extracted from grades: mastery of subject matter as measured by actual achievement on recall tests; individual differences as measured by teacher observations of motivation, intellectual abilities, and personal-social-moral traits; and school standards as measured by the percentage of high and low grade point averages in a student body. On the other hand, there was no common agreement that inferences can be extracted from grades, when a teacher looks at college success as measured by individual course grades and cumulative grade point averages.

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Summary

	<u>Agree</u>	<u>Disagree</u>	<u>No Common Agreement</u>
<u>Purposes of Grading</u>			
1. Communication	x		
2. Motivation	x		
3. Measurement	x		
4. Prediction		x	
5. Reporting personal-social-moral traits		x	
6. Promotion & graduation		x	

Criteria for Grading

7. Aptitude		x	
8. Teacher/pupil relationship		x	
9. Punctuality & attendance		x	
10. Conformity & personal appearance		x	
11. Effort			x
12. Interest		x	
13. Actual achievement			x

Methods of Grading

14. Standard normal curve		x	
15. Variation of expectation	x		
16. Dangers of inflexible standard of grading	x		

	<u>Agree</u>	<u>Disagree</u>	<u>No Common Agreement</u>
<u>Inferences Extracted From Grades</u>			
17. Mastery of subject matter	x		
18. Individual differences	x		
19. College success			x
20. School standards	x		

Significant Relationships Between Selected
Teacher Characteristics and Rationale
for Grading

A chi-square test was used to test for relationships between selected teacher characteristics and rationale for grading. There were eleven independent variables (one psychological, nine sociological, and one philosophical characteristic) and twenty dependent variables (grading practices); they are presented in the Appendix. Of the total possible relationships, only seventeen chi-squares were found to be significant at or beyond the .05 level. It was necessary in the case of all dependent variables to reduce the number of cells or response categories. This meant combining the "strongly agree" category with the "agree" category and the "strongly disagree" with "disagree." The responses were lower than five for some categories, making this adjustment in computing chi-squares essential.

In order to present those seventeen relationships found to be significant, the following format is used. Each general null hypothesis is presented and a table which shows the results of the chi-square analysis. After the statement of the null hypothesis, there is reported the chi-square analysis data for the twenty dependent variables.

Ho₁: There will be no significant relationship between the scores on the Rokeach Dogmatism Scale which measures open and closed mindedness and:

R.Q.₁ The purposes for grading

R.Q.₂ Selected teacher criteria for determining grades

R.Q.₃ Methods used in grading

R.Q.₄ Inferences extracted from grades

Table 5 reports the results of the chi-square analysis for relationships between the independent variable of dogmatism scores and the twenty dependent variables.

In research question 1, Purposes of Grading, there were no significant differences between the Rokeach Dogmatism Scale and the six dependent variables. This was also true of the seven dependent variables in research question 2, Criteria for Grading.

In research question 3, Methods Used in Grading, there was a significant difference between the scores on the Rokeach Dogmatism Scale and the dependent variable,

Dangers of Inflexible Approach. The chi-square data were significant at the .02 level.

Table 5.--Chi-square analysis for Rokeach Dogmatism Scale and twenty dependent variables.

Dependent Variable	Chi-Square Value
<u>R.Q. 1 Purposes for Grading</u>	
Communication	2.465
Motivation	4.485
Measurement	4.899
Prediction	1.003
Personal-social-moral	.605
Promotion/graduation	3.610
<u>R.Q. 2 Criteria for Grading</u>	
Aptitude	1.140
Teacher/pupil relationship	1.297
Punctuality/attendance	2.818
Conformity/personal appearance	.599
Effort	3.517
Interest	.248
Actual achievement	1.318
<u>R.Q. 3 Methods Used in Grading</u>	
Standard normal curve	2.634
Variation of expectations	3.857
Dangers of inflexible approach	8.272**
<u>R.Q. 4 Inferences Extracted from Grades</u>	
Mastery of subject matter	.832
Individual differences	8.4467**
College success	1.694
School standards	4.762

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.

Dangers of Inflexible Approach. The chi-square data were significant at the .02 level.

In research question 4, Inferences Extracted from Grades, there was a significant difference between the scores on the Rokeach Dogmatism Scale and the dependent variable, Individual Differences. The chi-square data were significant at the .02 level.

Discussion of Significant Findings
on the Dogmatism Scale

There is a significant relationship between scores on the Dogmatism Scale and Dangers of Inflexible Approach in R.Q.3, Methods Used in Grading.

Chi-square computations by cells for the significant relationship between scores on the Dogmatism Scale and the Methods of Recognizing the Danger of an Inflexible Approach are as follows:

	<u>Danger of Inflexible Approach</u>	
	<u>Agree</u>	<u>Disagree</u>
Low Dogmatism	31o 28.33e	1o 3.67e
Middle Dogmatism	25o 28.22e	8o 3.78e
High Dogmatism	29o 27.45e	2o 3.55e
	$\chi^2 = 8.727$ DF = 2 P .02	

Specific Null Hypothesis Rejected. There will be no significant relationship between the scores on the Dogmatism Scale which measures open and closed mindedness and Danger of Inflexible Approach (R.Q.₃, Methods Used in Grading).

There is a significant relationship between scores on the Dogmatism Scale and Individual Difference in R.Q.4, Inferences Extracted from Grades.

	<u>Individual Differences</u>	
	<u>Agree</u>	<u>Disagree</u>
Low Dogmatism	20o 22.67e	12o 9.33e
Middle Dogmatism	20o 23.37e	13o 9.63e
High Dogmatism	28o 21.96e	3o 9.04e
$\chi^2 = 8.446$ DF = 2 P .02		

Specific Null Hypothesis Rejected. There will be no significant relationship between scores on the Dogmatism Scale which measures open and closed mindedness and Individual Differences (R.Q.₄, Inferences Extracted from Grades).

Ho₂: There will be no significant relationship between certain sociological characteristics of teachers (i.e., age, sex, marital status, children, father's occupation, number of teaching years, teaching field, type of school system currently teaching in, and place of teacher training) and:

- R.Q.₁ The purposes for grading
- R.Q.₂ Selected teacher criteria for determining grades
- R.Q.₃ Methods used in grading
- R.Q.₄ Inferences extracted from grades

Tables 6 through 9 report the results of the chi-square analysis for relationships between the independent sociological variables listed above and the twenty dependent variables.

Findings for Purposes for Grading and Sociological Characteristics

Table 6 presents the seven dependent variables of the research question related to purposes of grading and the nine independent variables of the sociological characteristics.

In the independent variables--sex, age, children, father's occupation, and experience as a teacher--there was no significant relationship with the six dependent variables for the research question related to Purposes for Grading. In the independent variable, marital status, there is a significant relationship with the dependent variable motivation. The chi-square data are significant at the .05 level. In the independent variable, subject

Table 6.--R.Q.1--Purposes for Grading (dependent variable).

Sociological Characteristics (Independent Variables)	Communica- tion	Motivation	Measurement	Prediction	Personal/ Social/ Moral Traits	Promotion/ Graduation
Sex	.066	0.000	.049	0.000	3.065	1.524
Age	1.886	1.246	.781	1.715	.481	.687
Marital status	1.284	4.702*	.437	.001	1.664	2.177
Children	.126	.405	.346	.013	.526	.009
Father's occupation	5.634	6.426	7.291	.836	.242	6.950
Experience as teacher	.549	.115	.364	3.060	7.117	.579
Subject taught	3.281	.422	11.184*	7.783	6.582	4.684
Type of school	.863	1.118	3.069	3.798	2.210	.300
Teacher training	8.482***	.296	.062	.186	.380	.425

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.

taught, there was a significant relationship at the .05 level. In the independent variable, teacher training, there was a significant relationship with the dependent variable, communication, which was significant at the .01 level.

Findings for Criteria for Grading and Sociological Characteristics

Table 7 presents the seven dependent variables for the research question related to Criteria for Grading and the nine independent variables for sociological characteristics.

An analysis of the data shows that there was no significant relationship between the dependent variables of Criteria for Grading and the sociological characteristics of sex, age, children, father's occupation, experience as a teacher, type of school, and teacher training. There is a significant relationship between the dependent variable, teacher-pupil relationship, and the independent variable, marital status. The chi-square was significant at the .01 level. In the dependent variables, aptitude and teacher-pupil relationship, there was a significant relationship with the independent variable, subject taught. The chi-square was significant at the .01 level.

Table 7.--R.Q.2--Criteria for Grading.

Sociological Characteristics (Independent Variables)	Aptitude	Teacher-Pupil Relationship	Punctuality/ Attendance	Conformity/ Personal Appearance	Effort	Interest	Actual Achieve- ment
Sex	3.503	1.200	.211	1.043	.375	1.338	.042
Age	.518	2.761	1.098	.854	4.125	.933	.234
Marital status	1.942	8.935***	.931	2.987	2.050	.156	1.113
Children	.709	2.743	.405	.066	1.006	1.534	.484
Father's occupation	1.264	.141	4.487	3.309	2.101	6.059	2.162
Experience as teacher	.192	2.465	1.392	2.681	3.102	.515	.859
Subject taught	16.481***	13.427***	4.400	5.366	1.597	2.717	4.865
Type of school	.230	2.479	.131	.452	1.007	2.937	5.745
Teacher training	.310	.492	.005	.936	.010	2.14	.670

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.

Findings for Methods Used in Grading
and Sociological Characteristics

Table 8 presents the findings for the three dependent variables in research question 3 related to Methods Used in Grading, and the nine independent variables related to sociological characteristics.

Table 8.--R.Q.3--Methods Used in Grading.

Sociological Characteristics (Independent Variables)	Standard Normal Curve	Variation of Expectations	Dangers of Inflexible Approach
Sex	.061	.188	.103
Age	.366	5.385	4.928
Marital status	.216	.143	.633
Children	.146	3.048	1.371
Father's occupation	2.213	4.803	1.728
Experience as teacher	2.596	3.017	.032
Subject taught	6.149	3.092	.747
Type of school	1.669	1.177	3.762
Teacher training	.352	.308	.003

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.

