THE SOCIAL RELATIONS OF TEACHERS AS RELATED TO TEACHING COMPETENCY

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ABSTRACT

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by Kenneth S. Parr

The basic premise of this investigation is that education is a social process. If in an analysis of the social factors involved, certain of them can be isolated and conclusively related to learning, then teaching efficiency can be improved by taking such social factors into consideration.

The major hypothesis of this investigation is that certain social or social-psychological factors are related to teaching ability. Teaching ability was measured by mean gains in pupil information. The social factors which were investigated include: the teacher's relationship with his students, his role in the community, his role in the school, his attitude toward his work, his social adjustment, and the administrator's (principal) opinion of the teacher.

A minor hypothesis tested was: the same social factors are related to teaching ability as rated by pupils.

Thirty-nine secondary teachers of United States History were included in the study. These were male teachers in twenty-eight rural/agriculturally oriented communities.

The results, while not strongly conclusive relative to the major hypothesis, indicate that for the thirty-nine teachers studied, certain social factors are of some importance in determining teacher effectiveness. It is also apparent that many social factors which have been considered important are unrelated to teaching ability as measured by pupil gains in information.

The major results of the study are summarized as follows:

1. a. Tentative indications are that teachers who have a more congenial relationship with their students tend, on the average, to teach slightly more history as measured by pupil gains in information.

   b. Those teachers who do have closer personal relationships with their students are considered, by their students, to be better teachers.

2. No index of the teachers' role in the community (participation in community affairs, church attendance, etc.) or supervision of

extracurricular activities at
school is related to effectiveness
as measured by pupil gains in
information.

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By

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A THESIS

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> The school has not only a culture of its own, but a social organization of its own. There develops within the school a pattern of social relations that is not only unique but which persists through time so that the pattern is not radically changed even when different individuals enter it or leave it. In other words, the individuals who make up the social system of the school act in certain social roles, roles that are defined by the society at large, but also by the particular school itself. Persons may move in and out of given role positions, but the roles themselves stay the same. The child in the school is in the role of learner; the teacher is in the role of purveyor of knowledge; the principal is in the role of authority figure.[1]

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[1]Robert J. Havighurst and Bernice L. Neugarten, Society and Education (Boston, Mass.: Allyn and Bacon, Inc., 1957), p. 185.

PREFACE

From the foregoing statement it is clear that interaction between persons within the same general level of the school structure, or between persons of two different levels may affect the organization as a whole. It has often been asserted that the quality of the interaction between administrators and teachers, or between teachers and teachers, or between teachers and pupils, and even sometimes between some segments of these and the community at large accounts for the success or failure a given school achieves.

The study here reported is an effort to analyze some of the above mentioned interactions, namely those involving the teacher and his pupils and the teacher's community activities, attempting to determine what effect, if any, the quality of the interactions has upon the competency of the individual teacher.

The writer wishes to express his gratitude for the assistance rendered by Dr. Wilbur B. Brookover who served as a most able advisor, and of whose study this is a replication.

TABLE OF CONTENTS

LIST OF APPENDICES

CHAPTER I

INTRODUCTION TO THE STUDY

Theoretical Frame of Reference

The following study is a replication of one done by Dr. Wilbur B. Brookover for his Ph.D. dissertation at the University of Wisconsin in 1943. In view of changing circumstances in the intervening years, certain modifications have been made in this study--primarily in the area of procedures in gathering the data, but also in some of the instruments. The size of this survey is smaller: Dr. Brookover's sample of teachers being sixty-six and this one being thirty-nine.

In view of the fact that the Brookover study was in some ways a pioneer effort, and in view of the educational and social changes which have transpired in the intervening twenty-five years, the primary interest of the writer is in determining whether the findings will reflect such changes.

In the early 1940's when the original study was made, Brookover made the statement that experts do not agree as to what a good teacher is, and it can be added they are farther apart as to any criterion by which to judge teaching competency. Let it be

stated at the outset of this replication that, after twenty-five years, experts are still not in agreement.

In their attempts to determine what makes a good teacher good, educational researchers have largely oriented their work in psychology and concentrated their attention on the teacher, the underlying assumption being that a certain combination of emotional stability and a host of favorable personality traits would produce a good teacher; in large ignoring any effects of teaching.

This suggests that one variable is all that is necessary in the study of effectiveness: teacher behavior (which should be an independent variable) but not teacher effects (which would be a dependent variable). "The problem is [most] complex because teacher-pupil interaction is imbedded in historical, social, and physical contexts which constrain and interact with it."[2]

Strongly implied in the foregoing statement is that psychological approaches are indeed inadequate since they do not take into account the fact that learning is a social process--the social interactions being overlooked by such studies.

The social process is strongly emphasized by Havighurst and Neugarten:

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[2]Bruce J. Biddle and William J. Ellena (eds.), Contemporary Research on Teacher Effectiveness (New York: Holt, Rinehart and Winston, 1964), p. 5.

> The socialization of the individual is carried out by various agencies of society. The social groups within which the infant is changed into the socialized adult are the groups that take care of him, love him, reward and punish him, and teach him. The major socializing agencies in the life of the child are the family, the peer group, the school, the church, the youth-serving organizations, various political and economic institutions in the community, and the mass media such as radio and television. The school is an example of an agency formally organized for the purpose of inducting the child into society; the peer group is an example of an agency that, although informal, plays an important role in the socialization process.[3]

Finney, as reported by Brookover, clearly states that "the learning process is a social process."[4] It is therefore assumed that the quality of the social interaction in the classroom situation will have some direct relationship with the quality of the learning which takes place in that situation. This is the major hypothesis of the study here presented. More specifically, the hypothesis is that some factors in the social situations in which learning occurs influence the amount and quality of the learning.

The school is a complex web of social interaction which involves in large part those interactions which occur in the classroom but also those which occur between the school complex and the community at large

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[3]Havighurst and Neugarten, op. cit., p. 61.

[4]Ross Finney, A Sociological Philosophy of Education (New York: MacMillan Company, 1928), p. 57, cited by Wilbur B. Brookover, "The Relation of Social Factors to Teaching Ability" (unpublished Ph.D. dissertation, University of Wisconsin, 1943), p. 1.

which supports and institutes the school. As stated in the preface, the quality of these interactions could possibly account for the success or failure of the teacher. Waller makes a statement which conveys an affirmative attitude on the issue:

> What the teacher gets from experience is an understanding of the social situation in the classroom, and an adaptation of his personality to the needs of that milieu; that is why experienced teachers are wiser than novices...The teacher acquires in experience a rough, empirical insight into the personal interaction in the school. For let no one be deceived, the important things that happen in the schools result from the interaction of personalities. Children and teachers are not disembodied intelligences, not instructing machines and learning machines, but whole human beings tied together in a complex maze of social interconnections.[5]

The difficulty with Waller's statement is that he gives no factual basis to either the assertion that the quality of the interaction affects teaching or the assertion that more experienced teachers are better teachers. These are the very questions for which we are indeed attempting to offer a factual basis.

The second major concern of the study has to do with the teachers' relations with the community beyond the confines of the specific learning situation. A recently published supervision text asserts that:

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[5]Willard Waller, Sociology of Teaching (New York: Wiley, 1932), p. 1, cited by Brookover, ibid., p. 3.

> Through social experiences in the community in which the teacher has a chance to share with others and gain greater security in his social relationships, he can acquire some of the skills that will help him establish better relationships with his pupils.[6]

and also from a textbook of the general teaching methods:

> Relaxation at the end of the day, on a weekend, or at the close of the school year will enable you to live longer and to be a happier and more successful teacher in the process.[7]

As a high school teacher in a community in close proximity with Michigan State University (Leslie, Michigan), those laymen who have expressed interest in the school to this writer inevitably express concern that so many teachers do not remain very long and do not reside in the community. In fact, in order to induce more commuting teachers to sponsor extra-curricular activities such as dances, a $10.00 compensation was offered (with little success) causing not a little resentment on the part of many school patrons.

The above statements and the writer's experience substantiate the fact that many educators and school patrons continue to believe that the

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[6]Kimball Wiles, Supervision for Better Schools (New York: Prentice Hall, Inc., 1955), p. 117.

[7]M. D. Alcorn, R. A. Houseman, and J. R. Shunert, Better Teaching in Secondary Schools (New York: Henry Holt and Company, 1954), p. 474.

teacher's social contacts outside the classroom have a definite bearing on his classroom success. These views have their origin in what educational historians have labeled the "community school" concept. Having its impetus in the 1930's, it continues to develop today with various refinements. These views offer evidence that:

> People who think about education in broad terms, as a process of teaching children the concepts and attitudes of their society, and of teaching them how to behave in their social, civic, and economic relations, tend to think of the whole community as an educative agent. From this point of view, the school alone cannot do the job of education, nor can the school and family together. Education is the result of living and growing up in a community.[8]

Joseph K. Hart, writing about the nature of education in a democracy, said:

> The democratic problem in education is not primarily a problem of training children; it is the problem of making a community within which children cannot help growing up to be democratic, intelligent, disciplined to freedom, reverent of the goods of life, and eager to share in the tasks of the age. A school cannot produce this result; nothing but a community can do so.[9]

Because the community is so important in the education of children, educators are interested in finding the best combination of school and community experience for educational purposes. It follows,

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[8]Havighurst and Neugarten, op. cit., p. 205.

[9]Joseph K. Hart, The Discovery of Intelligence (New York: Appleton-Century-Crofts, Inc., 1924), p. 383.

moreover, that they are concerned about how teachers relate with the community at large.

The Hypothesis

The foregoing discussion points to the major hypothesis and is here appropriately restated: Certain social and social-psychological factors are related to teaching ability. Henceforth when teaching ability is referred to it will be a reference to a measurement of mean gains in pupil information. This measurement is to be the prime criterion used to determine teaching ability.

As a reminder to the reader, two categories of social factors are to be scrutinized to determine their relationship with teaching ability. They are as follows: those which develop out of the individual teacher's interactions in the school, and those which develop out of the individual teacher's interaction beyond the school in the community at large.

The following specific social factors will be investigated: the teacher's relationship with his students, his age, his activities in the community, his activities in the school, the administrator's opinion of the teacher, and the pupils' opinion of the teacher. Brookover also attempted to discern the teacher's social adjustment and his attitude

toward his work. A similar attempt was made in this study but the questions designed to measure these characteristics were, with two easily explainable exceptions, unanimously answered the same way by the respondents. Therefore any possible relationships were impossible to determine.

Before these items were selected for study, Brookover checked them with school administrators and this writer rechecked them. They continue to be used twenty-five years later. Popham[10] established that administrators went so far as to make use of an "activity record" as a criterion for evaluating applicants for teaching positions.

Since it seems that everyone in the school setting thinks he knows a good teacher when he sees one, and it is customary for both administrators and students to rate teachers' teaching ability, two minor hypotheses similar to the above were also tested: (1) certain social factors are related to teaching ability as rated by pupils' ratings of teaching ability, and (2) administrators' and pupils' ratings of teaching ability are correlated with ratings of ability as measured by gains in pupil information.

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[10]W. James Popham, "Out-of-School Activities of Teachers as Related to an Index of Their Professional Performance" (unpublished Ph.D. dissertation, Indiana University, 1958), p. 3.

Review of Research in the Field

Over the past several decades, many studies have been carried out on teachers and related aspects of the teaching complex. Personal characteristics of teachers have been assessed with objective psychometric instruments as well as with ratings by superintendents, principals, peer-teachers, and students. The environment of the classroom has been examined with a view for assessing the teacher while working on the job. Some studies have also been conducted in which teachers have been assessed in terms of the changes in behavior of their students. In general, this latter method of evaluating teacher performance has been accomplished by measuring the students' educational development at two different times while they were under the direction of the teacher.

This review of research will concentrate on efficiency ratings and pupil growth; primarily pupil growth and, more specifically, pupil growth defined as subject matter mastery.

Since this is a replication of a study done in the early 1940's, and in view of the fact that "no other investigator has been concerned with the major hypothesis of this study"[11] (as of 1943), this review will concentrate primarily on research done from 1945 to the present.

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[11]Brookover, op. cit., p. 11.

As reported by Brookover, "LaDuke found that teachers who are less considerate of others, [harsh, directive, autocratic, etc.,] as measured by Jackson's Social Proficiency test, tend to be more effective teachers as measured by gains in information, attitudes, appreciation, and interests."[12] Since correlations were all slightly below the level of significance, LaDuke cautions the reader that this is "contrary to...common sense" even though correlations on the four gain criteria were consistent. Brookover's study tends to substantiate LaDuke's findings.

The literature is full of contradictions regarding the above findings, in research as well as in opinion. A study by Cronbach[13] may reveal at least one reason why the studies are contradictory at this point. He asserts that it is an error to equate the personality characteristics of warmth with permissiveness, and harshness with directiveness. In fact, Cronbach's research has some significant similarities to Brookover's and definitely reveals that gains in achievement were observed (in vocabulary and arithmetic) in those students of warm teachers.

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[12]Charles V. LaDuke, The Measurement of Teaching Efficiency (Ph.D. dissertation, University of Wisconsin, 1941), cited by Brookover, ibid., p. 10.

[13]C. M. Christensen Cronbach, "Relationships Between Pupil Achievement, Pupil Affect-Need, Teacher Warmth and Teacher Permissiveness," Journal of Educational Psychology, Vol. LI (No. 3, 1960), pp. 169-174.

Asserting that pupil gains "provide the most objective criterion discovered," Morsh, Burgess, and Smith[14] attempted to find other characteristics of the instructor besides ability to impart subject matter which might be related to student gains and could thus be used to predict student achievement (teaching success). There was a high correlation between student gains and student ratings of teaching effectiveness. As to the ratings of particular teachers, rather close agreement between peer and supervisor was observed but peer and supervisor ratings agreed only slightly with student opinion.

In another study similar to Brookover's, but conducted in an Air Force training center, Morsh[15] found that:

(1) Under some conditions student gains can be reliably measured.

(2) The students appeared to know when they were well taught. Student ratings, therefore, offer promise as a technique for instructor evaluation.

(3) The student rating of instructor's subject matter knowledge was correlated significantly with instructors' proficiency test scores.

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[14] J. E. Morsh, G. G. Burgess, and P. N. Smith, "Student Achievement as a Measure of Instructor Effectiveness," Journal of Educational Psychology, Vol. XLVII (1956), p. 79.

[15] Ibid., pp. 79-88.

(4) Little relationship was shown between supervisor or fellow instructor estimates of instructor effectiveness and student gains.

(5) The low correlation found between supervisor rankings and student achievement suggests that the instructors are judged on other factors--such as subject matter knowledge.

In what is probably one of the better studies cited in this review, Flanders[16] tested the following hypotheses in a laboratory experiment:

(1) Restricting student freedom of participation early in the cycle of classroom learning activities increases dependence and decreases achievement.

(2) Restricting student freedom of participation later in the cycle of classroom learning activities does not increase dependence but does increase achievement.

(3) Expanding students' freedom of participation early in the cycle of classroom activities decreases dependence and increases achievement.

It was concluded that dependent-prone junior high school students are more sensitive than average students to differences in patterns of teacher in-

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[16]N. A. Flanders, Teacher Influence, Pupil Attitudes and Achievements: Studies in Interactions Analysis, Final Report, Cooperative Research Project No. 397, University of Minnesota, 1960.

fluence, and that the dependent-prone learned less geometry when exposed to a rigid direct pattern of influence than they did with an indirect pattern. One weakness of this study may be that the different patterns were created by the same role playing teacher.

Some unique qualities were noted in a study by C. D. Jayne.[17] In this writer's review of the literature this is the only investigation in which classroom behaviors were recorded and studied in relation to pupil gains. Since class recitation responses were tape-recorded, the data are restricted to oral interaction and subjects are not separated into good and poor teachers. There are two studies: in his first study long-term gains and understanding were measured, while in the second study the teaching objective was short-term gains, chiefly recall of factual material.

While perhaps not as unique as the data gathering technique previously mentioned, few investigations were encountered in which any long-term aspect of information gain was considered.

Brookover's study was one of the earlier ones in which teaching results (according to pupil gains in information) were correlated with certain social factors.

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[17] C. D. Jayne, "A Study of the Relations Between Teaching Procedures and Educational Outcomes," Journal of Experimental Education, Vol. XIV (Dec. 1945), pp. 101-134.

It is evident, however, that since the mid 1940's more researchers have shifted their attention to teaching results. In fact, several studies were encountered in which psychological tests were administered to teachers and the results were correlated with pupil gains. The three studies discussed are considered typical.

In Carlson's[18] study in which both ratings and pupil gain criteria are employed, the Washburn test did not discriminate between good and poor teachers with a pupil gain criterion, but in other studies it was found to discriminate. When pupil gain criteria were employed in studies by Gotham[19] and Rolfe,[20] although all correlations are positive, no statistically significant correlations of criteria to the various measures of social adjustment or social intelligence employed were obtained. These results stand in rather sharp contrast to correlations obtained in investigations employing a rating criterion.

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[18]Gustave Carlson, "Characteristic Differences Between Good and Poor Teachers," (unpublished Ph.D. dissertation, University of Wisconsin, 1942).

[19]R. E. Gotham, "Personality and Teaching Efficiency," Journal of Experimental Education, Vol. XIV (Sept. 1945), pp.157-165.

[20]J. F. Rolfe, "The Measurement of Teaching Ability, Study No. 1," Journal of Experimental Education, Vol. XIV (Sept. 1945), pp. 52-74.

Gotham and Rolfe, on the other hand, are in agreement that emotional stability, as measured by the Bernreuter test, is not significantly related to their pupil gain criterion.

CHAPTER II

INSTRUMENTS, SOURCES OF DATA, AND METHODS OF ANALYSIS

The Measurement of Teaching Ability

As we have previously stated, this study was originally undertaken more than twenty-five years ago. In his discussion of the reasons for using mean gains in pupil information (subject matter mastery), Brookover first states that "the measurement of information gain has been the most valid and reliable of any of the measures used."[1] In our review of previous research we reported a statement made by Morsh, Burgess, and Smith, viz., "pupil gains provide the most objective criterion discovered."[2] This study was made approximately fifteen years after Brookover's (1956). Of course these are reflections of opinion even though both scholars feel their basis for them is sound. So many other investigators used this measure that it is certain their (Brookover

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[1]Brookover, op. cit., p. 13.

[2]Morsh, Burgess, and Smith, op. cit., p. 79.

and Morsh) opinions are supported by a broad consensus. It is felt by this writer, however, that the fifteen-year period indicates that educational research on teacher effectiveness was somewhat static. A discussion concerning design and criterion will follow at a later point.

Since this is an attempt to replicate Brookover's study, his reasons for using pupil information gain as the only criteria for determining teacher competency will be restated, the first and major one already having been given.

> Second, various standardized tests of school subject matter are readily available for use in measuring gains in information. Third, gains in pupil information are universally accepted as one of the criteria of teaching ability. Fourth, gains in information are also a measure of the basic social function of education, transmission of the culture.
>
> The use of such a single criterion of teaching ability has the weakness that it does not include all the outcomes of teaching. Rather generally educators consider it important that teaching should result in the acquisition of a set of moral or ethical precepts and habits. There is also the somewhat overlapping concept that teaching should result in a sound adjustment of the child in the society of which he is a part. It is conceivable that a teacher might be initiating a considerable gain in the pupil's information at the expense of the child's satisfactory social adjustment.
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> None of these other outcomes of teaching has been used as a criteria in this investigation. In the first place, they were not used because there is little agreement about

them. As a current illustration, one would find a variety of opinion about what attitude the pupils should acquire toward internationalism. The same sort of disagreement would occur on some of the other suggested criteria. Furthermore, it is for the present impossible to measure any of the other results of teaching with the same degree of accuracy with which one is able to measure information. The final reason for using only gains in information is that some of the other criteria are highly correlated with gains in information. From the data used by LaDuke[3] and Rostker[4] the writer found that mean scores on attitudes and mean scores on information tests for 31 teachers were correlated .75 (the Pearsonian correlation coefficient, r.) and that mean appreciation and information scores showed a correlation of .57. This was to be expected since mean scores on attitudes and appreciation tests were correlated .92. Of the criteria used by LaDuke, only interest showed so little correlation with information that the two might be independent and even in this case the coefficient was as high as .44. Furthermore, the gain in information scores showed a rank correlation of .58 with a composite of the four criteria scores after corrections had been made in each for differences in pupil intelligence and differences in pre test scores.

These considerations lead us to conclude that gains in information are the most valid and perhaps the best single criterion of teaching ability that we have yet developed. The writer does not, of course, maintain that it should always be the only criterion for judging a teacher. It is possible that teaching which results in high gains in pupil information may have undesirable effects on the personality of the child.[5]

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[3]LaDuke, loc. cit., cited by Brookover, op. cit., p. 15.

[4]Leon E. Rostker, The Measurement and Prediction of Teaching Ability (unpublished Ph.D. dissertation, University of Wisconsin, 1939), also School and Society, Vol. LI (Jan. 1941), cited by Brookover, ibid..

[5]Brookover, op. cit., pp. 13-15.

The gains in pupil information were determined by the use of two forms of condensed Minnesota High School Achievement Examinations in U. S. History. They were used by permission of American Guidance Service, Inc., and may be examined in Appendix I. The coefficient of reliability between the two forms is .86. This figure would be higher except for the fact that these were a comprehensive part (thirty-four multiple choice questions) of the above mentioned standardized tests. A statement concerning the length of the tests will follow later.

The mean gain score in pupil information for each teacher was obtained in a determination of the difference between the mean pre test score and the mean post test score.

Measures of Central Tendency: The mean pupil gain in information scores for the thirty-nine teachers in the study ranged from a -1.83 to 6.29. The mean of these means was 2.50 and the median was 2.7. The standard deviation was 2.18.

Classification of Teachers by Mean Gain Scores: The procedure used in rating the teaching ability of the teachers, as measured by mean pupil gain in information scores, was based on the above calculations. Since a five category rating was desired, the teachers whose pupils' mean gain scores fell outside the range of the mean, plus or minus one standard deviation, were given the extreme ratings of "very superior" and

"poor." Seven teachers were given the highest ratings and six the lowest by this procedure. The remainder of the scores fell within the plus or minus one standard deviation range of 4.58 to .04.

This range was divided approximately equally into the three middle categories. The lowest one, .41 to 1.67, was called "below average" and included seven teachers. The middle one, 1.67 through 3.43, was termed "average" and included fourteen (or 36%)of the teachers. The upper of these three middle classes was labeled "superior." Those five teachers whose pupils' mean gain scores fell between (but not including) 3.43 to 5.49 were included in this classification.

There were natural breaks in the scores at these division points, so they could be grouped into the intervals, 6.30 through 5.49, 5.48 through 3.61, 3.60 through 1.67, 1.66 through .41, and .40 through -1.83. This classification of the teachers is shown in the following table.

TABLE 1

RATING OF 39 TEACHERS BY MEAN GAIN SCORES

Rating of Teacher	Range of Mean Gain Scores	Weighted Mean of Mean Gain Scores	Number of Teachers	Code No.
Very Superior	6.30 to 5.49	5.81	7	1
Superior	5.48 to 3.61	3.85	5	2
Average	3.60 to 1.67	2.72	14	3
Below Average	1.66 to .41	.66	7	4
Poor	.40 to -1.83	- .84	6	5
Total	6.30 to -1.83	2.50	39	

The Validity of the Criterion of Teaching Ability: Of course in a study of this nature it is improbable that all possible variables can be known so as to be able to isolate certain ones with complete confidence and without any doubt as to effects of hidden variables. This probably accounts for the contradiction in findings mentioned in the review of other research. This problem will be discussed further in a concluding chapter.

With complete awareness of the above mentioned hazard, we proceed in an effort to establish the validity of the criterion of teaching ability. Certainly several background factors such as intelligence differences (pupils and teachers), prior knowledge of subject matter, differing emphases by the teachers regarding subject matter, as well as approaches to it (teaching methodology), length of term or session, size of school, or size of classes, are of major significance and were held constant in this study.

It is at this point that a major deviation of this study from Brookover's occurs. His study was done using rural consolidated high schools in northern Indiana with enrollments ranging from forty-five to one hundred and seventy. This study was done in southern Michigan in high schools ranging in enrollment from three hundred to seven hundred and fifty.

In any event, as many of the background factors as possible were eliminated in our selection of schools and teachers. Thus all male high school U.S. History teachers were selected.

In recent years many methodological innovations have occurred in social studies teaching. On the assumption that the Brookover sample was composed of teacher-centered classroom situations, care was taken to ensure that the same traditional teacher-centered type situation prevailed with the thirty-nine teachers of this investigation. Herein is where some difficulty was encountered in getting the thirty-nine teachers, for there are some indications that the above described teaching situation is passing from the educational scene.

Most of the variation in pupil gain which might have resulted from academic or mental/emotional maturity was also eliminated due to the fact that U.S. History is offered predominantly at the junior level of high school in the state of Michigan.

In attempting to eliminate wide variations in cultural background the schools wherein the teachers of the study were employed were selected with care. The assistance of a staff member of the Michigan Department of Public Instruction was enlisted. Since his personal knowledge of the schools of the state of Michigan is quite extensive, he was able to select a very homogeneous population of schools; rural/agriculturally oriented and not in

close proximity (twenty to twenty-five mile minimum distance) to any industrial areas of the state. These schools were all located south of an imaginary line drawn from Muskegon, on Lake Michigan, to Bay City, on Lake Huron.