None of the three dependent variables in the research question related to Methods Used in Grading showed any significant relationship with the nine independent variables related to sociological characteristics.

Findings Related to Inferences Extracted
From Grades and Sociological
Characteristics

Table 9 presents the four dependent variables related to the research question, Inferences Extracted from Grades, and the nine independent variables related to sociological characteristics.

Table 9.--R.Q.4--Inferences Extracted from Grades.

Sociological Characteristics (Independent Variables)	Mastery of Subject Matter	Individual Differences	College Success	School Standards
Sex	0.000	2.02	1.046	.750
Age	.816	6.515*	6.300*	.405
Marital status	.577	.001	.305	.894
Children	.282	2.164	.293	4.762*
Father's occupation	.876	4.374	2.413	4.803
Experience as teacher	.442	4.413	3.408	1.758
Subject taught	.338	4.122	1.013	1.261
Type of school	.705	.218	2.379	1.177
Teacher training	4.103*	.515	.053	1.231

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.

In the independent variables, sex, marital status, father's occupation, experience as a teacher, subject taught, and type of school, there was no significant relationship with the four dependent variables in the research question related to Inferences Extracted from Grades. There was a significant relationship with the independent variable, age, and the dependent variables, individual differences and college success. The chi-squares in both cases were significant at the .05 level.

There was a significant relationship with the independent variable, children, and the dependent variable, school standards. The chi-square was significant at the .05 level. The only other significant relationship was found between the independent variable, teacher training, and the dependent variable, mastery of subject matter. The chi-square was significant at the .05 level.

Discussion of Significant Findings on Sociological Scale

There is a significant relationship between the sociological characteristic (teacher training) and R.Q.1 Purposes for Grading (Communication).

The chi-square computation by cells for the significant relationship between the sociological characteristic of teacher training and Purpose of Grading--Communication is shown on the following page.

Teacher Training in Public
Institution & Communication

Communication

	<u>Agree</u>	<u>Disagree</u>
(Yes)	67o	11o
Public College	62.56e	15.44e
(No)	10o	8o
Public College	14.44e	3.56e

$$\begin{aligned} X^2 &= 8.482 \\ DF &= 1 \\ P &= .01 \end{aligned}$$

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristics of teachers receiving their training in a public or private institution and R.Q.₁ Purposes for Grading, Communication.

There is a significant relationship between the sociological characteristic (marital status) and R.Q.1 Purposes for Grading (Motivation).

Marital Status
and Motivation

Motivation

	<u>Agree</u>	<u>Disagree</u>
(Yes)	54o	25o
Marital Status	57.6e	21.4d
(No)	16o	1o
Marital Status	12.4e	4.6e

$$\begin{aligned} X^2 &= 4.702 \\ DF &= 1 \\ P &= .05 \end{aligned}$$

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (marital status) and R.Q.₁ Purposes for Grading (Motivation).

There is a significant relationship between sociological characteristic (subjects taught) and R.Q.1 Purposes for Grading (Measurement).

Subjects Taught
and Measurement

	<u>Measurement</u>	
	<u>Agree</u>	<u>Disagree</u>
English/Language	16o 14.66e	5o 6.34e
Social Studies	19o 14.66e	2o 6.34e
Mathematics/Science	9o 9.77e	5o 4.23e
Special Subjects	13o 18.84e	14o 8.16e
Other	10o 9.07e	3o 3.93e

$$\begin{aligned} X^2 &= 11.184 \\ DF &= 4 \\ P &= .05 \end{aligned}$$

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (subjects taught) and R.Q.₁ Purposes for Grading (Measurement).

There is a significant relationship between sociological characteristic (subject taught) and R.Q.2 Criteria for Grading (Aptitude).

Subject Taught
and Aptitude

	<u>Aptitude</u>	
	<u>Agree</u>	<u>Disagree</u>
English/Language	2o 3.72e	19o 17.28e
Social Studies	1o 3.72e	20o 17.28e
Math/Science	1o 2.48e	13o 11.52e
Special Subjects	6o 4.78e	21o 22.223
Other	7o 2.30e	6o 10.70e

$$\chi^2 = 16.481$$

$$DF = 4$$

$$P = .01$$

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (subjects taught) and R.Q.2 Criteria for Grading (Aptitude).

There is a significant relationship between sociological characteristic (marital status) and R.Q.2 Criteria for Grading (Teacher/Pupil Relationship).

<u>Marital Status and Teacher/Pupil Relationship</u>	<u>Teacher/Pupil Relationship</u>	
	<u>Agree</u>	<u>Disagree</u>
(Yes)	9o	7o
Marital Status	13.7e	65.83e
(No)	7o	10o
Marital Status	2.83e	14.17e
	$\chi^2 = 8.935$	
	DF = 1	
	P .01	

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (marital status) and R.Q.₂ Criteria for Grading (Teacher/Pupil Relationship).

There is a significant relationship between sociological characteristic (subject taught) and R.Q.2 Criteria for Grading (Teacher/Pupil Relationship).

<u>Subject Taught and Teacher/Pupil Relationship</u>	<u>Teacher/Pupil Relationship</u>	
	<u>Agree</u>	<u>Disagree</u>
English Language	2o	19o
	3.50e	17.50e
Social Studies	1o	20o
	3.50e	17.50e
Math/Science	0o	14o
	2.33e	11.67e

	<u>Agree</u>	<u>Disagree</u>
Special Subjects	8o 4.50e	19o 22.50e
Other	5o 2.17e	8o 10.83e
	$\chi^2 = 13.427$ DF = 4 P .01	

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (subject taught) and R.Q.₂ Criteria for Grading (Teacher/Pupil Relationship).

The data in Table 8 show no significant relationship between any of the sociological characteristics and R.Q.₃, Methods Used in Grading.

There is a significant relationship between the sociological characteristic (teacher training in public or private institution) and R.Q.₄ Inference Extracted from Grades (Master of Subject Matter).

<u>Teacher Training in Public or Private Institution and Mastery of Subject Matter</u>	<u>Agree</u>	<u>Disagree</u>
(Yes)	45o	33o
Public College	48.75e	29.25e
(No)	15o	3o
Public College	11.25e	6.75e
	$\chi^2 = 4.103$ DF = 1 P .05	

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (teacher training in public or private institution) and R.Q.₄ Inference Extracted from Grades (Mastery of Subject Matter).

There is a significant relationship between sociological characteristic (age of teacher) and R.Q.₄ Inference Extracted from Grades (Individual Difference).

<u>Age & Individual Differences</u>	<u>Individual Differences</u>	
	<u>Agree</u>	<u>Disagree</u>
Under 25 years of age	90 8.60e	30 3.32e
25-35 years of age	410 36.17e	90 13.83e
Over 35 years of age	180 23.15e	140 8.85e
	$\chi^2 = 6.515$ DF = 2 P = .05	

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (age of teacher) and R.Q.₄ Inference Extracted from Grades (Individual Difference).

There is a significant relationship between sociological characteristic (age) and R.Q.4 Inference Extracted from Grades (College Success).

<u>Age and College Success</u>	<u>College Success</u>	
	<u>Agree</u>	<u>Disagree</u>
Under 25 years of age	8o 6.26e	4o 5.74e
25-35 years of age	20o 26.06e	30o 23.94e
Over 35 years of age	21o 16.68e	11o 15.32e
$\chi^2 = 6.300$ DF = 2 P .05		

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (age of teacher) and R.Q.₄ Inferences Extracted from Grades (College Success).

There is a significant relationship between sociological characteristic (teacher having or not having children) and R.Q.4 Inferences Extracted from Grades (School Standards).

<u>Children & School Standards</u>	<u>School Standards</u>	
	<u>Agree</u>	<u>Disagree</u>
(Yes)	41o	13o
Children	36e	18e
(No)	23o	19o
Children	28e	14e
$\chi^2 = 4.762$ DF = 1 P .05		

Specific Null Hypothesis Rejected. There will be no significant relationship between the sociological characteristic (teacher having or not having children) and R.Q.₄ Inferences Extracted from Grades (School Standards).

The data in Table 10 show that there are two significant relationships between philosophical position and R.Q.₁, Purposes for Grading, namely measurement and promotion/graduation. The purpose of measurement (chi-square 7.959) was significant at the .01 level, while the purpose of promotion/graduation (chi-square 6.194) was significant at the .02 level. In the criterion R.Q.₂, Criteria for Grading, there were also two significant relationships. Punctuality and attendance (chi-square 8.072) showed a relationship at the .01 level and the criterion of effort at .05 level of significance. The data show no relationship between philosophical position and R.Q.₃, Methods Used in Grading. In the criterion inferences extracted from grades, the variable, mastery of

subject matter was found to be significant (chi-square 8.864) at the .01 level.

Table 10.--Data on relationship between philosophical position and twenty dependent variables.

Dependent Variable	Chi-Square Value
<u>R.Q. 1 Purposes for Grading</u>	
Communication	.127
Motivation	2.032
Measurement	8.072***
Prediction	.311
Personal/social/moral	3.316
Promotion/graduation	6.194**
<u>R.Q. 2 Criteria for Grading</u>	
Aptitude	.061
Teacher/pupil relationship	1.064
Punctuality/attendance	8.072***
Conformity/personal appearance	2.342
Effort	.787
Interest	4.586*
Actual achievement	1.246
<u>R.Q. 3 Methods Used in Grading</u>	
Standard normal curve	.002
Variation of expectations	1.007
Dangers of inflexible approach	1.343
<u>R.Q. 4 Inferences Extracted from Grades</u>	
Mastery of subject matter	8.864***
Individual differences	.683
College success	3.332
School standards	2.199

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.

Discussion of Significant Findings
on Philosophical Positions

There is a significant relationship between philosophical position and R.Q.1 Purposes for Grading (measurement of specific aspects).