Since Brookover's study indicates that school and class size have little or no effect on learning, and since the variations in school and class size were not considered very great, no attempt to determine relationship between these factors and learning was made in this study.

In all classes the texts used by students were one of two or three standards and no relationship could be determined between the use of any one text and subject matter mastery.

By performing an analysis of variance on the pre test scores, the conclusion was drawn that no group achieved its gain as a consequence of prior knowledge. We did not consider correction for intelligence as being necessary because of the homogeneous character of the environment being studied, and also because there is no interest here in the gains of individual pupils but rather in all the pupils of each teacher. Care was taken to ensure that there was no ability grouping in any of the schools.

Subjective Ratings of Teaching Ability: In order to test the minor hypothesis mentioned in Chapter I, it was necessary to obtain administrators'

and pupils' subjective ratings of the teachers' ability. This was done on a simple five point scale on which the ratings were: very superior, superior, average, below average, and poor. This scale was included in the pupil and administrator questionnaires which can be found in Appendix I.

The Instruments Used in Gathering Social and Social-Psychological Data

Three different questionnaires were used to obtain the desired data concerning the independent variables which we have termed social and social-psychological factors. One of these questionnaires was answered by the U.S. History students of each of the thirty-nine teachers (Student Questionnaire), one by each of the teachers (Teacher Questionnaire), and one by the principals who supervised the teachers (Principal Questionnaire). A copy of each of the questionnaires will be found in Appendix I.

Student Questionnaire: The items found in Part II of the Student Questionnaire are the ones in which we are primarily interested. They are concerned with various aspects of the relationship between teachers and their pupils, including the pupils' reactions to the teacher's personality, and the character of their personal relationship. It will be noted that Part I on the questionnaire is made up of personal questions. The data from these

were used to check the necessity of controlling various factors, as previously described. Part III of the questionnaire provides for the pupils' rating of the teachers' ability. These were used to test the related hypotheses described in Chapter I, viz., administrators' and pupils' ratings of teaching ability are correlated with ratings of ability as measured by gains in pupil information.

The twelve items in Part II were selected as a result of earlier research by Brookover in various aspects of teacher-pupil relations.[6] Some items were selected which these earlier studies indicated were related to teaching ability. Others came as a result of suggestions to Brookover by a number of educators as possibly related to teaching ability. Several of the items were derived from the work of Frank Hart.[7]

Teacher Questionnaire: Information on the role of the teacher in the community and the school, as well as personal data on the teachers, was obtained through a Teacher Questionnaire. The items in this questionnaire were primarily concerned with subjects which are frequently made the basis for employment or dismissal of

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[6]Brookover, "Person-person Interaction Between Teachers and Pupils and Teaching Effectiveness," Journal of Educational Research (Dec. 1940), pp. 272-287, and unpublished data of Teacher-pupil Relations of Twenty Elementary Teachers in Wisconsin.

[7]Frank Hart, Teachers and Teaching by 10,000 High School Seniors (New York: MacMillan Company, 1934).

teachers in rural schools. For this reason it is important to know whether or not they are related to teaching ability. A few remaining items give information regarding factors that have been represented as determinants of pupil learning. In this group are questions four and five of Part II and questions four to seven of Part IV.

Principal Questionnaire: The purpose of this questionnaire was to determine if the factors which these school administrators frequently use as the basis for employment and dismissal are related to teaching ability as measured by gains in information.

In Part II of this questionnaire are seven items which are frequently found on teacher rating scales and are concerned with the teacher's relationships to the students and others in the school situation. It has been demonstrated[8] that administrators' ratings are not highly correlated with pupil gains when ratings on several items are taken together. The purpose here was to see if the administrators' opinions of the teacher on any one of these traits were related to gains in information.

The third part of the questionnaire duplicates, in part, some of the items in the Teacher Questionnaire. Since all of them are at times the basis for continuance

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[8]Popham, LaDuke, Rostker, et al., op. cit..

or discontinuance of employment, it was considered important that we have the administrators' opinion also.

Part IV of the questionnaire was included for use in testing the hypothesis that administrators' ratings of teaching ability are correlated with gains in pupil information.

Gathering The Data

During the legislative session of 1965 and 1966, the Michigan State Legislature passed an act which gave public employees the right to bargain collectively. This induced a state of turmoil into nearly every school district in the state. The initial contacts for this study were made in the midst of this turmoil. This, in addition to the fact that it was necessary for all the participating teachers to be men, and 56% of them were coaches, largely accounts for the relatively small number of teachers included in the study. It can be seen that in the "heat" of last minute negotiations, and the early days of football season, the number of teachers willing to cooperate was minimal.

From the list of schools drawn up in consultation with the staff member from the Michigan Department of Public Instruction, the initial contacts were made with high school principals by telephone. This was done during the latter half of August, 1966. The project was briefly explained and the names of their U.S. History

teachers were requested along with permission to contact them. The principal was assured that a letter describing the project in detail would immediately follow if his initial consent was given. In the letter, his aid was also solicited in the completion of a confidential questionnaire regarding his evaluation of the teacher or teachers on his staff who might be cooperating with the writer. Brookover administered questionnaires to superintendents and members of the local boards of education regarding the teachers in his study. It was assumed by this writer that the schools in this study were all so large that the likelihood of a superintendent knowing the teachers well enough to complete the questionnaire adequately was remote. This would be even more the case with board members. It is for this reason that principals were used instead of superintendents and board members were not used at all. This, of course, is another necessary deviation from Brookover, albeit a relatively minor one.

In order to obtain the cooperation of the teachers, it was emphasized that a minimum amount of effort and class interruption would be required. This is the major reason why a short history test was used. The history examination was thirty-four multiple choice questions and required about thirty minutes to complete. It was suggested that, if the teacher desired, the post test could be used as a semester test. The teachers were also

informed that the results of this study would be made available to them.

Forty teachers agreed to cooperate. One was dropped because of his failure to comply with the requested dates for administration of the post test.

By the end of the second week in September, pre tests were mailed to the teachers and, after some "encouragement" by telephone, they were all returned by the end of the month.

During the first half of January the questionnaires concerning the teachers were mailed out. It should be recalled that there were three such questionnaires: one to be completed by the principal, one by each student, and one by the teacher himself.

Since the responses to the Student Questionnaire were of a confidential nature, it was important that there be nothing to inhibit the students' frankness. A special set of instructions was enclosed with these questionnaires in which it was requested that another teacher administer them, and certain procedures be followed which would minimize even his seeing any of the completed forms. The students' names did not appear on the questionnaires. They were informed in advance that the completed questionnaires would be sealed in their mailing envelope by the administering teacher in their presence, thereby guaranteeing that their teacher would not know how any student appraised him, and

alleviating further any threat they could possibly have felt.

Immediately after the return of all the questionnaires during the third week in January, the post tests were mailed. They were returned by the end of the first week in February.

Since these data were gathered completely by mail[9] (with the exception of the collection of the completed post tests which were picked up personally by the writer or a representative), it was very important that instructions be in detail and easily understood. In all the correspondence sent out the teacher was always encouraged to call the writer (collect) if any questions arose. No calls were received. In any event, a good lesson in communications was learned. The writer is especially gratified in that only one respondent out of the original forty was lost as a possible consequence of misunderstanding.

Methods of Analysis

Analysis of the data by arranging it in contingency tables is the major procedure followed, teaching ability being one variable with one of the various social factors as the other.

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[9]Brookover distributed the tests and questionnaires in person and gathered some of his data by interview instead of questionnaires.

In order to determine the probability that differences as large as those between the observed and expected (theoretical) cell frequencies would occur by chance, an application of the Chi-square test was made. If a real relationship was indicated by means of a low probability, the coefficient of contingency was calculated to determine the magnitude of the relationship.[10]

We, of course, were also greatly interested in the direction of the relationship. Other means were resorted to in making this determination since the Chi-square test and the coefficient are not appropriate. This determination was made in most cases simply by a close scrutiny of the contingency table. In more complicated cases where the table contains several cells and the relationship is not linear, or where variations in direction are present, the following simple method was devised. First, cells with lower frequency were combined with cells in the next row or column to smooth out the minor variations in the direction of the correlation. Second, the proportion of the cases in a given column was calculated (i.e., the proportion of the students who rated their teachers friendly). Third, the positive or negative deviations of corresponding row proportions from the above mean P were then determined.

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[10]The tables and calculations will be found in Appendices II and III. The formulas used are shown in Appendix II.

Fourth, points indicating the positive deviations were plotted to determine the direction of the relationship.

In concluding this chapter, perhaps it is appropriate that an explanation be given concerning what is meant by the term "direction of relationship." This pertains to the kind, or nature of the relationship after a significant one has been established. Four terms are used to describe the relationship: positive, negative, curvilinear, or ambiguous. For example, Table 2 of Appendix II indicates a positive direction because a greater proportion of respondents indicate that superior and very superior teachers are always fair than indicate below average teachers as being fair. Furthermore, a straight line can be plotted by means of the positive numbers in the f_o-f_t columns; it being noted, for example, that poor teachers are predominantly rated as never fair or sometimes unfair. If Table 2 had indicated that superior teachers were never fair, and that poor teachers were always fair, then we would say that the direction was negative. The term curvilinear is illustrated in Table 3 of Appendix II. The direction is considered to be curvilinear because average teachers are more likely to be very much respected than are either superior or below average teachers and a line can easily be plotted which shows a definite curve. The term ambiguous is used when no such line can be plotted in any direction due to irregular negative and positive magnitudes which occur in the f_o-f_t columns.

CHAPTER III

RESULTS OF THE ANALYSIS: THE MAJOR HYPOTHESES

The Relation of Social Factors To Pupil Gains In Information As A Measure of Teaching Ability

It is the primary objective of this study to make a determination as to the existence of a relationship between a number of social factors and teaching ability as measured by mean gains in pupil information, to measure the amount of the relationship, and to determine the nature of that relationship. We have previously described the techniques and questionnaires as the means by which the data were obtained on the social factors. These factors include: (1) teacher-pupil relations, (2) the role of the teacher in the community, (3) the role of the teacher in the school, (4) the teacher's age, (5) the teacher's attitude toward his work, (6) the teacher's social adjustments, and (7) the employer's opinion of the teacher. The results of the investigation of these relationships are presented in the following sections.

Teacher-Pupil Relations and Teaching Ability: The data on the teachers' relationships with their pupils were obtained from the replies of approximately

1,160 students to 13 questions in the Student Questionnaire.[1] The analysis of the association between these indicators of teacher-pupil relations and teaching ability led to the following conclusions.

Brookover, in 1943, reported significant correlations with negative direction between seven of the thirteen questions in the Student Questionnaire and mean gains in pupil information. The questions were: (1) Is this teacher friendly when you meet him? (2) Does this teacher join in your recreational activities? (3) Do you admire this teacher personally? (4) Do you like to have this teacher join in your social and recreational activities? (5) Do you think this teacher is fair? (6) Is this teacher helpful to you in your work? (7) Do you confide in this teacher and tell him your troubles?

In each of the above questions, those teachers who were rated favorably in terms of "admirable," "helpful," "friendly," etc., were less effective according to the mean gains in information achieved by their pupils. This, of course, led to the conclusion that those teachers who demonstrate warmth and congeniality toward their students are less effective imparters of history information.

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[1]This questionnaire will be found in Appendix I. The tables and calculations are presented in Appendix II, Tables 1 through 14.

The findings related to this hypothesis tend to refute the Brookover results (see Table 2). The response to the question, "Do you think this teacher is fair?" reveals there is a significant (.18) but low correlation with a positive direction between the pupils' answers to this question and teacher effectiveness. This is a refutation to Brookover on this particular question.

With the exception of the question on teacher friendliness, for which no relationship was indicated, all other questions show low (C = .32 or less) but significant correlations.

The questions concerning the students' respect for their teachers' academic ability, opinions of the teachers' peculiarity, and freedom to confide in the teacher, all indicated curvilinear directions. The average teachers, according to mean gains in information, were respected more for their academic ability and were less likely to be considered peculiar than either the above or below average teachers. The average teachers were also confided in much more frequently than the above or below average teachers.

The direction of the questions on the students' respect for their teachers' academic ability, and students' perceptions of the teachers' peculiarity was in conformity with that of the Brookover study. These were the only questions where such conformity was observed.

TABLE 2

COMPARATIVE RESULTS OF TESTS OF RELATIONSHIP BETWEEN TEACHER-PUPIL RELATIONS AS DETERMINED BY THE RESPONSES OF 1275 STUDENTS IN 1943 AND 1160 STUDENTS IN 1967 TO 13 QUESTIONS CONCERNING SUCH RELATIONS AND RATING OF TEACHING ABILITY FOR 66 TEACHERS IN 1943 AND 39 IN 1967 AS DETERMINED BY MEAN GAINS IN INFORMATION

Questions Concerning Teacher-Pupil Relations	Relationship With Mean Gains in Information									
	Degrees of Freedom		Chi-Square		Probability		$\bar{C}$		Direction	
	1943	1967	1943	1967	1943	1967	1943	1967	1943	1967
Do you think this teacher is fair?	8	8	23.88	169.41	.01-	.01-	.17	.18	Negative	Positive
Do you respect this teacher for his academic ability?	8	8	18.06	18.55	.02	.01	.14	.15	Curv'lin	Curv'lin
How long have you known this teacher?	8	8	23.04	103.03	.01-	.01-	.19	.32	Varies with age	Ambiguous
Does this teacher have a sense of humor?	4	4	7.44	53.60	.10	.01-		.32	None	Ambiguous
Does this teacher join in your recreation?	8	8	26.51	23.15	.01-	.01-	.19	.17	Negative	Ambiguous
Do you think this teacher has a pleasant appearance?	8	8	17.29	24.95	.03	.01-	.14	.18	Varies with age	Ambiguous
Do you think this teacher is peculiar?	8	8	19.85	27.02	.01-	.01-	.15	.19	Curv'lin	Curv'lin
Does this teacher scold you?*	8	8	1.74	17.76	.98	.03		.15	None	Ambiguous
Is this teacher sarcastic in speaking to you?*	8		12.67		.15				None	

TABLE 2--Continued

Questions Concerning Teacher-Pupil Relations	Relationship With Mean Gains in Information									
	Degrees of Freedom		Chi-Square		Probability		$\bar{C}$		Direction	
	1943	1967	1943	1967	1943	1967	1943	1967	1943	1967
Do you like this teacher to join your recreation?	8	8	44.87	34.03	.01-	.01-	.23	.21	Negative	Ambiguous
Do you admire this teacher personally?	8	8	22.11	29.24	.01-	.01-	.16	.19	Negative	Ambiguous
Is this teacher helpful to you?	8	8	24.68	15.37	.01-	.05	.17	.14	Negative	Ambiguous
Do you feel you can confide in this teacher?	8	8	15.98	23.83	.05	.01-	.14	.18	Negative	Curv'lin
Is this teacher friendly to you?	4	8	27.47	13.19	.01-	.10	.20	.13	Negative	None

*These questions were combined in the 1967 study to read as follows: "Does this teacher frequently scold or use sarcasm?"

The direction of all (8) other questions was ambiguous. Therefore, in an effort to make some determination concerning the direction of the relationships, the cells of the tables were combined and the proportions of the observed frequencies were examined. We are considering the relationships between the following social factors of teacher-pupil relationships and teacher effectiveness: (1) How long have you known this teacher? (2) Does this teacher have a sense of humor? (3) Does this teacher join in your recreational activities? (4) Do you think this teacher has a pleasant appearance?

A consistent positive relationship emerges in that the largest combined frequency occurs for the very superior and superior teachers according to mean gain scores. These teachers are perceived to: "very much" have a sense of humor, "often" join in student recreational activities, and "very much" have pleasant appearances. While these findings tend to verify consistent positive relationships, we hasten to add that every one of these frequencies are offset by sizeable (though lower) frequencies for the below average and poor teachers according to mean gain scores.

Four other questions continue to indicate a tendency to sustain the positive relationship tentatively established in the preceding paragraph: (1) Does this teacher frequently scold or use sarcasm? (2) Do you

like to have this teacher join your social and recreational activities? (3) Do you admire this teacher personally? (4) Is this teacher helpful to you in your work?

The high frequencies continue to favor the superior and very superior teachers except in intermediate responses of "sometimes" or "somewhat." These responses continue to be offset by high frequencies for the below average and poor teacher, however.

The above, rather crude, analysis continues to indicate a tendency to refute the Brookover finding that the warm, congenial teachers were less effective. The preponderance of ambiguous directions of the relationships indicates that students are unsure of the relations existing between themselves and their teachers.

Relations of the Teachers' Age to Teaching Ability: Biddle and Ellena, in a very comprehensive examination of the relationship of age to teaching, suggest that "age may determine relationships between teachers and students, and, therefore, the effectiveness of teachers."[2] Further, it is suggested that the relationships teachers have with their students fall into stages concomitant with stages in their career. The first stage is characterized by close relationships between teachers and students and by teacher energy investment in classroom related activities. Middle-aged

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[2]Biddle and Ellena, op. cit., p. 315.

teachers tend to be involved in professional activities. Older teachers often are embittered and defensive, but those who become "old characters" or "mother counselors" retain or even increase their ability to affect students.

> Such findings imply that teachers of all ages may be effective (or ineffective) but that different types of behavior are required for effectiveness at different ages. The middle-aged teacher who yearns for the warmth of her early relations with students is probably less successful than her colleague who adjusts her behavior to her age. The elderly teacher is likely to end her career in frustrated ineffectiveness unless she becomes a subject-matter expert or a grandmother figure. Hypotheses such as these should be explored in supplementary studies which utilize careful measurements of teacher style and student reactions.[3]

The findings of this study do not indicate an existing relationship between teacher age and mean gain in information. No attempt was made to establish a relationship by controlling for specific age ranges because of the low number of teachers in the study and also because of the slight deviation in mean age between the groups of teachers (very superior, 29; superior, 26; average, 30; below average, 31; poor, 36.) This does suggest that the better teachers were more likely to be between 22 and 30 years of age.[4]

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[3]Biddle and Ellena, loc. cit.

[4]The questionnaire by which this information was gained is found in Appendix I. The relevant table is Table 15, Appendix II.

The Teachers' Role in the Community in Relation to Teaching Ability: Popham[5] has indicated that strong emphasis is placed on the teachers' community activities and/or leisure activities in that it is believed such activities do have a bearing on teaching ability. This being the case, such beliefs do in fact influence administration employment policies.

Brookover's study does not substantiate the justification for such practice on the part of school administrators, nor does this study.

Data on the teacher's place of residence and acquaintance (includes involvement) with the community were obtained by means of a questionnaire. The analysis of these data fails to indicate any relationship between previous residence, length of residence in the community, or length of teaching tenure and teaching ability. Neither is the proportion of the patrons known by the teacher significantly related to gain in pupil information.[6]

The Teachers' Role in the School in Relation to Teaching Ability: Since the writing of this thesis began, the writer had occasion to attend a teachers' meeting at the school where he is employed. One teacher was overheard to say to another (who is a coach), "Come on, now. Surely you'll admit your teaching suffers during track season?" This comment is representative of

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[5]Popham, op. cit., p. 4.

[6]The analysis and calculations are presented in Appendix II, Tables 16 through 18.

a wide-spread belief that coaches are not as good in their teaching as non-coaches. The question we are concerned with here is what bearing, if any, other school duties have on the effectiveness of classroom teachers. Exactly half the teachers in the study sponsor dances or supervise other activities which bring them into close informal contact with their students. Over half (56%) of the teachers in this study were coaches.

In neither case was a significant relationship established between these extracurricular activities and pupil mean gains in information.[7]

Teachers' Attitudes Toward Teaching in Relation to Teaching Ability: Ringness, in his contribution to a major survey of research on teacher effectiveness, treats the subject of motivational factors, one of which is teachers' attitudes toward teaching. His observations led him to report that not one investigation was encountered in which a clear relationship was established between a teacher's "satisfaction with teaching and this satisfaction as related to teaching success."[8]

Similar attempts were made here to establish some relationship between teachers' attitudes toward their

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[7]The analysis and calculations are shown in Appendix II, Tables 20 and 21.

[8]A. S. Barr et al., Wisconsin Studies of the Measurement and Prediction of Teacher Effectiveness--A Summary of Investigations (Madison, Wis., Dembar Publications, Inc., 1961), p. 117.

work and teaching success. No relationship whatever was established.

The Social Adjustment of Teachers in Relation to Teaching Ability: A chapter by Peronto in the above mentioned survey of research gives a thorough treatment to a problem thought by many to be a significant factor in teacher effectiveness. While he concedes that "a certain amount of emotional stability is essential to teaching success,"[9] he asserts that paper and pencil tests designed to detect emotional stability are not adequate.

Again attempts were made in this study to relate the social adjustment of teachers to teaching ability by using such questions on the Teacher Questionnaire as: "Do you feel your superiors are riding you or have it in for you?" and "Do you feel you are not appreciated by the community?" Brookover readily concedes that these questions were inadequate for the task. His study, as well as this one, is not at all conclusive as to the relationship between teacher adjustment and teaching ability. Interestingly enough, of the nine teachers in this study who felt unappreciated by the community, five were commuters. It may well be in these cases their perceptions are correct; the desire of the school patrons that "their" teachers live in the community being made manifest.

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[9] Ibid., p. 97.

Employers' Ratings of Teachers' Characteristics in Relation to Teaching Ability: It is a common and widely held assumption that superintendents, principals, and members of boards of education are competent judges of good teaching. Implied here is that there is some general ability to make such ratings. Out of this widely held assumption has evolved the use of an almost infinite variety (Barr and Emans studied two hundred and nine[10]) of rating scales.

This present study checked each of seven ratings by the principals against gains in information. Ratings of the following were included: friendliness, cooperativeness, tactfulness, enthusiasm, stimulation of students, sympathetic understanding of the students, and fairness in treatment of students. This questionnaire can be found in Appendix I. No significant correlations were found between any of these ratings and pupil gain in information.[11]

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[10] Ibid., p. 14.

[11] The analysis and calculations are shown in Appendix II, Tables 21 through 27.

CHAPTER IV

RESULTS OF THE ANALYSIS: THE MINOR HYPOTHESIS

This chapter notes the relations between ratings of the pupils and the social factors considered in this study. Since these ratings are of a highly subjective nature (Barr indicates there is evidence that efficiency ratings are, in reality, compatibility ratings[1]) the relations are considered to be of minor importance.

Teacher-Pupil Relations as Related to Pupils' Ratings of Teaching Ability: The minor hypothesis was that certain social factors are related to pupils' ratings of teaching ability. The data regarding the social factors were obtained by questionnaires from both the teachers and pupils.[2]

Teacher-pupil relations are related to pupils' ratings of teaching ability. There is a positive relationship between pupils' ratings of the effectiveness of teachers and their response to eleven of the thirteen questions in the Student Questionnaire. The eleven questions were concerned with the teachers'

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[1] Ibid., p. 143.

[2] The questionnaires may be found in Appendix I. The results of this section of the analysis may be found in Appendix III, Tables 1 through 4.

friendliness, fairness, helpfulness, sense of humor, appearance, the pupils' length of acquaintance with the teacher, the teachers' frequency of participation in recreational activities, as well as the desire of the pupils to have him participate, the pupils' personal admiration of the teacher, the pupils' feelings of freedom to confide in the teachers, and the pupils' respect for the teachers' academic ability.

The responses to the other two questions were negatively correlated with the pupils' ratings of ability. These two questions dealt with the frequency with which the teacher used sarcasm or scolded, and the students' perceptions of teachers' peculiarity.

No ambiguity of results is evident here. There is no question but what the students equate a teacher's effectiveness with the teacher's ability to relate well with them. The greater the degree of congeniality and warmth between teacher and student the higher he was rated by them as to effectiveness. Barr's previous indication is verified.[3]

Brookover points out that the correlation between nine of these factors and pupils' ratings are in disagreement with the corresponding correlations between the same factors and mean gains in information. This is also the case for this study for the single social factor of fairness. According to mean gain scores the teachers

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[3] Ibid.

who were perceived as being unfair were the superior and very superior teachers; here the fair teachers are rated by the students as being superior and very superior. There is little question but what the students believe they learn more from those teachers whom they like most.

The Teacher's Age and Length of Acquaintance with Pupils in Relation to Pupils' Ratings of Ability: The teachers' age and length of acquaintance are inter-related, therefore they are treated here together. While a relation for the above two factors of age and length of acquaintance is established at the .01- and .03 levels of probability, the directions of the relations are somewhat vague; that of age being curvilinear and ambiguous for the length of acquaintance.

The Teachers' Role in the Community in Relation to Pupils' Ratings of Ability: Consistent but low significant correlations between the social factors of church attendance ($\overline{C}$ = .224), participation in community activities ($\overline{C}$ = .276), the percentage of students' parents known ($\overline{C}$= .214), and the tenure of the teacher ($\overline{C}$ = .195) and pupils' ratings of ability were observed. No consistent pattern of direction of the relationships was observed, however. Those teachers who attended church often were likely to be regarded as below average or poor teachers, establishing a

definite negative direction, but the direction of the other three relationships were curvilinear or ambiguous. It does appear from examination of the data that those teachers who have tenure of five years or more are more consistently rated higher by their pupils.