Philosophical Position and
Measurement of Specific Aspects

	<u>Measurement</u>	
	<u>Agree</u>	<u>Disagree</u>
Traditional	32o 25.82e	5o 11.18e
Progressive	35o 41.18e	24o 17.82e
$\chi^2 = 7.959$ DF = 1 P .01		

Specific Null Hypothesis Rejected. There is no significant relationship between the philosophical points of view of education and R.Q.1 Purposes for Grading (measuring certain aspects of student progress).

There is a significant relationship between philosophical position and R.Q.1 Purposes for Grading (promotion/graduation).

Philosophical Position &
Promotion/Graduation

Promotion/Graduation

	<u>Agree</u>	<u>Disagree</u>
Traditional	13o 8.09e	24o 28.91e
Progressive	80 12.91e	51o 46.09e
$\chi^2 = 6.194$ DF = 1 P .02		

Specific Null Hypothesis Rejected. There is no significant relationship between the philosophical points of view of education and R.Q.₁ Purposes of Grading (promotion/graduation).

There is a significant relationship between philosophical position and R.Q.2 Criteria for Determining Grades (punctuality/attendance).

Philosophical Position &
Punctuality/Attendance

Punctuality/Attendance

	<u>Agree</u>	<u>Disagree</u>
Traditional	4o 10.02e	33o 26.98e
Progressive	22o 15.98e	37o 43.02e
$\chi^2 = 8.072$ DF = 1 P .01		

Specific Null Hypothesis Rejected. There is no significant relationship between the philosophical points of view of education and R.Q.₂ Criteria for Determining Grades (punctuality/attendance).

There is a significant relationship between philosophical point of view and R.Q.2 Criteria for Determining Grades (interest).

Philosophical Position
and Interest

	<u>Interest</u>	
	<u>Agree</u>	<u>Disagree</u>
Traditional	9o 5.40e	28o 31.60e
Progressive	5o 8.60e	54o 50.40e
$\chi^2 = 4.586$ DF = 1 P .05		

Specific Null Hypothesis Rejected. There is no significant relationship between the philosophical points of view of education and R.Q.₂ Criteria for Determining Grades (interest).

There is a significant relationship between philosophical position and R.Q.4 Inferences Extracted from Grades (mastery of subject matter).

Philosophical Position and
Mastery of Subject Matter

Mastery of Subject Matter

	<u>Agree</u>	<u>Disagree</u>
Traditional	30o 23.12e	7o 13.87e
Progressive	30o 36.87e	29o 22.12e

$$\begin{aligned} X^2 &= 8.869 \\ DF &= 1 \\ P &= .01 \end{aligned}$$

Specific Null Hypothesis Rejected. There is no significant relationship between the philosophical points of view of education and R.Q.₄ Inference Extracted from Grades (mastery of subject matter).

Summary

It has been the intent in Chapter IV to present an analysis of the data gathered and relate the results to the hypotheses and research questions. The chapter was divided into two parts. Data obtained from the Grading Questionnaire were presented in the first part. The second part presented data obtained on relationships between teacher characteristics and grading rationale found to be significant at or beyond the .05 level. The final section also presented a discussion of the findings and additional analysis of variables found to have a statistically significant relationship.

The final chapter will be devoted to a concise summary of the research, conclusions, implications, and recommendations for further study.

CHAPTER V

SUMMARY AND CONCLUSIONS

The final chapter will be devoted to a summary of the study, followed by a discussion of the findings and conclusions generated from the analysis of the data. The general implications of the study will be presented, followed by recommendations for further research.

Summary

Purposes of the Study

The purposes of the study were:

1. To identify secondary teachers' rationale regarding the four aspects of grading as identified in the literature:
 - A. Purposes for grading
 - B. Criteria used in assessing student progress
 - C. Methods used in determining grades
 - D. Inferences extracted from grades
2. To determine if there are relationships between teachers' grading practices and certain selected teacher characteristics, such as psychological, sociological, and philosophical.

Assumptions and Limitations of the Study

There are two assumptions important to the design and conduct of the study:

1. That the teacher's self-report of his behavior on the questionnaire will reflect his actual grading rationale and grading practices, and

2. That a teacher will report his actual beliefs and give appropriate information when responding to the Rokeach Dogmatism Scale and the information form. The methods selected for scoring the data were not designed as a check to see if there is a difference.

One assumption to be analyzed in the study implies a relationship between grading practices and certain selected teacher characteristics. Because of the nature of the research, however, it is possible only to show whether or not a relationship exists. It is not possible to test the nature of the relationships as to cause and effect.

Review of the Literature

Exploration of the literature on the subject of grading practices produced two interesting observations. First, there is mentioned a variety of purposes to warrant the use of grades, criteria for determining grades, methods for actual assignment of grades, and information thought to be extracted from grades. There appeared to be no

strong endorsement for any particular set of practices. The primary reason for this lack of agreement seems to extend from the fact that different teachers perceive grades as serving a multitude of purposes.

Secondly, in the examination of the literature, there were a number of studies discovered which indicated that various teacher characteristics (i.e., sex, subject taught) may have a relationship with teachers' opinions and rationale in grading practices and procedures. These studies were a cue that there could be other teacher characteristics which could affect grading practices. Knowing the existence of any relationship would be helpful in gaining an understanding of and in clarifying the grading practices of teachers.

Design of the Study

This study was designed to explore secondary school teachers' rationale for grading practices and the existing relationships between these practices and selected teacher characteristics. Twenty different grading practices were used to explore teacher perceptions and eleven teacher characteristics were related to these.

The ninety-six teachers used in the study were secondary teachers (grades 7 to 12), representing all subjects taught in a typical secondary school. The random sample of teachers for the study were equally divided by

sex and by type of school location (rural, suburban, and city).

A Grading Questionnaire was developed and used to obtain information which would indicate the grading rationale held by secondary school teachers. Each question was designed to identify grading practices regarding purposes for grading, criteria used in determining grades, methods used in grading, and inferences extracted from grades. The twenty practices employed in the investigation were developed from a thorough review of the available literature and reflected many actual patterns of grading. In order to seek clarity in each question, a number of pilot tests were conducted.

The obtained data on the twenty practices were placed in frequency tables according to the four aspects of grading (i.e., purposes, criteria, methods, and inferences). It was then possible to distinguish agreed responses for each of these four aspects of grading and determine the amount of consensus among teachers. The results showed that teachers gave statements of agreement to each of the twenty practices, thus demonstrating the number of practices used by teachers. The amount of consensus among teachers varied from practice to practice, demonstrating the number of practices used by teachers.

The study was also designed to explore possible relationships that may exist between identified teacher

rationale for purposes, criteria, and selected philosophical, psychological, and sociological teacher characteristics. These possible relationships were included to seek an understanding of the variables that may be instrumental in determining teacher points of view about grading practices.

Each subject completed a Personal Information Form which was used to collect the philosophical and sociological information. The Rokeach Dogmatism Scale was used to collect information pertaining to the psychological characteristic examined. The specific psychological characteristic included age, sex, marital status, children, father's occupation, number of teaching years, teaching field, type of school system, and place of teacher training. Teacher perceptions of their own philosophical viewpoint were assessed with regard to progressive-traditional tendencies.

In this investigation of relationships between teacher practices and selected characteristics, seventeen teacher characteristics and grading practices were found to have a significant relationship at the .05 level of confidence. Even though the significant relationships found were few in number, it was interesting to note that there were relationships among all three kinds of characteristics studied--psychological, sociological, and philosophical. This not only demonstrated possible

explanations for why teachers may have agreed to a variety of practices, but also offered insight into the complications in ascertaining all of the different factors affecting the assignment of grades.

The study was designed to determine the extent to which there is a range in statement of agreements to grading rationale among secondary teachers and to explore possible relationships that may exist between identified teacher grading practices and certain selected teacher characteristics. The assumption that there is a range was examined, and the hypotheses that there are existing relationships were tested.

Conclusions

The general findings of this study indicate that:

1. Teachers hold a wide range of rationales about four aspects of grading: (a) purposes for grading, (b) criteria used in assessing student progress, (c) methods used in determining grades, and (d) inferences extracted from grades.

2. Certain selected teacher characteristics (psychological, sociological, and philosophical) have a statistically significant relationship with the grading practices of teachers.

Discussion

Statements among secondary school teachers regarding rationale for the four aspects of grading defined for this study.--In examining the frequency of responses to all the items in each of the four aspects of grading, it was found that there was a range of statements of agreement for each item. The range extended from a low of 4 percent for criterion of conformity and personal appearance to a high of 76 percent for the purpose of communication.

1. Agreements Among Purposes

In summarizing statements of agreement for grading purposes, it can be noted that all six purposes had degrees of agreement, with the highest being given to communication of student progress (76). The purposes of motivation and measurement were agreed with by approximately two-thirds of the participants (70 and 67, respectively). The lowest number of agreements was given to reporting personal-social-moral traits (9), prediction (28), and promotion/graduation (20).

The fact that each purpose did receive statements of agreement would indicate a wide usage of these purposes in grading. Because each purpose did not receive the same proportion of agreements, it can also be inferred that there is a difference of opinion among teachers about the appropriateness of each purpose for grading.

Grades have been typically thought of as a report on a student's learning of certain skills and information in the classroom. Numerical and alphabetical grading systems have been used to report this information. The low percentage of statements of agreement on the appropriateness of numerical and alphabetical grading systems for reporting personal-social-moral traits of students would indicate that some teachers perceived the limitations of these systems for this particular purpose. But their support for seeing grades as measures of specific aspects of student development (i.e., aptitude, interest, and actual achievement), and motivating students toward greater effort are an indication that they see these same systems accomplishing more than being a report on learned skills and information.

The most interesting observation was that 76 percent of the teachers agreed that one purpose for having grades was for the purpose of communication. Since this purpose was defined as representing grades as a vehicle for helping each pupil to determine whether he is progressing according to whatever the teacher established as criteria, this fact would indicate that teachers view criteria for grading as a variable. Because of the high percentage of agreements, the finding has two very important implications.