The Teachers' Role in the School in Relation to Pupils' Ratings of Teaching Ability: Those who supervise such extracurricular activities as athletics, dramatics, music, school yearbook, etc., are consistently considered by the pupils to be below average or poor teachers. This is in complete conformity with Brookover.

The Teachers' Attitudes Toward Their Work and the Teachers' Social Adjustment in Relation to the Pupils' Ratings of Ability: All thirty-nine teachers enjoy their work, only two are seeking some other type of employment, none feel their superiors are "riding" them, and only nine feel unappreciated by the community. In view of the above tallies, it is obvious that no relationship could be established.

Some interesting observations can be made, however. As previously stated, five of the nine teachers who feel unappreciated by the community are daily commuters. Also, of these same nine teachers, two taught at the same school. These nine teachers

are overwhelmingly rated by their pupils as average or above, therefore it probably can be assumed that whatever negative feelings these teachers have for the community have not been communicated. One teacher, in answer to the question concerning the people with whom he socializes, wrote in the margin of the questionnaire, "Don't live in this community." Sixty-eight percent of his students said that he frequently used sarcasm or scolded them in his classroom. He did get good ratings on other factors, such as being friendly to them (outside of class) and having a good sense of humor (90% rated him "very much" having a sense of humor). The above nine teachers range all the way from superior to poor according to the pupils' gain in information criterion.

A Comparison of the Various Measures of Teaching Ability

Since there is some discrepancy in the manner in which several of the social factors in this study are related to the different measures of teaching ability, perhaps it will be of interest to indicate the correlations between the measures themselves.[4]

There is no relation between the principals' rating and pupil mean gains in information. The data did indicate a low ($\overline{C}$ = .18) relationship between the two subjective ratings by the pupils and principals.

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[4]See Table 5, Appendix III, for the summary of the relationship between these measures.

The pupils' ratings, with respect to the objective measure of teaching ability, indicate a low significant relationship.

These findings continue to bear out other findings[5] that subjective ratings of teaching ability are of dubious value.

The findings related to this minor hypothesis are in general conformity with Brookover.

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[5]La Duke, "The Measurement of Teaching Ability," Journal of Experimental Education, Vol. XIV (Sept. 1945), pp. 75-100.

CHAPTER V

SUMMARY OF RESULTS

The results of this study indicate that, in the specific instances of the thirty-nine teachers studied, there are some social factors which may be important while several factors heretofore considered important reveal no apparent relation to teaching ability as measured by pupil gains in information.

The summarized results of the study are here stated.

1. a. Tentative indications are that teachers who have a more congenial relationship with their students tend, on the average, to teach slightly more history as measured by pupil gains in information.

   b. Those teachers who are perceived to have closer personal relationships with their students are considered, by their students, to be better teachers.

2. No index of the teachers' role in the community (i.e., length of residence, participation in community affairs, church attendance, etc.) is related to his effectiveness as a history teacher as measured by pupil gains in information.

3. a. There is no indication that teachers' supervision of activities which allow for close informal contacts with students is in any way related to teaching effectiveness as measured by pupil gains in information.

   b. However, those teachers who do supervise such activities are considered, by the pupils, to be less effective teachers than those who do not involve themselves in this manner with the pupils.

4. The principals' evaluations of those teacher traits which are frequently found in teacher rating scales (friendliness, tactfulness, enthusiasm, etc.) are

not related to teaching ability as measured by pupil gains in information.

5. Subjective ratings of teaching ability by principals and pupils are inter-correlated.

6. Principals' ratings of teaching ability are not related to pupil gains in information.

7. Pupils' ratings have a low positive relationship with teaching effectiveness as measured by pupil gains in information, but do tend to indicate pupils know when they are well taught.

These findings, in conjunction with those of Brookover, continue to indicate that many of the factors which are frequently used as the basis for teacher employment policies are not related to the objective measurement of teaching effectiveness used in this study.

In the opinion of the writer, the term "tentative" in item 1-a above should be emphasized, for findings of this study which indicate refutations of Brookover are not believed to be significant enough to be strongly conclusive. Certainly, however, the Brookover findings are not sustained. It should be recalled that the pur-

pose of this replication is to determine if social and educational changes in the twenty-five years since Brookover undertook his work would in some way be reflected in the findings.

Any high school graduate should be cognizant of the fact that many events which have precipitated social changes of great magnitude have occurred in the last twenty-five years (the advent of television, wars, tremendous affluence, increased mobility, etc.). It is unlikely that social scientists will ever be aware of all the effects on society of such phenomena, but they can safely isolate some. One of these, which is presently in a dynamic state, is the problem of authority; its manifestations and perceptions of the manifestations.

Brim[1] specifically refers to this question in the educational context, saying that the task-oriented teachers (which is what we assume the teachers in this study to have been) gain respect but lose attractiveness. The findings of this study give some indication that the better teachers are respected and retain their attractiveness. A major portion of the findings (ambiguous directions for eight of the questions having to do with student-teacher relations) indicates that student perceptions of their relations with the teacher are those of uncertainty.

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[1]Orville G. Brim, Jr., Sociology and the Field of Education (New York: Russell Sage Foundation, 1958), p. 49.

Within the experience of this writer, and many teachers of his acquaintance, there is much uncertainty as to what role is proper or most effective in terms of what is to be accomplished in the classroom. Such questions as, "How can one effectively teach democracy by autocratic methods?" are being raised. This gives rise to many reservations among conscientious teachers. In fact, such questions are known to cause intra-faculty and faculty-administrative feuds. One recent news headline was, "Troy Is Split By Feud Over Teaching Ideas". A portion of the article follows:

> Some teachers adopted "sensitivity training," a kind of no-holds-barred bull session in which participants are free to say anything they want.
>
> "There is nothing wrong with the idea," said Mrs. Perry, "but the people who were conducting these sessions were not adequately trained in how to use the device."
>
> "Some teachers allowed their students to sit and talk about anything they wanted to, rather than study subject matter.
>
> "This attitude meant that those of us who wanted to teach subject matter had great difficulty in carrying on. Students who had no homework in other classes greatly resisted assignments in ours."[2]

While there are perhaps other contributory factors, it is the conclusion of this writer that such uncertainty on the part of the teachers leads to the uncertain pupil perceptions revealed in this study and referred to above.

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[2]Detroit Free Press, July 10, 1967, p. 3-A.

CHAPTER VI

CRITIQUE ON THE DESIGN OF THIS INVESTIGATION

Barr, in his contributions to a major review of eighty-three studies on the measurement of teacher effectiveness, gives a thorough treatment of the hazards which the pupil gain criterion presents the investigator.

> The use of measured pupil gain as a criterion of teacher effectiveness presents very real difficulties. First of all, each teacher in the modern school, within very broad limits, chooses his own purposes, means, and methods of instruction. These ordinarily vary from one school system to another and within named grade levels and subject fields. Regardless of the validating data reported in test manuals, the tests used in developing the pupil gain criterion will have varying degrees of operational validity, except as the teachers agree to pursue certain stated objectives which can be defined with sufficient clarity to provide like meanings to all the participants. [No such agreements were held by the teachers in either Brookover's study or this one.] A second difficulty arises out of the fact that, notwithstanding over a half century of effort, many of the outcomes of learning and of teaching are poorly or inadequately measured. The gaps in the criterion arising from inadequate tests with which to measure pupil gain will be found to be considerable. Finally, tests measure effects but not causes. The sources of the effects observed are not readily ascertained, even under carefully controlled experimental conditions. Some of these effects will reside in the pupils, some in their general and special capabilities, some in their previous training, and some in

> motivation. A few of the effects are doubtlessly traceable to the home environment: socio-economic status, respect for school education, and direct assistance rendered by various members of the family. A few of the effects will be traceable to the school and community: In some, teachers' and pupils' morale is high and in some it is low. The physical facilities of different schools and communities vary greatly. And finally, there are the direct and indirect effects of the teaching of other teachers, both in the same and related subjects. One of the very best measures of a teacher's effectiveness will be found in what his students do in subsequent course work. Accordingly, the problem of establishing an adequate criterion of pupil gain will not be an easy one.[1]

Even though every effort was made to "control" for all the factors which Barr mentions, it is believed by this writer that such control is impracticable in the area even of group differences. It is possible, as Morsh[2] proved, but the setting of his investigation (an Air Force training center) is certainly not the norm for American public education. Most given types of Air Force training require a minimum intelligence and aptitude level. This immediately creates a very homogeneous group. It is also the case that when a particular group (class) is under the instruction of a particular teacher, this teacher is the only one it has for a thirty hour instructional week (six hours daily), for a definite period of time, and only one subject is taught; both student and teacher

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[1]Barr et al., op. cit., p. 8.

[2]Morsh, Burgess, and Smith, op. cit., pp. 79-88.

having well defined and agreed upon objectives. Since this is not the norm for most education which occurs in this country, this writer would surmise that herein lies the reason Morsh's study is not included in Barr's exhaustive survey.

What is implied above is that a serious weakness of the design of this investigation is the lack of control for group differences, it being previously stated such control is for all practical purposes impossible to accomplish even in what is believed to be a homogeneous cultural background. This is believed to be true of Brookover's study as well as this one.

Another weakness of the pupil gain criterion is that it is a single criterion. Biddle and Ellena, in discussing the problem of semantics in educational research, define teacher competency as "the ability to produce agreed upon effects."[3] There is little doubt that a consensus probably did exist in the setting of the Brookover study that a major objective, if not the major objective, of U.S. History teaching was to instill a maximum amount of U.S. History factual information into the minds of the students. How to reach the objective is another matter, however.

Here is where a further piece of research is appropriately suggested--a survey of the objectives

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[3]Biddle and Ellena, op. cit., p. 3.

U.S. History teachers hold for their teaching efforts. This writer would hypothesize that such a survey would reveal a very narrow consensus of opinion. The present state of education in general, and the social sciences in particular, at the elementary and secondary levels is a very dynamic one, thereby accounting for what is believed by this writer to be a narrow consensus concerning objectives. For this reason, the single criterion approach to teaching effectiveness is inadequate, at least as presently applied to U.S. History teaching.

According to Riessman, the progressive approach, despite its emphasis on learning by doing, fails with the culturally deprived child, whose cognitive style demands structure.[4] When the learning situation is such as to demand task-orientation--when passing an examination is at stake, for example--students will be frustrated by permissive leadership; progressive education is not necessarily what the students themselves want.

Brim points out that the classroom group, like all groups, has two general kinds of needs: "instrumental" and "expressive." The relationship of these to initiation of structure and consideration

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[4]Frank Riessman, The Culturally Deprived Child (New York: Harper & Row), p. 72, cited by Earl E. Edgar, Social Foundations of Education (The Center for Applied Research in Education, 1965), p. 105.

is clear. Brim also believes these to be relatively incompatible roles which, in fact, are taken by different people in informal groups. The problem of the teacher, as the sole leader in the classroom, involves handling both roles. Brim concludes that the studies show the dominant role for teachers is task-oriented ("instrumental"); that the teacher accepts this role at the expense of "expressive" or morale considerations, gaining respect but losing attractiveness in doing so. Both students and teachers wish more attention could be given the expressive role but when this happens, learning suffers. As a consequence, the teacher faces contradictory demands in the classroom.[5] This would explain why, in Brookover's study, the teachers whose academic ability was respected were not liked.

It is therefore this writer's conclusion that, in conducting future research in this area, it should be known in advance whether or not the teacher is "directive or permissive" and whether he is properly "matched" with students who have a manifest need for his kind of instruction. This implies that one characteristic of an effective teacher may be his ability to meet the psychological needs of his students in his manner or teaching method approach.

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[5]Brim, loc. cit.

Obviously then the autocratic teacher is not necessarily the best teacher even in terms of pupil gain (if his pupils need a permissive teacher) but he still might be. Contrary to LaDuke, then, such a thing would not be "contrary to . . . common sense."[6]

Further, it is the feeling of this writer that future research in the area of teaching effectiveness should be "tailored" to fit a very particular setting (primarily according to the particularly stated objectives and personality components of teachers and students), and that such research will not be of much value for purposes of generalizing, with a view that such generalizations be applied to all teaching.

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[6]LaDuke, op. cit., p. 10.