First, teachers see themselves determining their own classroom criteria for grading. This could explain why teachers agreed with the many different purposes appearing in the study. Secondly, teachers do not perceive the use of a numerical or alphabetical grading system as restricting them to reporting only learned skills and information. The latter implication points up a serious dilemma. Does the teacher or the system of grading determine what is going to be reported? The preliminary indication is that the teachers see themselves making the determination. Of course, to arrive at a clear understanding of what a grade reports would require knowing an individual teacher's classroom expectations for his students. The results highlight the involvement of both the teacher and the system of grading and the accommodation of these two constitutes apparently more of a problem than is often recognized in practice.

2. Agreements Among Criteria

In examining the degree of responses to criteria used in grading, it can be observed that all seven criteria received statements of agreement but none received a distinct majority. The criteria of effort and actual achievement came the closest with forty-six agreements and forty-five agreements, respectively.

Although each criterion did receive limited agreements, it can be stated that a varying percentage of

teachers saw each criterion as appropriate for determining grades. However, due to the percentage of agreements given to criteria [i.e., aptitude (15), conformity and personal appearance (4), teacher/pupil relationship (16), punctuality/attendance (26), and interest (16)], it would appear that teachers as a group had a tendency to reject the use of these criteria.

Teachers' rejection could be a result of their general disapproval of these criteria or their disapproval of the student grading conditions and behaviors characterized in the instruments used. Because there was a variation in the percentage of agreements given to the above criteria, it could indicate that their disapproval was partially due to certain student grading conditions and behaviors proposed in this study. This becomes more evident when comparing the number of agreements given to four of these criteria (i.e., conformity and personal appearance, punctuality and attendance, teacher-pupil relationships, and interest).

Two of these criteria (conformity and personal appearance and punctuality and attendance) described very positive classroom behaviors where grades were changed upward in value because of such behaviors. Teachers were told that a student received high grades because she exemplified model classroom behavior even though her actual classroom performance and scores on aptitude tests

showed her to be an average student. Only 4 percent thought that model classroom behavior warranted the assignment of grades which had the highest value possible. In contrast to this grading condition, another student was described as being a below-average student with low classroom performance who received passing and average grades because she was always punctual and in attendance. Fifty-three percent thought that this grading condition warranted the assignment of a grade with a higher value than her actual performance would deserve. This difference in percentage of response would appear to be attributable to the student conditions and behaviors described.

The other two criteria (teacher-pupil relationships and interest) depicted disturbing and lazy classroom behaviors where grades were reduced. The criterion of teacher-pupil relationships described a student having excellent performance and high measured aptitude, but demonstrating disturbing and resistant attitudes in the classroom. Forty-two percent agreed that this student should be given low grades even though classroom performance in subject matter was high. Another student described as very lazy had satisfactorily met all the requirements of a course. The teacher reduced his grade because he reasoned this boy needed a good jolt. Sixteen percent agreed that this demonstrated lack of interest deserved a

reduced grade. This difference in response noted also seems attributable to the grading conditions described.

The criterion of effort which received a high number of agreements (46 percent) adds further support that teachers' tendency toward rejection of the other criteria might have been due to the proposed grading conditions. This criterion was represented by a description of a student as being the recipient of high grades and having an honors grade point average, even though classroom achievement and measured aptitude were average, because of his tremendous effort. Thus, student grading conditions and behaviors appear to affect the value of a classroom grade and the use of these criteria.

The fact that effort received a high number of agreements is interesting for other reasons. In examining the responses to the purpose of motivation used in (A) Purposes for Grading, it was found that 70 percent agreed with it as an appropriate grading purpose. From the size of agreed responses both to the purpose of motivation and the criterion of effort, it can be observed that many teachers still agree with motivation as a purpose and do use effort as a criterion in assigning grades.

Item thirteen in the Grading Questionnaire used to gather responses regarding the criterion of actual achievement was designed to require participants, if they were to agree with the item, to reject the use of other criteria,

including effort. It would appear from the size of the number of agreements given to the criterion of effort (46 percent), and the agreed responses given to each of the other criteria, that participants had a tendency to reject actual achievement as the only criterion because it was limited to evaluating learned skills and information.

If a system of grading is to have meaning without knowing each teacher's grading objectives, it would, by its existence, require wide agreement on its criteria for classroom evaluation. Because teachers have strongly agreed with the purpose that permits teachers to establish their own criteria and have indicated that criteria used will vary according to many different student grading conditions and behaviors, it is difficult to imagine present numerical and alphabetical grading systems having an assigned set of criteria that is widely agreed upon. It is obvious that what was thought to be reported by these systems (i.e., actual achievement in learned skills and information) was disagreed with by the majority of the teachers.

3. Agreements Among Methods

There were three grading methods used in the study to which each participant responded. The first method described a grade as having meaning only when it was defined in terms of the frequency with which it can be

secured on a normal probability curve. The second method described two groups of students, one a slow group and the other a bright group, being graded according to their performance capabilities. The third and final method was one that gave recognition to the many dangers that can occur by establishing an inflexible standard of grading.

The results of the study show that each of the three methods received some agreement with the method, dangers of an inflexible standard of grading having almost unanimous endorsement. The method of recognizing dangers of an inflexible standard of grading received eighty-four responses in agreement; the method of using a variation of expectations depending on student performance capabilities received sixty-four agreements; and the method of using "the principle of the normal curve" was the lowest with 20 percent.

Because the results do indicate a rejection by most teachers of the "standard normal curve" method and an almost total acceptance of the dangers of any inflexible method, this finding may well indicate why teachers have strongly endorsed a purpose for grading where teachers determine the criteria to be used rather than the system. Secondly, it may account for their endorsement of student grading conditions and behaviors as important factors in their grading practices. Further support for this finding would be the number of statements of agreement given to

the method of recognizing the difference in students' performance capabilities. This takes into account what is considered to be one of the more serious dangers of an inflexible approach. The results, in combination, strongly indicate methods which are more flexible and consider many factors of student performance.

Item sixteen in the Grading Questionnaire described an inflexible standard of grading as (1) forcing students to sacrifice creativity and imagination, (2) creating pressures that contribute to the classroom cheating and feelings of inferiority, and (3) lacking a recognition of the difference in mental abilities among student populations. It would seem that teachers have demonstrated through their very strong support of this item, and their very weak support of the "standard normal curve" method, an overwhelming personal concern for the student's welfare in the classroom. This concern would have serious implications for any system of grading that strives to delimit what is to be graded.

4. Agreements Among Inferences Extracted From Grades

In reviewing the frequencies for the degree of responses for inferences extracted from grades, it can be observed that each of the four measurements received statements of agreements [i.e., individual differences (67), mastery of subject matter (63), school standards (63), and college success (51)], indicating the majority of

teachers do perceive each inference attributable to grades. It can also be observed that the inference of individual differences, mastery of subject matter did receive a majority in agreed responses. The latter observation has implications for two theories of education and brings this whole discussion section to a focal point.

Mastery of subject matter as an inference described grades as being limited to reporting success in learning skills and information. The inference of individual differences described grades as providing information about students' intellectual abilities, motivation, and personal-social-moral traits. Because teachers agreed significantly with each of these measurements, it can be concluded that there does exist among the perceptions of some teachers basic misunderstandings about the application of two theories of education to present numerical and alphabetical systems of grading, the one being the mastery of subject matter and the other being the development of certain kinds of traits, abilities, and attitudes in students.

By limiting mastery of subject matter to measurements of skills and information which can be obtained by use of tests, it is possible and logical to attribute to the present numerical and alphabetical systems of grading learnings in information and skills. But, to attribute personal-social-moral traits, intellectual

abilities, and motivations would require wider agreement on the goals of instruction and a more defined grading system.

The indication from this study, however, is that teachers do perceive themselves reporting to pupils, parents, and the school administration development in areas of traits, intellectual abilities, and motivations. One possible reason teachers may perceive themselves reporting student development in other areas than learning skills and information is because they are giving consideration to student traits, abilities, and attitudes in their grading patterns. This was partially seen in the discussion of agreed responses to criteria other than actual achievement. It would seem to follow then that teachers may have seen the inference of individual differences being reflected in their own grading patterns even though present numerical and alphabetical systems are inappropriate for this kind of measurement.

As is shown in the size of the responses to the inference of college success (51 percent) and school standards (63 percent), there are still those who maintain that these measurements can be attributed to grades. Because grades do represent a composite of many different kinds of teacher rationale as is seen in the number of agreements given to the purposes, criteria, and methods selected for the study, and because of the discussion

above, it would have to be concluded that grades are an inappropriate measurement for each of these when viewed strictly by themselves.

Significant chi-square relationships between responses of secondary school teachers and selected teacher characteristics.--Statistically significant relationships between grading perceptions and certain selected teacher characteristics were found for 17 of the 220 chi-squares computed. Even though there were only seventeen found to be significant, each relationship did indicate one distinct grading variable that may affect the grading rationale of teachers. Since the purpose for examining possible relationships between teacher characteristics and grading practices was to determine some of the different kinds of characteristics that might be instrumental in affecting grading rationale, these relationships also gave insight into how varied these characteristics can be.

The significant relationships found were distributed among all three characteristics selected for the study--psychological, sociological, and philosophical--and all four aspects of grading (purposes, criteria, methods, and inferences). (See Appendix for the chi-square computations for each significant chi-square.)

Relationships between the psychological variable dogmatism score, which measures open and closed

mindfulness, and grading practices evidences two significant relationships:

1. Open-closed mindedness and the method of recognizing the danger present when an inflexible approach is used
2. Scores on dogmatism scale and the inference of individual differences

Relationships between scores on the Dogmatism Scale and danger of inflexible approach.--The chi-square between closed-open mindedness, as measured by the Rokeach Dogmatism Scale and teachers' responses to the questionnaire item relating to the method of recognizing the danger of an inflexible approach (item sixteen), was significant at the .02 level. There are many dangers in setting up an inflexible standard of marking. A pupil who conforms solely to a teacher's standards for a high grade may sacrifice his creativity and imagination in the process. In another instance, a pupil may feel pressured to cheat or may develop feelings of inferiority which would affect his self-concept. Of course, a pupil may lack the mental ability to achieve the standards imposed by a teacher's procedure of marking. These dangers really exist when an inflexible standard of marking is applied. Teachers categorized as open minded and those categorized as closed minded both agree with and recognize the dangers of an

inflexible method of grading, while the teachers categorized as middle scores on the dogmatism or neither closed or open minded tended to disagree.