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A P P E N D I X I

QUESTIONNAIRES AND TESTS

STUDENT QUESTIONNAIRE

School_____ Teacher_____ Date_____

I. Personal Data

1. Sex of student: Male___ Female___

2. Grade in school: 12th___ 11th___ 10th___ 9th___

3. Age of student: 20 or over___ 19___ 18___ 17___ 16___ 15___ or less___

4. How long have you known this teacher?
Less than 1 year___ 1 year___ 2 years___
3 years___ 4 years___ 5 years or more___

II. Relationship of Teacher to Pupils

1. Is this teacher friendly to you when you meet him?
Always___ Sometimes___ Never___

2. Does this teacher frequently scold or use sarcasm?
Often___ Sometimes___ Never___

3. Does this teacher have a sense of humor?
Very much___ Somewhat___ Not at all___

4. Does this teacher join in your recreational activities? Often___ Sometimes___ Never___

5. Do you think this teacher has a pleasant appearance?
Very much___ Somewhat___ Not at all___

6. Do you think that this teacher is peculiar?
Very much___ Somewhat___ Not at all___

7. Do you respect this teacher for his academic ability?
Very much___ Somewhat___ Not at all___

8. Do you admire this teacher personally?
Very much___ Somewhat___ Not at all___

9. Do you like to have this teacher join in your social and recreational activities? Very much___
Somewhat___ Not at all___

10. Do you think this teacher is fair?
Always___ Partial to boys___ Partial to girls___
Sometimes unfair to either group___ Never ___

11. Is this teacher helpful to you in your work?
Often___ Sometimes___ Never___

12. Do you feel you can confide in this teacher and tell him your troubles?
Often___ Sometimes___ Never___

III. Pupil Rating of Teacher's Ability

How do you rate this teacher regarding his ability to teach history?
Very Superior___ Superior___ Average___
Below Average___ Poor___

TEACHER QUESTIONNAIRE

School_____ Teacher_____ Date_____

I. Personal Data

1. Teacher's Age___

2. How long have you taught in this school?_____

3. Do you live in this community? Yes___ No___

4. Was your home here before you taught here?
Yes___ No___

5. If you do not live here, do you commute on weekends?___ Commute daily?___

II. School Activities

1. Do you coach a major athletic sport? Yes___ No___

2. Do you supervise extracurricular activities (other than athletics) such as dramatics, music, etc.? Yes___ No___

3. With what percentage of the parents of your students are you well acquainted?
Above 75%___ 75%___ 50%___ 25%___
Below 25%___

4. Do you strive to stimulate competitive activity among your students in history?
Yes___ No___

5. Do you have your students cooperate in group projects in their history work? Yes___ No___

III. Community Activities

1. Do you attend church in this community?
Often___ Sometimes___ Never___

2. Do you participate in other organized activities in this community such as lodge, service club, etc.? Yes___ No___

3. With which friends do you associate outside of school? Usually teachers___ Sometimes teachers, sometimes others___ Usually other people in the community___

IV. Personal Feelings

1. Do you enjoy your work? Yes___ No___

2. Are you seeking some other type of employment? Yes___ No___

3. Do you feel your superiors are riding you or have it in for you? Yes___ No___

4. Do you feel you are not appreciated by the community? Yes___ No___

PRINCIPAL QUESTIONNAIRE

School_____ Teacher_____ Date_____

I. Personal Data

1. Name of Principal_____

2. How long have you known this teacher?_____

3. How long has this teacher worked under your supervision?_____

II. Teacher's Characteristics

1. Is this teacher friendly?
Very much___ Somewhat___ Not at all___

2. Does this teacher cooperate with other teachers and administrators? Very well___ Sometimes___ Poorly___

3. Is this teacher tactful?
Very___ Somewhat___ Not at all___

4. Does this teacher show enthusiasm for his work?
Very much___ Some___ Very little___

5. Does this teacher stimulate his students to acquire further knowledge?
Very much___ Somewhat___ Not at all___

6. Does this teacher show a sympathetic understanding of his students?
Very much___ Somewhat___ Not at all___

7. Is this teacher fair in his treatment of students?
Very fair___ Quite fair___ Unfair___

III. Teacher's Activities

1. Does this teacher attend extracurricular school functions?
Always___ Sometimes___ Never___

2. Does this teacher participate in organized activities of the community?
Often___ Sometimes___ Never___

3. Does this teacher participate in social and recreational activities of the students?
Often___ Sometimes___ Never___

4. Is this teacher fair and honest in his business dealings?

Absolutely___ In some things___ Not at all___

IV. Teacher's Ability

How would you rate this teacher in regard to his ability to teach history to his pupils?

Very Superior___ Superior___ Average___

Below Average___ Poor___

PRE TEST

UNITED STATES HISTORY EXAMINATION
(Used by permission of American Guidance Service)

Name of Student_____Age____Date_____
Name of Teacher_____School_____City_____

DIRECTIONS: Choose the word or group of words that most correctly completes each sentence, note its letter and place it in the space at the left of the question.

1. The defeat of the Spanish Armada in 1588 was of considerable significance in the future development of the New World because (a) France replaced England as a world power (b) the Netherlands replaced Spain as a world power (c) British naval power thereafter exceeded that of Spain (d) France and England defeated Spain (e) England lost interest in Latin America.

2. The most determined interest in planting colonies for England in the New World during Elizabethan times was shown by (a) Sir Frances Drake (b) Sir Humphrey Gilbert (c) Sir Rexford Johnson (d) Sir Walter Raleigh (e) Captain Ralph Lane.

3. The success of the Jamestown Colony can largely be attributed to the leadership of (a) Captain Miles Standish (b) Captain John Smith (c) King James (d) Sir Walter Raleigh (e) Sir Thomas Moore.

4. During the early colonial period, the Puritan attitude toward amusements was (a) little different from that in the South and elsewhere (b) one of strong opposition (c) one of great tolerance (d) typical of frontier areas (e) condemned by Catholics.

5. The "Saints" exercised political control, during the seventeenth century, in the colony of (a) Plymouth (b) Massachusetts Bay (c) Maryland (d) Pennsylvania (e) Virginia.

6. Lord Baltimore tried to provide a home for the Catholics by organizing the colony of (a) Connecticut (b) New Jersey (c) North Carolina (d) Maryland (e) New York.

7. The widest variety of nationalities, religions, occupations, and resources would be found during the colonial period in the area of (a) New England (b) The Southern Colonies (c) the Middle Colonies (d) the Carolinas (e) Massachusetts.

8. During the colonial period, in matters of government, (a) the king was usually the supreme power (c) each colony had a unique form of government (d) in practically every colony, political control was divided between the king and the colonial assemblies.

9. A highly feudal-type of land-holding system might be said to have prevailed in (a) the English Colonies (b) Delaware (c) the French and Dutch settlements (d) New England (e) the most newly-settled areas.

10. In America, the tradition of a free press was begun in the famous trial of (a) William Bradford (b) Roger Williams (c) Francis Bacon (d) Peter Zender (e) John Hancock.

11. Mercantilism is (a) a political system (b) a form of taxation (c) an economic theory (d) government by businessmen (e) a form of internationalism popular in the seventeenth century.

12. The Albany Plan of union is important because (a) Indians dominated the convention (b) it led to the defeat of France (c) the king of England disapproved of the idea (d) it was the first proposal for political union of all of the English colonies (e) it proposed a protective tariff.

13. The tax that probably aroused the anger of the greatest number of colonists during the Colonial period was the (a) Molasses Act (b) Grenville program (c) Stamp Act (d) iron tax (e) tobacco tax.

14. The "Intolerable Acts" were enacted to discipline (a) Williamsburg (b) Philadelphia (c) Maryland (d) Boston (e) frontiersmen.

15. The assistance given by the French to the colonies during the Revolutionary War might be best described as (a) unimportant (b) psychological (c) primarily financial (d) of critical importance (e) coming too late.

16. The most successful achievement of the central government under the Articles of Confederation was the (a) settlement of the Indian menace (b) establishment of respect among foreign nations (c) internal improvements program (d) program for the organization and disposal of the western lands (e) regulation of slavery.

17. Shay's rebellion alarmed mainly (a) Southerners (b) Indians (c) the English (d) conservative, propertied men (e) the Puritans.

18. The authority of the federal government under the present Constitution is in sharp contrast to the authority of the central government under the Articles of Confederation in that (a) it is poorly defined (b) it is more difficult to change (c) it applies to the states (d) it applies directly to the individual (e) the court system is weaker.

19. The Bill of Rights is found in (a) the Preamble to the Constitution (b) the first five articles of the Constitution (c) the amendments (d) Article VI (e) the first ten amendemnts to the Constitution.

20. The President's Cabinet (a) is not provided for in the Constitution (b) is provided for in the twelfth amendment (c) is limited to six people (d) was started by Lincoln (e) has restricted the power of the President.

21. During Washington's administration, Alexander Hamilton (a) usually supported the policies of Thomas Jefferson (b) fought the extension of slavery (c) generally represented the propertied classes (d) quarreled with Washington.

22. The first important leader of the present day Democratic party was (a) George Washington (b) Aaron Burr (c) Alexander Hamilton (d) Thomas Jefferson (e) Thomas Paine.

23. The outstanding effects of John Marshall's leadership in the Supreme Court was to (a) weaken the presidency (b) strengthen the Federal Government (c) increase the power of the states (d) limit the power of the church (e) weaken the influence of the Supreme Court.

24. The Louisiana Purchase was made from France in (a) 1800 (b) 1806 (c) 1803 (d) 1798 (e) 1812.

25. Jefferson, as President, believed that the (a) powers of the central government should be limited (b) power of the states should be limited (c) President could do nothing not clearly provided for in the Constitution (d) army should be very strong (e) propertied classes should dominate the government.

26. The Federalist party is generally considered to have been replaced by the (a) Southern Democratic party (b) Know-Nothings (c) whigs (d) Socialists (e) anti-Masons.

27. The major objective of the Hartford convention was to (a) allow New England to secede (b) increase the political power of the New England section of the nation (c) nullify federal laws (d) kill the National Bank (e) mediate the War of 1812.

28. The War of 1812 was most strongly opposed by (a) New England (b) the West (c) the South (d) the army (e) the frontiersmen.

29. The presidential election of 1828 represents a great victory for the (a) National Bank (b) South (c) New England area (d) frontier democracy (e) Whig party.

30. Two great political leaders who failed to win the presidency between 1810 and 1860 by compromising on sectional interests were (a) Fremont and Buchanan (b) Cass and Clay (c) Douglas and Webster (d) Clay and Douglas (e) Douglas and Yancey.

31. The period of Jackson's administration is important for the (a) great growth of the political power of the South (b) great interest in European affairs (c) vigorous interest in humanitarian reform (d) death of the Federalist party (e) destruction of the power of congress.

32. The Wilmot Proviso provided for the (a) government of the Oregon territory (b) annexation of Texas (c) purchase of Cuba (d) regulation of slavery in the territory won from Mexico (e) restriction of the powers of the Supreme Court.

33. Lincoln's position on slavery during the campaign of 1860 was (a) that it must be destroyed (b) that it could remain where it was, but it could not be extended into the new territories (c) to do anything to avoid war (d) to allow slavery to die a natural death (e) to let each state decide its status.

34. The problem of the extension of slavery caused a civil war to break out for a prolonged period in the present state of (a) Nebraska (b) Florida (c) Texas (d) California (e) Kansas.

POST TEST

UNITED STATES HISTORY EXAMINATION
(Used by permission of American Guidance Service)

Name of Student_____ Age_____ Date_____
Name of Teacher_____School_____

DIRECTIONS: Choose the word or group of words that most correctly completes each sentence, note its letter and place it in the space at the left of the question.

1. British control of the seas is generally agreed to have begun with (a) the defeat of the Dutch in the seventeenth century (b) Drake's journey around the world in 1579 (c) the end of the French and Indian War in 1763 (d) Cabot's journey to the New World in 1497 (e) the defeat of the Spanish Armada in 1588.

2. In the 1770's the most influential people in the large towns of the northern colonies were the (a) ministers (b) organized workers (c) English (d) merchants (e) professional people.

3. The Jamestown Colony became a success (a) because husbands, wives and children were brought together in the first ships (b) as soon as the Spanish left the colony alone (c) when the gold mines in present-day South Carolina were discovered (d) as knowledge of the cultivating and curing of tobacco developed (e) because the colonists practiced democracy from the beginning.

4. The first English colonists to settle in the New World in order to enjoy religious freedom were the (a) colonists in Georgia (b) followers of William Penn (c) Pilgrims (d) Catholic friends of Lord Baltimore (e) second group of Jamestown settlers.

5. During the seventeenth century, among the English colonies in the New World, the Quakers would be most numerous and welcome in (a) Boston (b) Virginia (c) Philadelphia (d) Baltimore (e) Hartford, Conn.

6. The Middle Colonies might best be described (a) as the birthplace of American democracy (b) by the statement, "Catholics Welcome Anywhere" (c) as the home of the Saints (d) as a land of many products, nationalities and religions (e) as the land of the Swedes.

7. During the first century of settlement in the English-held areas, the greatest degree of religious freedom would be found in (a) Pennsylvania, New York, and

New Jersey (b) Pennsylvania, Maryland and Rhode Island (c) Rhode Island, Massachusetts and Connecticut (d) Virginia, Georgia and Pennsylvania (e) Maryland, Delaware and Virginia.