Relationships between scores on the Dogmatism Scale and individual differences.--The chi-square between closed-open mindedness as measured by the Rokeach Dogmatism Scale and teachers' response to the questionnaire (item eighteen) relating to individual differences as an inference extracted from grades was significant at the .02 level. It was stated that when teachers assign a grade, they are providing information to pupils, parents, and the school administration concerning their judgment of the degree to which the pupil is developing certain individual characteristics in the classroom (i.e., intellectual abilities, motivation, and personal-social-moral traits). Teachers categorized as "high" in closed mindedness tend to strongly agree with individual differences as an inference that can be extracted from grades. The open-minded person tended to disagree.

Relationships between certain sociological characteristics of teachers evidenced ten significant relationships: (1) the use of grades to communicate student progress and teacher's training in public college; (2) the use of grades to motivate students and teacher's marital status; (3) the use of grades to measure specific aspects

of student's progress and subject taught; (4) the criteria of teacher/pupil relationship and marital status; (5) the criteria of aptitude and subject taught; (6) the criteria of teacher/pupil relationship and subject taught; (7) the mastery of subject matter and teacher training in public college; (8) the inference of individual differences and age; (9) the inference of college success and age; and (10) the inference of school standards and teachers having or not having their own children.

1. Teacher Training in Public Institution and Communication

The type of institution in which the teachers were prepared (private and public college) was included because the institution has the potential of influencing a teacher's attitude toward grading practices. Teacher responses to the questionnaire (item one) relating to the purpose of communication was significant at the .01 level because teachers trained in public institutions tend to agree that the primary purpose for having marks in the classroom is to provide a vehicle of communication between teacher and pupil. Final marks exist for the purpose of helping each pupil to determine whether he is progressing according to whatever criteria have been established. The findings would indicate that teachers trained in private colleges tend to proportionately disagree with communication as a purpose of grading.

2. Marital Status and Motivation

The purpose of motivation (item two) described one of the primary purposes for reporting pupil progress was to motivate pupils to greater effort in school. Fear of failure, it was argued, produced greater achievement. It was found in examining the significant relationship obtained between the purpose of motivation and marital status of teachers that unmarried teachers made the chi-square significant at the .05 level because they registered proportionately more agreements. The findings would indicate that unmarried teachers have a greater tendency to use grades to motivate students toward greater effort in the classroom.

3. Subject Taught and Measurement

In classifying subjects taught, five categories were used: (1) English-Language, (2) Social Studies, (3) Mathematics-Science, (4) Special Subjects (i.e., music, art, physical education), and (5) Other (i.e., counselor, special programs). The relationship between subject taught and the purpose of measurement of student progress was significant at the .05 level because teachers in the subject areas of English and Social Studies gave a significant number of agreements to the purpose of measuring student progress (aptitude, interest, and actual achievement) and because special subject teachers gave more disagreements. The teacher characteristic of subject

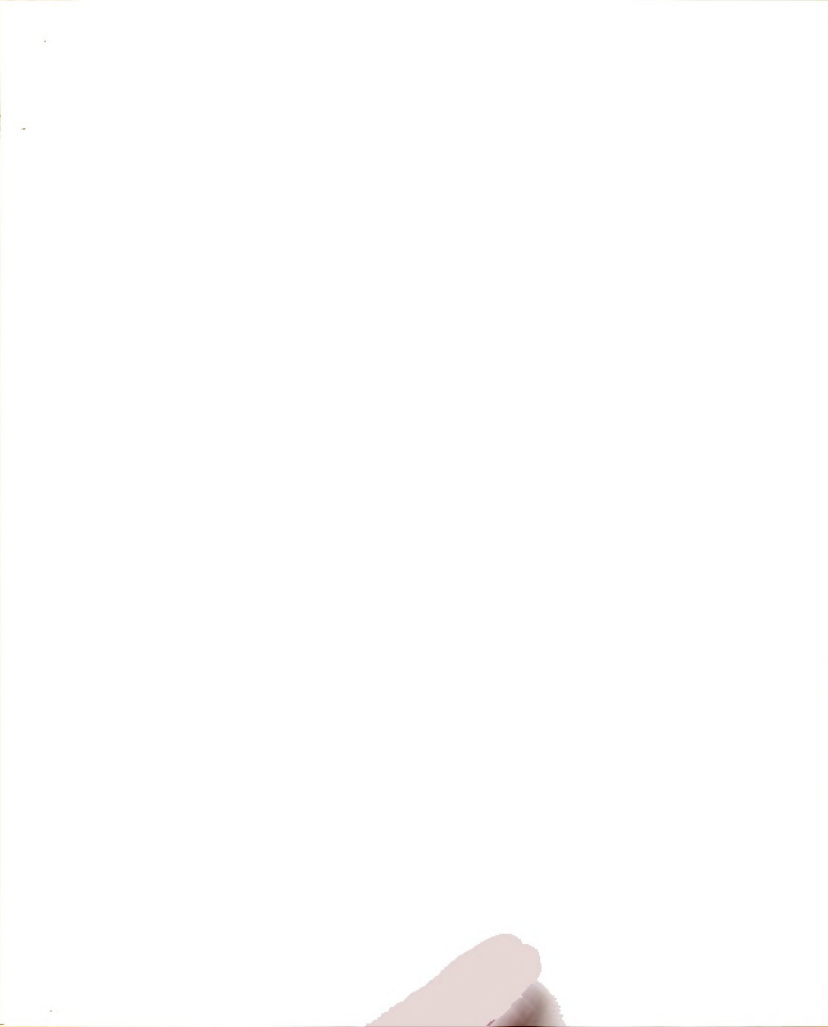
taught was included in the study as a way of examining whether teachers in different curricula perceive grading practices differently. The findings indicate that for the purpose of measuring specific aspects of students' progress (aptitude, interest, and actual achievement) there is a difference.

4. Teachers' Marital Status and Teacher/Pupil Relationship

The criterion of teacher/pupil relationships (item eight) described a student having excellent performance and high measured aptitude, but demonstrating disturbing and resistant attitudes in the classroom. The teacher was reported to have given the student a low grade on the basis of his negative classroom attitudes. It was found in examining the significant relationship obtained between this criterion of teacher-pupil relationships and the marital status of teachers that unmarried teachers made the chi-square significant at the .01 level because they registered proportionately more agreement. The finding would indicate that unmarried teachers have a greater tendency to use the criterion of teacher-pupil relationships in their grading practices.

5. Subject Taught and Aptitude

The criterion of aptitude (item seven) described a teacher who holds a personal conviction that grades she assigns her students should be in line with their aptitude



scores. The chi-square was significant at the .01 level because English-Social Studies, Math, and Science teachers disagreed significantly with aptitude as a grading criterion. Special subject teachers agreed significantly. The findings would indicate that music, art, and other special subject teachers have a stronger tendency to consider their pupils' aptitude when assigning grades.

6. Subject Taught and Teacher/Pupil Relationship

The criterion of teacher/pupil relationship (item eight) described a student having excellent performance and high measured aptitude, but demonstrating disturbing and resistant attitudes in the classroom. The teacher was reported to have given the student a low grade on the basis of his negative classroom attitudes. It was found in examining the significant relationships obtained between this criterion of teacher/pupil relationship and subject taught was significant at the .01 level because teachers in the category of English/Social Studies, Math and Science registered a significant number of disagreements with this criterion while teachers in special subjects agreed significantly. The findings would indicate that teachers in special subjects are more inclined to consider the teacher/pupil relationship as a criterion in assigning grades.

7. Teacher Training in Public Institution and Mastery of Subject Matter

The type of college in which a teacher was prepared (private or public) was included because the college

has the potential of influencing a teacher's attitudes about grading practices. Teacher responses to the questionnaire (item seventeen) relating to the inference of mastery of subject matter was significant at the .05 level, because teachers trained in a private college tend to agree that grades are based on success in learning skills and mastery of subject matter. The findings would indicate that teachers trained in public colleges tend to proportionately disagree with the idea that grades indicate success in subject matter.

8. Age and Individual Differences

In classifying age, three categories were used: (1) under twenty-five, (2) twenty-five to thirty-five, and (3) over thirty-five. Age has been included because it has been found to be related to conservative attitudes and opinions. The relationship between age and the inference of individual differences extracted from grades was significant at the .05 level. Teachers categorized as under twenty-five years of age, and twenty-five to thirty-five years both agreed with the inference of individual differences while teachers over thirty-five years of age registered proportionately significant disagreement.

9. Age and College Success

The relationship between the teacher's age and the inference of college success was significant at the .05 level. When a student achieves a high cumulative

grade point average, it is reasonable to assume the student will be successful in college if he chooses to go on. It was interesting to note that disagreement was proportionately greater at the middle age group. Teachers under twenty-five agreed slightly. Teachers twenty-five to thirty-five disagreed to a substantial extent and teachers over thirty-five agreed. The findings would indicate that younger teachers just out of college feel grades can be used to make inferences about college success while that is not true with all age groups.

10. Children and School Standards

The chi-square between teachers having children of their own and the inference of school standards was significant at the .05 level. The inference of school standards (item twenty) stated that when a student achieves a high cumulative grade point average the school is certifying to the local community that the student is representative of the highest academic standards of the school. Conversely, when a student fails or receives a low cumulative grade point average, the school is reporting that the student is not representative of its standards. Teachers having children of their own registered a significant number of agreements with this inference and teachers without children gave a significant number of disagreements.

The characteristic of teachers either having or not having children of their own was included in the study because it has the tendency to influence an individual's perceptions of other people. This would indicate the possible influence of human experience outside the classroom on their grading practices.

Relationships between teachers' philosophical point of view of education evidenced five significant relationships: (1) the use of grades to measure specific aspects of a student's progress and teacher's philosophical viewpoint of education; (2) the use of grades for determining promotion/graduation and teacher's philosophical point of view of education; (3) the criterion of punctuality/attendance and philosophical view; (4) the criterion of interest and philosophical view; (5) the inference of mastery of subject matter and philosophical point of view of education.

1. Philosophical Point of View of Education and Measurement

Two well-known philosophies of education--the progressive and traditional--were included because they represent two popular philosophic positions in education. Each position represents basically a different view of the learner (the child). The chi-square between philosophical points of view and the purpose of having grades to measure specific aspects of student development (i.e., aptitude, interest, and actual achievement) was significant

at the .01 level. The relationship was significant because teachers labeling themselves as having traditional philosophy of education registered proportionately more agreement with measurement as a purpose for grading than did those describing themselves as progressive in outlook. This relationship is in a direction that would normally be expected. Teachers who place emphasis on subject matter, arranging curriculum into carefully broken down, logical units with each unit aimed at developing a particular part of the child's make-up of study, viewing the teacher as an expert in supplying direction and recognizing that true discipline is governed by well-established standards, tend to favor measurement as a purpose for grades.

2. Philosophical Point of View and Promotion/Graduation

A very interesting and significant relationship was found between progressive and traditional philosophical points of view and the purpose of grades as a system of administrative shorthand for determining promotion and graduation. The chi-square was significant at the .02 level. The relationship was significant because teachers labeling themselves as having a progressive philosophy of education registered proportionately more disagreement. It would be expected that teachers favoring autonomy and independence for the child, fitting the curriculum to

the child, teaching the problem-solving approach, and recognizing that true discipline springs from interest, motivation, and involvement in live problems, would have a tendency to reject using grades for promotion and graduation.

3. Philosophical Point of View of Education and Punctuality and Attendance

A very interesting and significant relationship was the one found between progressive and traditional philosophical points of view and the grading criterion of punctuality and attendance. The grading criterion of punctuality and attendance (item nine) described a teacher awarding passing grades to a slow student on the basis of punctuality and attendance. The relationship was significant at the .01 level because teachers labeling themselves as having a traditional philosophy of education registered proportionately more disagreement with punctuality and attendance as a grading criterion than did those describing themselves as progressive in outlook, which strongly agreed. The finding would indicate that progressive teachers use punctuality and attendance as criteria when assigning grades to a far greater extent than do traditional teachers.

4. Philosophical Point of View of Education and Interest

The criterion of interest (item twelve) described a teacher giving a student a reduced grade because of his

attitude of doing as little as possible, which was interpreted as a lack of classroom interest. A relationship with philosophical points of view of education was found at the .05 level because teachers who classified themselves as traditional registered a significant number of agreements with this criterion, while progressive teachers disagreed with interest as a criterion for grades. The findings would indicate that traditional teachers consider their pupils' demonstrated interest when assigning grades.

5. Philosophical Point of View of Education and Mastery of Subject Matter

The final relationship found among inferences and characteristics was the one found between progressive and traditional philosophical points of view and the inference of mastery of subject matter. The chi-square was significant at the .01 level. The relationship was significant because teachers labeling themselves as having a traditional philosophy of education registered proportionately more agreement than did those describing themselves as progressive in outlook. The findings would indicate that traditional teachers tend to support the notion that inferences can be extracted from grades regarding a student's success in learning skills and mastery of subject matter, while progressive teachers feel mastery of subject matter can not necessarily be translated directly for grades.

Implications

The general implication of the present study, which is strongly supported by the findings of previous research studies, suggests an examination of the worth of our secondary grading practices. Unless it can be demonstrated that grades contribute to a better understanding of a student's classroom performance and experience, there is little value in having them. It would also follow that school districts, school personnel, and institutions of teacher education must accept a position of responsibility for the failure of grades to report meaningful information about a student's classroom activities and for seeking improvements which would result in a better understanding of performance and experience.

School Districts

Most school districts allow teachers much latitude in determining their grading practices. The reasons for this freedom, since it is not inherent in traditional grading systems, are not historically clear. Whatever the reasons, teachers adhere to a broad variety of grading practices which were found to vary according to student grading conditions and behavior. This study, then, would suggest that school districts should seek to establish committees for developing a district philosophy of grading, and procedures whereby grades assigned to students in the

district contribute to a better understanding of a student's performance and experience in the classroom. Until districts begin to take these committee and procedural actions, grades will continue to have little value.

School Personnel

Another specific implication of this study is that the results are significant for a number of school personnel. Teachers in the classroom should be made aware of the varying rationales held by fellow teachers and the teacher characteristics found related to some of these practices. By providing this information, it could lead teachers to a more conscious evaluation of their own practices and a serious questioning of the effectiveness of their practices in communicating their objectives for grading.

School counselors should be made aware of the implications of the results for helping students with their vocational and educational plans. It would seem appropriate to the counselor's role to clarify for students the many different criteria used by teachers in deciding grades, to encourage students to seek clarification of individual teacher rationale when they are not sure about the criteria being used to judge their classroom progress, and to advise parents that the existence of a wide range of teacher rationale makes the assessment of students' general progress a difficult task.

School administrators and curriculum coordinators should also be made aware of the results. The administrators should recognize the implications for school policies governing promotion and graduation. Curriculum coordinators should become responsible for inservice seminars to help teachers evaluate their grading patterns in relation to any existing school grading policies.

Teacher Education Programs

This study leads to two implications for institutions engaged in the training of teachers. First, colleges should take the lead in preparing students to accept realistic grading viewpoints and to recognize that subjective biases can enter into the grading process. Secondly, colleges should take the lead in researching ways in which grading systems can be improved to reach realistic goals and the ways in which inservice teacher behaviors might be changed, so that any realistic goals agreed upon can be identified when they are reached.

Recommendations for Further Research

This research was an exploratory study to identify grading practices of secondary school teachers and relationships that exist between these practices and selected teacher characteristics. It was demonstrated that grading practices vary among teachers, which contributes to the ambiguousness of grades. It was also demonstrated that

significant relationships do exist between certain identified practices and certain selected teacher characteristics. Additional research is needed to support and extend these findings, especially in the area of relationships between practices and characteristics.

Research similar in nature and intent to this study should be conducted to test the validity of the conclusions for other teacher populations. The populations from which these studies draw should vary in geographic area. Research similar in nature and intent to this study should also be conducted to test the validity of the conclusions as perceived by other kinds of populations concerned with grades (i.e., students, parents, administrators, industrial personnel agencies, and college admission officers).

There are a number of other studies that should be conducted which would be indirectly related to the results of this study. A different form of research is needed to identify and test aspects of grades other than grading practices and their possible relationships with teacher characteristics. The present study examined rationale of grading practices only. It did not attempt to examine how these practices and the assigned grades affect behaviors of persons intimately involved with grades (i.e., parents, students, teachers). These studies might investigate the relationship between parents' acceptance or rejection of



a child and his assigned grades. Some studies might investigate the relationship between student insecurity or classroom rebellion and his assigned grades. Other studies might investigate the relationship between a teacher's self-image and his assigned grades. The essential thing to be investigated in each of these studies is what grades do to the self-image and the image held for others.

Survey studies might be conducted to identify the kinds of knowledge, attitudes, and skills that educators and academic scholars feel should be reported through grades. Additional studies might be conducted to examine what kinds of grading practices are most appropriate for different types of subject matter. These studies might sample a population of teachers who are teaching music, mathematics, etc. This would allow the identification of factors whose influence was seen in this present research.

Finally, longitudinal studies of the influence of grades on learning knowledge, skills, and attitudes should also be done. There may be years in a student's life when grades have real significant meaning as reward systems and are very helpful as motivational factors, and there may also be years when grades are a constant source of frustration, and do considerable harm to the ability of some students to learn.

APPENDIX

GENERAL QUESTIONNAIRE

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one.

- | | |
|--|--|
| I agree (little) (on the whole) (very much) | 1. The United States and Russia have just about nothing in common. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 5. Man on his own is a helpless and miserable creature. |
| I disagree (little) (on the whole) (very much) | |

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

6. Fundamentally, the world we live in is a pretty lonesome place.

7. Most people just don't give a "damn" for others.

8. I'd like it if I could find someone who would tell me how to solve my personal problems.

9. It is only natural for a person to be rather fearful of the future.

10. There is so much to be done and so little time to do it in.

11. Once I get wound up in a heated discussion I just can't stop.

12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what others are saying.

14. It is better to be a dead hero than to be a live coward.

15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.



- | | |
|--|---|
| I agree (little) (on the whole) (very much) | 17. If given the chance I would do something of great benefit to the world. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 18. In the history of mankind there have probably been just a handful of really great thinkers. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 19. There are a number of people I have come to hate because of the things they stand for. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 20. A man who does not believe in some great cause has not really lived. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 22. Of all the different philosophies which exist in this world there is probably only one which is correct. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side. |
| I disagree (little) (on the whole) (very much) | |
| I agree (little) (on the whole) (very much) | 25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do. |
| I disagree (little) (on the whole) (very much) | |



- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
- I agree (little) (on the whole) (very much)
I disagree (little) (on the whole) (very much)
26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.
27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.
28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.
29. A group which tolerates too much differences of opinion among its own members cannot exist for long.
30. There are two kinds of people in this world; those who are for the truth and those who are against the truth.
31. My blood boils whenever a person stubbornly refuses to admit he's wrong.
32. A person who thinks primarily of his own happiness is beneath contempt.
33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.



I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

I agree (little) (on the whole) (very much)
 I disagree (little) (on the whole) (very much)

34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

36. In the long run the best way to live is pick friends and associates whose tastes and beliefs are the same as one's own.