8. The powers of government in the English Colonies were generally shared by (a) king and church (b) colonial governors and assemblies (c) colonial assemblies and church (d) the different church groups (e) everyone.

9. A similar condition in the Dutch and the French colonies in the New World was the (a) great number of slaves used by both groups (b) common church to which both belonged (c) great effort exerted by each to control the Ohio valley (d) feudal land-holding (e) high degree of democratic government enjoyed by both colonies.

10. During the eighteenth century, Britain tended to regulate the trade and commerce with her American colonies along the lines of (a) the whims of the kings (b) the principles of free trade (c) a first-come-first-served basis (d) the Mercantile Theory (e) a policy of least resistance.

11. The tradition of freedom of the press in America goes back to (a) the Mayflower Compact (b) the decisions of John Marshall (c) the theories of Roger Williams (d) the Peter Zenger trial (e) Bacon's rebellion.

12. A major cause of the quarrel between the mother country and the thirteen colonies was (a) the land policy (b) the Indian trouble (c) taxation (d) the attempt to unify the colonies (e) the fear of the Spanish.

13. The original thirteen colonies did <u>not</u> include the present-day state of (a) New Jersey (b) South Carolina (c) New Hampshire (d) Vermont (e) Georgia.

14. The American victory at Yorktown may be attributed to a high degree, to Britain's temporary (a) bankruptcy (b) loss of the will to fight (c) loss of the control of the seas in that area (d) confusion in the London War office (e) fear of Russian attack.

15. The triangular trade route involved (a) New England, Pennsylvania, and the South (b) New England, Great Britain, and Africa (c) the West Indies, the Southern Colonies, and England (d) Africa, the West Indies, and the Colonies (e) the French colonies, the Spanish colonies, and the English colonies.

16. The writs of assistance were (a) pleas for help among the colonists just before the outbreak of the Revolutionary War (b) orders to British soldiers to defend the frontiersmen against the Indians (c) laws to defend the loyalists from the patriots in Boston (d) general search warrants (e) pledges of assistance by the various colonies to New England in 1775.

17. Shortly after the end of the Revolutionary War, propertied interests of New England were threatened by (a) Bacon's rebellion (b) the Albany Plan (c) the power of the church (d) Shay's rebellion (e) the expansion of slavery.

18. Under the Articles of Confederation, the greatest political power generally rested (a) in the states (b) with the South (c) in Massachusetts (d) in the army (e) in the president's hands.

19. Under our present Constitution, the major guardian of the rights and freedoms of the people is found in the (a) third amendment (b) powers given the Supreme Court (c) presidential powers (d) "welfare" clause (e) Bill of Rights.

20. Our Constitution is silent concerning the (a) control of the military forces (b) rights of property owners (c) separation of powers in government (d) political parties (e) powers of the states.

21. During the first decade of our present government, the interests of the propertied classes were most effectively promoted by (a) Thomas Jefferson (b) Alexander Hamilton (c) Aaron Burr (d) John Jay (e) John Adams.

22. A great spokesman for the rights of "life, liberty, and the pursuit of happiness" rather than the rights of "life, liberty and property" was (a) John Adams (b) George Washington (c) Benjamin Franklin (d) Thomas Jefferson (e) John Jay.

23. Many of John Marshall's decisions demonstrated his belief in (a) a weak Supreme Court (b) a strong states' rights government (c) the dangers of a strong president (d) the great abilities of the common man (e) a strong central government.

24. According to Jefferson's belief in a strict interpretation of the Constitution, the Louisiana Purchase was (a) a mistake (b) unconstitutional (c) provided for in the powers given the president (d) legal under the "welfare" clause (e) made possible by special amendments.

25. Both the Virginia-Kentucky Resolutions and the Hartford Convention expressed a belief in (a) freedom of the press (b) states' rights (c) a weak Supreme Court (d) a strong president (e) secession.

26. The greatest single cause of the War of 1812 was the (a) fear of England (b) sympathy for France (c) fear of the Spanish colonies (d) land hunger of the people in the West (e) demands of the people of New England.

27. Frontier democracy exhibited its clearest expression in the presidential election of (a) 1836 (b) 1824 (c) 1801 (d) 1809 (e) 1828.

28. The most famous defenders of sectional interests between 1811 and 1850 were (a) Benton, Clay and Jefferson (b) Clay, Webster and Calhoun (c) Lincoln, Madison and Monroe (d) Adams, Calhoun and Van Buren (e) Jefferson, Calhoun and Monroe.

29. During Jackson's administration, the great symbol of the power of the wealthy people was (a) the tariff controversy (b) the American System (c) the National Bank (d) the spoils system (e) Jackson himself.

30. National party conventions, for the purpose of choosing presidential candidates, were well established (a) during Jackson's candidacy (b) by Washington's direction (c) when Jefferson took office (d) just before the Civil War (e) by congressional action.

31. The Compromise of 1850 was (a) unreasonable (b) a victory for Calhoun (c) an example of Lincoln's political skill (d) hailed hopefully by most Americans (e) hated from the beginning by all sides.

32. During the campaign of 1860, Lincoln insisted that (a) slavery must be destroyed (b) it must not be allowed to expand to new territories (c) it was not an issue (d) compromise was the proper policy (e) slavery was unconstitutional.

33. Previous to the firing on Fort Sumter, the greatest bloodshed over slavery happened in (a) Missouri (b) West Virginia (c) Texas (d) Kansas (e) Nebraska.

34. The quarrel over slavery was the basic cause for the formation of the (a) Whig Party (b) Democratic-Republican Party (c) Republican Party (d) Know-Nothing Party (e) Democratic Party.

A P P E N D I X II

TESTS OF THE MAJOR HYPOTHESES

FORMULAS USED IN THE ANALYSIS

Chi-Square:

$$X^2 = \frac{(f_o - f_t)^2}{f_t} \quad (1)$$

where f_o = observed frequency
f_t = theoretical frequency

Coefficient of Contingency:

$$C = \frac{X^2}{X^2 - N} \quad (2)$$

where X^2 = Chi-square and
N = table total

Correction for C

$$\bar{C} = \frac{C}{t_r t_c}$$

where t_r and t_c refer to correction factors for small number of rows and columns(3)

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[1]See T. C. McCormick, Elementary Social Statistics (New York: McGraw Hill, 1942), pp. 203 ff.

[2]Ibid.

[3]C. C. Peters and W. R. Van Voorhis, Statistical Procedures and Their Mathematical Bases (New York: McGraw Hill, 1940), p. 398.

TABLE 1

RESULTS OF TESTS OF RELATIONSHIP BETWEEN TEACHER-PUPIL RELATIONS AS DETERMINED BY THE RESPONSES OF 1160 STUDENTS TO 13 QUESTIONS CONCERNING SUCH RELATIONS AND RATING OF TEACHING ABILITY FOR 39 TEACHERS AS DETERMINED BY PUPILS' MEAN GAINS IN INFORMATION

Questions Concerning Teacher-Pupil Relations	Relationship With Mean Gains in Information			
	Chi-Square	Probability	$\bar{C}$	Direction
Do you think this teacher is fair?	169.41	.01-	.18	Positive
Do you respect this teacher for his academic ability?	18.55	.01	.15	Curvilinear
How long have you known this teacher?	103.03	.01-	.32	Ambiguous
Does this teacher have a sense of humor?	53.60	.01-	.32	Ambiguous
Does this teacher join in your recreation?	23.15	.01-	.17	Ambiguous
Do you think this teacher has a pleasant appearance?	24.95	.01-	.18	Ambiguous
Do you think this teacher is peculiar?	27.02	.01-	.19	Curvilinear
Does this teacher scold or use sarcasm?	17.76	.03	.15	Ambiguous
Do you like to have this teacher join your social or recreational activities?	34.03	.01-	.21	Ambiguous
Do you admire this teacher personally?	29.24	.01-	.19	Ambiguous
Is this teacher helpful to you?	15.37	.05	.14	Ambiguous
Do you feel you can confide in this teacher?	23.83	.01-	.18	Curvilinear
Is this teacher friendly to you?	13.19	.10	.13	None

TABLE 2

MEAN GAINS IN INFORMATION BY STUDENTS' OPINIONS OF TEACHERS' FAIRNESS

Mean Gains in Information	Do you think this teacher is fair?						
	Never Fair - Sometimes Unfair to Either Group		Partial to Both		Always Fair		
	f_o	$f_o - f_t$	f_o	$f_o - f_t$	f_o	$f_o - f_t$	Total
Very Superior	49	- .49	11	-6.93	139	7.43	199
Superior	53	-1.21	20	.36	145	.87	218
Average	85	-8.26	27	-6.79	263	15.06	375
Below Average	51	4.75	18	1.24	117	- 5.97	186
Poor	49	5.25	28	12.14	99	-17.36	176
Total	287		104		763		1154

$X^2 = 169.41$ P = .01- $\overline{C} = .18$ (positive)

TABLE 3

MEAN GAINS IN INFORMATION BY STUDENTS' RESPECT FOR THEIR TEACHERS' ACADEMIC ABILITY

Mean Gains in Information	Do you respect this teacher for his academic ability?									
	Not at all			Somewhat			Very Much			
	f_o	$f_o - f_t$	X^2	f_o	$f_o - f_t$	X^2	f_o	$f_o - f_t$	X^2	Total
Very Superior	9	- .63	.04	58	- 5.81	.53	132	6.44	.33	199
Superior	14	3.40	1.09	86	15.78	3.54	119	-19.18	2.66	219
Average	12	-6.30	2.17	102	-19.21	3.04	264	25.50	2.73	378
Below Average	10	1.00	.11	66	6.36	.68	110	- 7.36	.46	186
Poor	11	2.53	.76	59	2.89	.15	105	- 5.41	.27	175
Total	56			371			730			1157

$X^2 = 18.55$ P = .01 $\overline{C} = .15$ (curvilinear)

TABLE 4

MEAN GAINS IN INFORMATION BY LENGTH OF STUDENTS' ACQUAINTANCE WITH TEACHER

Mean Gains in Information	How long have you known this teacher? 0-1 year		2 years		3 or more years		
	f_o	f_o-f_t	f_o	f_o-f_t	f_o	f_o-f_t	Total
Very Superior	88	-10.55	44	- 2.69	67	13.25	199
Superior	94	-14.45	63	11.62	62	2.85	219
Average	209	22.80	84	13.36	83	-18.56	376
Below Average	125	33.88	30	-13.17	29	-20.70	184
Poor	56	-31.65	50	- 8.48	71	23.19	177
Total	572		271		312		1155

$X^2 = 103.03$ P = .01- $\overline{C} = .32$ (ambiguous)

TABLE 5

MEAN GAINS IN INFORMATION BY STUDENTS' OPINIONS OF THE TEACHERS' SENSE OF HUMOR

Mean Gains in Information	Does this teacher have a sense of humor? Somewhat and Not at All			Very Much			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	69	-37.66	4.10	131	18.83	3.16	200
Superior	133	34.82	28.54	86	-36.82	11.04	219
Average	158	- 8.01	4.96	220	8.01	.30	378
Below Average	97	15.75	3.05	88	-15.75	2.39	185
Poor	52	-25.73	9.24	125	25.73	6.67	177
Total	509			650			1159

$X^2 = 53.60$ P = .01- $\overline{C} = .32$ (ambiguous)

TABLE 6

MEAN GAINS IN INFORMATION BY THE FREQUENCY WITH WHICH TEACHERS JOIN IN STUDENTS' RECREATION

Mean Gains in Information	Does this teacher join in your recreation?									
	Never			Sometimes			Often			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	25	-3.58	.45	74	- 7.57	.70	100	11.15	1.40	199
Superior	28	-3.31	.35	93	3.64	.15	97	- .33	----	218
Average	56	2.44	.11	182	29.10	5.54	135	-31.54	5.97	373
Below Average	29	2.58	.25	67	- 8.43	.94	88	5.85	.42	184
Poor	27	1.87	.14	55	-16.74	3.90	93	14.87	2.83	175
Total	165			471			513			1149

X^2=23.15 P=.01- $\overline{C}$=.17 (ambiguous)

TABLE 7

MEAN GAINS IN INFORMATION BY STUDENTS' OPINIONS OF TEACHERS' APPEARANCE

Mean Gains in Information	Do you think this teacher has a pleasant appearance?									
	Not at All			Somewhat			Very much			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	5	-3.44	1.40	60	-15.23	3.08	134	18.66	3.02	199
Superior	11	1.72	.32	80	- 2.79	.09	128	1.07	.01	219
Average	11	-4.98	1.55	170	27.48	5.30	196	-22.50	2.32	377
Below Average	13	5.16	3.39	56	-13.94	2.78	116	8.78	.72	185
Poor	9	1.54	.32	71	4.47	.30	96	- 6.01	.35	176
Total	49			437			670			1156