37. The present is all too often full of unhappiness. It is only the future that counts.

38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

40. Most people just don't know what's good for them.

PERSONAL INFORMATION

Date _____ Name _____

1. Age _____ Sex _____

Marital Status _____ Children _____

Father's Occupation _____

2. Experience as Teacher

Number of years _____

Subjects taught (if two, select the one you currently
teach most classes in)

English-Language

Social Studies

Mathematics-Science

Special Subjects

Other _____

Name and location of the school you now teach in

_____Did you receive your teacher training as an undergraduate
in a public institution? ☐ Yes ☐ No

3. Philosophy of Education

Stated below are two well-known philosophies of education. Please check the one which is closest to your own personal philosophy.

1. Favor autonomy and independence for the child, fitting the curriculum to the child and not the child to the curriculum, teaching the problem-solving approach, and recognizing that true discipline springs from interest, motivation, and involvement in live problems.



2. Place emphasis on subject matter, arranging the curriculum into carefully broken down, logical units with each unit aimed at developing a particular part of the child's makeup of study, viewing the teacher as an expert in supplying direction, guidance, and control and recognizing that true discipline is governed by well-established standards.





GRADING QUESTIONNAIRE

The following is a study of what teachers think and feel about the purposes of the criteria for, and the approaches to, classroom grading practices. Please respond to each statement in terms of your own personal feelings.

Since many different and opposing points of view are represented, it is requested that you mark each statement according to how much you agree or disagree with it. Please mark every one.

1. The primary purpose for having marks in the classroom is to provide a vehicle of communication between teacher and pupil. Final marks given for classroom performance exist for the purpose of helping each pupil to determine whether he is progressing according to whatever criteria have been established.

Strongly agree Agree Disagree Strongly disagree

2. Originally one of the primary purposes for reporting grades was to exhort pupils to greater effort in school. Fear of failure, it was argued, produced greater achievement. One of the primary purposes of grading should be to motivate students toward greater effort.

Strongly agree Agree Disagree Strongly disagree

3. One of the major purposes for having grades is to measure specific aspects of student development (i.e., aptitude, interest, and actual achievement).

Strongly agree Agree Disagree Strongly disagree

4. Another purpose for having numerical or alphabetical grades is to be able to predict future student progress. Grades should be used to group students for course instruction and for predicting those students who will be successful in college.

Strongly agree Agree Disagree Strongly disagree

5. Since numerical or alphabetical systems are abstract symbols, they can be used to report any number of student characteristics. Teachers should use them to report personal-social-moral traits of students.

Strongly agree Agree Disagree Strongly disagree



6. Some school officials see the purpose of grades as a simple system of administrative shorthand for determining promotion and graduation. This is a reasonable purpose for supporting the use of grades.

Strongly agree Agree Disagree Strongly disagree

7. Teacher Y visits the guidance office each fall to check on the aptitude test scores of her students. She holds the personal conviction that the final grades she assigns her students should be in line with their aptitude scores. A student's aptitude should be considered when assigning grades.

Strongly agree Agree Disagree Strongly disagree

8. John is a real problem in class. Unlike most students he doesn't enjoy working with others. He is really a lone wolf. Instead of cooperating, he seems to find satisfaction in disturbing others. He exhibits a quarrelsome and domineering attitude and a tendency to be very aggressive with his peers. He also evidences a negative and often openly resistant attitude toward adults. On the other hand, his performance in subject matter has been excellent and his aptitude scores show him to be highly intelligent. His grades do not reflect his performance or his aptitude, however, because his teachers feel his behavior in class does not warrant high grades. A pupil who fails to adjust well to his peers, to adults, and to the classroom situation, but whose tested performance in subject matter is high, should be given low grades.

Strongly agree Agree Disagree Strongly disagree

9. Jean is characteristically described as a slow student; mental ability test scores show her to be a below-average student. Her teachers and guidance counselors feel that she probably cannot complete high school and her classroom performance continues to support their conclusion. But, in spite of her level of mental ability, she has continued to receive passing grades and many teachers have even awarded her average grades. Her teachers have been generous in grading her because she is always punctual and in attendance. Jean should be given passing grades and in many cases even average grades on the basis of punctuality and attendance.

Strongly agree Agree Disagree Strongly disagree

10. Mary is an exceptionally likeable girl. She is very neat in personal appearance and she exemplifies model classroom behavior. These characteristics have probably contributed to her high grades in her classes. She carries an honors grade point average in her school, even though her actual classroom performance and scores on aptitude tests show her to be an average student. Pupils who adjust well to classroom situations and are neat in appearance should be given high grades on the basis of these characteristics even though classroom performance is average.

Strongly agree Agree Disagree Strongly disagree

11. Kenneth is the type of student who always appears interested in class activities and applies himself enthusiastically. He volunteers for special class projects and readily assumes extra work. These characteristics have made him the recipient of high grades and he carries an honors grade point average in his school, even though his actual classroom achievement and scores on aptitude tests show him to be an average student. Kenneth should be given high grades primarily on the basis of effort.

Strongly agree Agree Disagree Strongly disagree

12. A high school teacher felt that Johnny lacked interest. The teacher was concerned about his attitude of doing as little as possible and reasoned this boy needed a good jolt. The teacher assigned Johnny a particularly low mark even though his performance was very satisfactory. The intelligent pupil who tries only to get by should be given a low mark even though he has satisfactorily met all the requirements of a course.

Strongly agree Agree Disagree Strongly disagree

13. The typical marking systems, i.e., alphabetical, used in schools should be based primarily on demonstrated achievement and report success in learning skills and information. These typical systems should never be used to evaluate effort, aptitude, interest, and other personality traits.

Strongly agree Agree Disagree Strongly disagree

14. Teacher X holds the belief that if a grade is to have meaning it can only be defined in terms of the frequency with which it can be secured on a normal probability curve. Teacher X is justified in using a normal curve in his grading practices.

Strongly agree Agree Disagree Strongly disagree

15. Teacher X had a group of slow learners, many of whom were working up to what he considered their potential. These he assigned high grades at the end of the semester. Teacher Y had a group of bright students who were all performing above what would be expected of an average student so he assigned the entire class high grades. These two teachers were correct in what they did.

Strongly agree Agree Disagree Strongly disagree

16. There are many dangers in setting up an inflexible standard of marking. A pupil who conforms solely to a teacher's standards for a high grade may sacrifice his creativity and imagination in the process. In another instance a pupil may feel pressured to cheat or may develop feelings of inferiority which would affect his self-concept. Of course, a pupil may lack the mental ability to achieve the standards imposed by a teacher's procedure for marking. These dangers really exist when an inflexible standard of marking is applied.

Strongly agree Agree Disagree Strongly disagree

17. If final marks given for classroom performance are to have any utility for persons outside the classroom setting, e.g., parents, college admission counselors, etc., then they should be based on success in learning skills and information. Other factors (e.g., effort, attitude, teacher-pupil relationships) are either subjective appraisals or too difficult to translate directly into marks.

Strongly agree Agree Disagree Strongly disagree

18. When a teacher assigns a grade he is providing information to pupils, parents, and the school administration concerning his judgment of the degree to which the pupil is developing certain individual characteristics in the classroom, i.e., intellectual abilities, motivation, and personal-social-moral traits.

Strongly agree Agree Disagree Strongly disagree

19. When a student achieves a high cumulative grade point average, it is reasonable to assume the student will be successful in college if he chooses to go on.

Strongly agree Agree Disagree Strongly disagree

20. When a student achieves a high cumulative grade point average the school is certifying to the local community that the student is representative of the highest academic standards of the school. Conversely, when a student fails or receives a low cumulative grade point average the school is reporting that the student is not representative of its standards.

Strongly agree Agree Disagree Strongly disagree



SOCIOLOGICAL CHARACTERISTICS OF TEACHERS

Sex Number	Male 48	Female 48			
Age Number	Under 25 12	25-35 50	Over 35 34		
Marital Status Number	Married 79	Single 17			
Children Number	Yes 54	No 42			
Father's Occupation Number	Unskilled 35	Skilled 21	Proprietor/ Manager 16	Professional 24	
Experience as Teacher Number	0-2 Years 21	3-6 Years 26	7-12 Years 26	Over 12 Years 23	
Subjects Taught Number	English/ Languages 21	Social Studies 21	Math/ Science 14	Special Studies 27	Other 13
Type of School Number	Rural 32	Suburban 32	City 32		
Undergraduate Training in Teacher's College Number				Yes 78	No 18

PHILOSOPHICAL APPROACH TO TEACHING

Number selecting traditional approach	37
Number selecting progressive approach	<u>59</u>
Total number responding	96

SCORES ON ROKEACH DOGMATISM SCALE

<u>Low Group</u>		<u>Middle Group</u>		<u>High Group</u>	
87	106	126	138	151	163
88	108	127	139	152	163
91	108	127	139	153	164
92	109	128	140	153	167
94	111	129	141	153	167
95	112	130	143	154	169
96	113	130	144	156	172
97	114	131	145	156	173
98	115	131	146	157	175
98	116	132	146	159	176
99	118	133	147	160	176
100	120	134	148	160	180
101	121	135	148	161	183
102	124	136	149	162	184
103	125	137	149	162	194
105	125	137	150	162	197

N = 96

Lowest Possible Score = 40

Highest Possible Score = 280



LISTING OF CHI-SQUARES FOR INDEPENDENT VARIABLES

Independent Variables	A. Dependent Variables--Purposes for Grading				
	Communi- cation	Motivation	Measurement	Prediction	Promotion/ Graduation
					Personal- Social- Moral Traits
Dogmatism scores	2.465	4.485	4.899	1.003	.605 3.610
Sex	.066	0.000	.049	0.000	3.065 1.524
Age	1.886	1.246	.781	1.715	.481 .687
Marital status	1.284	4.702*	.437	.001	1.664 2.177
Children	.126	.405	.346	.013	.526 .009
Father's occupation	5.634	6.426	7.291	.836	.242 6.950
Experience as teacher	.579	.115	.364	3.060	7.177 .579
Subjects taught	3.281	.422	11.184*	7.783	6.582 4.684
Type of school	.863	1.118	3.069	3.798	2.210 .300
Teacher training in public college	8.482***	.296	.062	.186	.380 .425
Philosophical position	.127	2.032	7.959***	.311	3.316 6.194**

*Significant at the .05 level

**Significant at the .02 level

***Significant at the .01 level



B. Dependent Variables--Criteria for Grading

Independent Variables	Aptitude	Teacher-Pupil Relationship	Punctuality and Attendance	Conformity/Personal Appearance	Effort	Interest	Actual Achievement
Dogmatism scores	1.140	1.297	2.818	.599	3.517	.248	1.318
Sex	3.503	1.200	.211	1.043	.375	1.338	.042
Age	.518	2.761	1.098	.854	4.125	.933	.234
Marital status	1.942	8.935**	.931	2.987	2.050	.156	1.113
Children	.709	2.743	.405	.066	1.006	1.534	.484
Father's occupation	1.264	.141	4.487	3.309	2.101	6.059	2.162
Experience as teacher	.192	2.465	1.392	2.681	3.102	.515	.859
Subject taught	16.481***	13.427***	4.400	5.366	1.597	2.717	4.865
Type of school	.230	2.479	.131	.452	1.007	2.937	5.745
Teacher training	.310	.492	.005	.936	.010	.214	.670
Philosophical position	.061	1.064	8.072***	2.342	.787	4.586*	1.246

*Significant at the .05 level

**Significant at the .02 level

***Significant at the .01 level

C. Dependent Variables--Methods
Used in Grading

Independent Variables	Standard Normal Curve	Variation of Expectations	Dangers of Inflexible Approach
Dogmatism Scale	2.634	3.857	8.272
Sex	.061	.188	.103
Age	.366	5.385	4.928
Marital status	.216	.143	.633
Children	.146	3.048	1.371
Father's occupation	2.213	4.803	1.728
Experience as teacher	2.596	3.017	.032
Subjects taught	6.149	3.092	.747
Type of school	1.669	1.177	3.762
Teacher training	.352	.308	.003
Philosophical position	.002	1.007	1.343

*Chi-square is significant at .05 level.

**Chi-square is significant at .02 level.

***Chi-square is significant at .01 level.



D. Dependent Variables--Inferences Extracted
From Grades

Independent Variables	Mastery of Subject Matter	Individual Differences	College Success	School Standards
Dogmatism scores	.832	8.4467**	1.694	4.762
Sex	0.000	.202	1.046	.750
Age	.816	6.515*	6.300*	.405
Marital status	.577	.001	.305	.894
Children	.282	2.164	.293	4.762*
Father's occupation	.876	4.374	2.413	4.803
Experience as teacher	.442	4.413	3.408	1.758
Subjects taught	.338	4.122	1.013	1.261
Type of school	.705	.218	2.379	1.177
Teacher training	4.103*	.515	.053	1.231
Philosophical position	8.864***	.683	3.332	2.199

*Chi-square is significant at the .05 level.

**Chi-square is significant at the .02 level.

***Chi-square is significant at the .01 level.



LISTING OF CHI-SQUARE COMPUTATIONS FOR
SIGNIFICANT RELATIONSHIPS

A. PURPOSES FOR GRADING

1. Marital Status and Motivation

	<u>Motivation</u>	
	<u>Agree</u>	<u>Disagree</u>
(Yes)	54o	25o
Marital Status	57.6e	21.4e
(No)	16o	1o
Marital Status	12.4e	4.6e
$X^2 = 4.702$		
DF = 1		
P .05		

2. Subject Taught and Measurement

	<u>Measurement</u>	
	<u>Agree</u>	<u>Disagree</u>
English-Language	16o	5o
	14.66e	6.34e
Social Studies	19o	2o
	14.66e	6.34e
Mathematics-Science	9o	5o
	9.77e	4.23e
Special Subjects	13o	14o
	18.84e	8.16e
Other	10o	3o
	9.07e	3.93e
$X^2 = 11.184$		
DF = 4		
P .05		

A. PURPOSES FOR GRADING (continued)

3. Teacher Training in Public Institution and Communication

	<u>Communication</u>	
	<u>Agree</u>	<u>Disagree</u>
(Yes)	67o	11o
Public College	62.56e	15.44e
(No)	10o	8o
Public College	14.44e	3.56e

$$X^2 = 8.482$$

$$DF = 1$$

$$P = .01$$

4. Philosophical Points of View of Education and Measurement

	<u>Measurement</u>	
	<u>Agree</u>	<u>Disagree</u>
Traditional	32o	5o
	25.82e	11.18e
Progressive	35o	24o
	41.18e	17.82e

$$X^2 = 7.959$$

$$DF = 1$$

$$P = .01$$

A. PURPOSES FOR GRADING (continued)

5. Philosophical Point of View of
Education and Promotion/Graduation

	<u>Promotion/Graduation</u>	
	<u>Agree</u>	<u>Disagree</u>
Traditional	13o 8.09e	24o 28.91e
Progressive	8o 12.91e	51o 46.09e
$X^2 = 6.194$		
DF = 1		
P .02		

B. CRITERIA FOR GRADING

1. Marital Status and
Teacher/Pupil Relationship

	<u>Teacher/Pupil Relationship</u>	
	<u>Agree</u>	<u>Disagree</u>
(Yes) Marital Status	9o 13.7e	7o 65.83e
(No) Marital Status	7o 2.83e	10o 14.17e
$X^2 = 8.935$		
DF = 1		
P .01		



B. CRITERIA FOR GRADING (continued)

2. Subject Taught and Aptitude

	<u>Aptitude</u>	
	<u>Agree</u>	<u>Disagree</u>
English-Language	2o 3.72e	19o 17.28e
Social Studies	1o 3.72e	20o 17.28e
Math-Science	1o 2.48e	13o 11.52e
Special Subjects	6o 4.78e	21o 22.22e
Other	7o 2.30e	6o 10.70e

$$X^2 = 16.481$$

$$DF = 4$$

$$P .01$$

3. Subject Taught and Teacher/Pupil Relationship

	<u>Teacher/Pupil Relationship</u>	
	<u>Agree</u>	<u>Disagree</u>
English-Language	2o 3.50e	19o 17.50e
Social Studies	1o 3.50e	20o 17.50e
Math-Science	0o 2.33e	14o 11.67e
Special Subjects	8o 4.50e	19o 22.50e
Other	5o 2.17e	8o 10.83e

$$X^2 = 13.427$$

$$DF = 4$$

$$P .01$$



B. CRITERIA FOR GRADING (continued)

4. Philosophical Point of View
of Education and Punctuality/
AttendancePunctuality/Attendance

	<u>Agree</u>	<u>Disagree</u>
Traditional	40 10.02e	330 26.98e
Progressive	220 15.98e	370 43.02e

$$X^2 = 8.072$$

$$DF = 1$$

$$P = .01$$

5. Philosophical Point of View
of Education and InterestInterest

	<u>Agree</u>	<u>Disagree</u>
Traditional	90 5.40e	280 31.60e
Progressive	50 8.60e	540 50.40e

$$X^2 = 4.586$$

$$DF = 1$$

$$P = .05$$

C. METHODS USED IN GRADING

1. Scores on the Dogmatism Scale
and Recognizing the Danger of
Inflexible ApproachDanger of
Inflexible Approach

	<u>Agree</u>	<u>Disagree</u>
Low Dogmatism	31o 28.33e	1o 3.67e
Middle Dogmatism	25o 29.22e	8o 3.78e
High Dogmatism	29o 27.45e	2o 3.55e

$$X^2 = 8.727$$

$$DF = 2$$

$$P = .02$$

D. INFERENCES EXTRACTED FROM GRADES

1. Scores on Dogmatism Scale
and Individual DifferencesIndividual Differences

	<u>Agree</u>	<u>Disagree</u>
Low Dogmatism	20o 22.67e	12o 9.33e
Middle Dogmatism	20o 23.37e	13o 9.63e
High Dogmatism	28o 21.96e	3o 9.04e

$$X^2 = 8.446$$

$$DF = 2$$

$$P = .02$$

D. INFERENCES EXTRACTED FROM GRADES (continued)

2. Age and Individual DifferencesIndividual Differences

	<u>Agree</u>	<u>Disagree</u>
Under 25 Years of Age	9o 8.60e	3o 3.32e
25-35 Years of Age	41o 36.17e	9o 13.83e
Over 35 Years of Age	18o 23.15e	14o 8.85e

$$X^2 = 6.515$$

$$DF = 2$$

$$P = .05$$

3. Age and College SuccessCollege Success

	<u>Agree</u>	<u>Disagree</u>
Under 25 Years of Age	8o 6.26e	4o 5.74e
25-35 Years of Age	20o 26.06e	30o 23.94e
Over 35 Years of Age	21o 16.68e	11o 15.32e

$$X^2 = 6.300$$

$$DF = 2$$

$$P = .05$$



D. INFERENCES EXTRACTED FROM GRADES (continued)

4. Children and School StandardsSchool Standards

	<u>Agree</u>	<u>Disagree</u>
(Yes)	41o	13o
Children	36e	183
(No)	23o	19o
Children	28e	14e

$$X^2 = 4.762$$

$$DF = 1$$

$$P = .05$$

5. Teacher Training in Public Institution and Mastery of Subject MatterMastery of Subject Matter

	<u>Agree</u>	<u>Disagree</u>
Traditional	30o	7o
	23.12e	13.87e
Progressive	30o	29o
	36.87e	22.12e

$$X^2 = 8.869$$

$$DF = 1$$

$$P = .01$$

D. INFERENCES EXTRACTED FROM GRADES (continued)

6. Philosophical Point of View
of Education and Mastery of
Subject MatterMastery of Subject Matter

	<u>Agree</u>	<u>Disagree</u>
Traditional	30o 23.12e	7o 13.87e
Progressive	30o 36.87e	29o 22.12e

$$X^2 = 8.869$$

$$DF = 1$$

$$P = .01$$

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