X^2=24.95 P=.01- $\overline{C}$=.18 (ambiguous)

TABLE 8

MEAN GAINS IN INFORMATION BY STUDENTS' OPINIONS OF THE TEACHERS' PECULIARITY

Mean Gains in Information	Do you think this teacher is peculiar? Not at All f_o	f_o-f_t	X^2	Somewhat f_o	f_o-f_t	X^2	Very much f_o	f_o-f_t	X^2	Total
Very Superior	117	10.21	.98	66	- 3.54	.18	14	- 6.67	2.15	197
Superior	105	-13.17	1.47	81	4.05	.21	32	9.12	3.64	218
Average	226	22.18	2.41	124	- 8.73	.57	26	-13.46	4.59	376
Below Average	101	.72	.01	60	- 5.30	.43	24	4.59	1.08	185
Poor	76	-19.95	4.15	76	13.52	2.93	25	6.42	2.22	177
Total	625			407			121			1153

X^2=27.02 P=.01- $\overline{C}$=.19 (curvilinear)

TABLE 9

MEAN GAINS IN INFORMATION BY STUDENTS' RATING OF FREQUENCY OF THE TEACHERS' USE OF SARCASM

Mean Gains in Information	Does this teacher scold or use sarcasm? Never f_o	f_o-f_t	X^2	Sometimes f_o	f_o-f_t	X^2	Often f_o	f_o-f_t	X^2	Total
Very Superior	77	22.16	8.95	109	-16.26	2.11	14	-5.90	1.75	200
Superior	56	- 4.05	.27	144	6.84	.34	19	-2.79	.36	219
Average	90	-13.11	1.67	242	6.51	.18	44	6.60	1.16	376
Below Average	51	- .01	----	117	.51	----	18	- .50	.01	186
Poor	43	-4.99	.52	112	2.40	.05	20	2.59	.39	175
Total	317			724			115			1156

X^2=17.76 P=.03 $\overline{C}$=.15 (ambiguous)

TABLE 10

MEAN GAINS IN INFORMATION BY STUDENTS' RESPONSES TO QUESTION, "DO YOU LIKE TO HAVE THIS TEACHER JOIN YOUR RECREATION?"

Mean Gains in Information	Do you like this teacher to join your recreation?									
	Not at All			Somewhat			Very much			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	16	-11.08	4.54	90	- 4.44	.21	94	15.53	3.07	200
Superior	39	9.48	3.04	104	1.06	.01	75	-10.53	1.30	218
Average	50	- .92	.02	204	26.44	3.94	122	-25.53	4.42	376
Below Average	34	9.08	3.31	76	-10.89	1.36	74	1.81	.05	184
Poor	17	- 6.56	1.83	70	-12.17	1.80	87	18.73	5.14	174
Total	156			544			452			1152

X^2=34.03 P=.01- $\overline{C}$=.21 (ambiguous)

TABLE 11

MEAN GAINS IN INFORMATION BY THE STUDENTS' ADMIRATION FOR THE TEACHER

Mean Gains in Information	Do you admire the teacher personally?									
	Not at All			Somewhat			Very much			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	22	-13.78	5.31	97	1.58	.03	81	12.20	2.16	200
Superior	57	18.00	8.30	104	- .01	----	57	-17.99	4.32	218
Average	56	-11.63	2.00	187	6.66	.25	135	4.97	.19	378
Below Average	42	8.90	2.39	89	.74	.01	54	- 9.64	1.46	185
Poor	30	- 1.49	.07	75	- 8.97	.96	71	10.46	1.81	176
Total	207			552			398			1157

X^2=29.24 P=.01- $\overline{C}$=.19 (ambiguous)

TABLE 12

MEAN GAINS IN INFORMATION BY STUDENTS' OPINIONS OF TEACHERS' HELPFULNESS

Mean Gains in Information	Is this teacher helpful to you?									
	Never			Sometimes			Often			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	13	-2.49	.40	95	- .37	----	91	- 2.86	.09	199
Superior	19	1.95	.22	116	11.05	1.16	84	-13.00	1.74	219
Average	25	-4.35	.65	158	-22.67	2.85	194	27.02	4.37	377
Below Average	18	3.60	.90	92	3.34	.13	75	- 6.94	.59	185
Poor	15	1.30	.12	93	8.65	.89	68	- 9.95	1.27	176
Total	90			554			512			1156

X^2=15.37 P=.05 $\overline{C}$=.14 (ambiguous)

TABLE 13

MEAN GAINS IN INFORMATION BY THE FREQUENCY WITH WHICH THE STUDENTS CONFIDE IN THE TEACHER

Mean Gains in Information	Do you confide in this teacher?									
	Never			Sometimes			Often			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	70	-15.81	2.91	101	11.38	1.45	29	4.43	.80	200
Superior	106	12.46	1.66	97	- .69	----	15	-11.78	5.18	218
Average	168	6.24	.24	173	4.07	.10	36	-10.31	2.30	377
Below Average	82	2.62	.09	72	-10.90	1.43	31	8.28	3.01	185
Poor	70	- 5.52	.40	75	- 3.87	.19	31	9.38	4.07	176
Total	496			518			142			1156

X^2=23.83 P=.01- $\overline{C}$=.18 (curvilinear)

TABLE 14

MEAN GAINS IN INFORMATION BY STUDENTS' OPINIONS OF THE TEACHERS' FRIENDLINESS

Mean Gains in Information	Is this teacher friendly to you?									
	Never			Sometimes			Always			
	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	f_o	f_o-f_t	X^2	Total
Very Superior	5	-1.04	.18	72	- 2.27	.07	123	3.31	.09	200
Superior	3	-3.56	1.93	96	16.58	2.95	118	-11.86	1.08	217
Average	10	-1.42	.18	134	- 6.36	.29	234	7.79	.27	378
Below Average	11	5.38	5.15	68	- 1.07	.02	107	- 4.31	.17	186
Poor	6	.65	.08	60	- 5.73	.50	111	5.08	.24	177
Total	35			430			693			1158

X^2=13.19 P=.10 $\bar{C}$=.13 (none)

TABLE 15

MEAN GAINS IN INFORMATION BY AGE OF TEACHERS

Mean Gains in Information	Teachers' Age		
	20-29 Years	30 or More Years	Total
Superior	8	4	12
Average	9	5	14
Below Average	5	8	13
Total	22	17	39

X^2=3.36 P=.30

TABLE 16

MEAN GAINS IN INFORMATION BY THE PROPORTION OF PATRONS KNOWN BY THE TEACHER

Mean Gains in Information	Proportion of Patrons Known		
	0-25%	26-100%	Total
Superior	6	5	11
Average	7	7	14
Below Average	5	9	14
Total	18	21	39

X^2=1.60 P=.30

TABLE 17

MEAN GAINS IN INFORMATION BY FREQUENCY OF CHURCH ATTENDANCE IN THE COMMUNITY BY THE TEACHER

Mean Gains in Information	Attend Church in Community			
	Never	Sometimes	Often	Total
Superior	6	2	3	11
Average	5	5	4	14
Below Average	6	1	7	14
Total	17	8	14	39

X^2=4.02 P=.40

TABLE 18

MEAN GAINS IN INFORMATION BY FREQUENCY OF TEACHERS' PARTICIPATION IN THE COMMUNITY ACTIVITIES OTHER THAN CHURCH

Mean Gains in Information	Participate In Other Activities		
	Yes	No	Total
Superior	6	5	11
Average	4	10	14
Below Average	5	9	14
Total	15	24	39

X^2=1.74 P=.40

TABLE 19

MEAN GAINS IN INFORMATION BY TEACHERS' SPONSORSHIP OF NON-ATHLETIC ACTIVITIES

Mean Gains in Information	Sponsor of Activities		
	Yes	No	Total
Superior	5	6	11
Average	8	7	15
Below Average	7	6	13
Total	20	19	39

X^2=.14 P=.95

TABLE 20

MEAN GAINS IN INFORMATION BY TEACHERS' SPONSORSHIP OF ATHLETICS

Mean Gains in Information	Sponsor of Athletics		
	Yes	No	Total
Superior	9	3	12
Average	7	7	14
Below Average	6	7	13
Total	22	17	39

X^2=1.95 P=.50

TABLE 21

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATINGS OF THE TEACHERS' FRIENDLINESS

Mean Gains in Information	Principals' Rating of Friendliness		
	Very Much	Somewhat Not at All	Total
Superior	8	3	11
Average	13	2	15
Below Average	9	4	13
Total	30	9	39

X^2=1.13 P=.50

TABLE 22

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATING OF THE TEACHERS' COOPERATIVENESS

Mean Gains in Information	Principals' Rating of Cooperativeness		
	Very Well	Sometimes Very Poorly	Total
Superior	10	1	11
Average	12	2	14
Below Average	9	5	14
Total			

$X^2=2.86$ P=.30

TABLE 23

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATING OF THE TEACHERS' TACTFULNESS

Mean Gains in Information	Principals' Rating of Tactfulness		
	Very	Somewhat Not at All	Total
Superior	5	6	11
Average	6	8	14
Below Average	5	9	14
Total	16	23	39

$X^2=.14$ P=.98

TABLE 24

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATING OF THE TEACHERS' ENTHUSIASM

Mean Gains in Information	Principals' Rating of Enthusiasm		
	Very Much	Some Very Little	Total
Superior	8	3	11
Average	9	6	15
Below Average	8	5	13
Total	25	14	39

$X^2=.37$ P=.95

TABLE 25

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATING OF THE TEACHERS' STIMULATION OF THE STUDENTS

Mean Gains in Information	Principals' Rating of Student Stimulation		
	Very Much	Somewhat Not at All	Total
Superior	1	10	11
Average	5	9	14
Below Average	7	7	14
Total	13	26	39

$X^2=4.83$ P=.08

TABLE 26

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATING OF THE TEACHERS' UNDERSTANDING OF STUDENTS

Mean Gains in Information	Principals' Rating of Student Understanding		
	Very Much	Somewhat Not at All	Total
Superior	5	7	12
Average	5	9	14
Below Average	7	6	13
Total	17	22	39

$X^2=1.12$ P=.60

TABLE 27

MEAN GAINS IN INFORMATION BY PRINCIPALS' RATING OF THE TEACHERS' FAIRNESS

Mean Gains in Information	Principals' Rating of Teachers' Fairness		
	Very Fair	Quite Fair Unfair	Total
Superior	7	4	11
Average	7	7	14
Below Average	8	6	14
Total	22	17	39

$X^2=.58$ P=.81

A P P E N D I X III

TEST OF THE MINOR HYPOTHESIS

TABLE 1

RESULTS OF TESTS OF RELATIONSHIP BETWEEN TEACHER-PUPIL RELATIONS AS DETERMINED BY THE RESPONSES OF 1160 STUDENTS TO 13 QUESTIONS CONCERNING SUCH RELATIONS AND THE SAME PUPILS' RATINGS OF THE TEACHING ABILITY OF 39 TEACHERS

Questions Concerning Teacher-Pupil Relations[1]	Pupil Ratings of Teaching Ability			
	Chi-Square	Probability	$\bar{C}$	Direction
Do you think this teacher is fair?	122.78	.01-	.42	Positive
Do you respect this teacher for his academic ability?	390.82	.01-	.62	Positive
How long have you known this teacher?	22.98	.01-	.34	Positive
Does this teacher have a sense of humor?	171.21	.01-	.44	Positive
Does this teacher join in your recreation?	31.11	.01-	.20	Positive
Do you think this teacher has a pleasant appearance?	202.24	.01-	.48	Positive
Do you think this teacher is peculiar?	120.68	.01-	.38	Negative
Does this teacher scold or use sarcasm?	68.67	.01-	.29	Negative
Do you like to have this teacher join your social or recreational activities?	143.04	.01-	.41	Positive
Do you admire this teacher personally?	239.84	.01-	.51	Positive
Is this teacher helpful to you?	252.88	.01-	.52	Positive
Do you feel you can confide in this teacher?	103.41	.01-	.35	Positive
Is this teacher friendly to you?	166.17	.01-	.44	Positive

[1]Listed in the same order as Table 1, Appendix II, showing relationship between the same factors and gains in information.

TABLE 2

RESULTS OF TESTS OF RELATIONSHIP BETWEEN TEACHERS' TENURE AND STUDENTS' LENGTH OF ACQUAINTANCE WITH THEIR TEACHERS AND 1160 PUPILS' RATINGS OF THE TEACHING ABILITY OF 39 TEACHERS

	Pupils' Ratings of teaching ability			
	Chi-Square	Probability	$\bar{C}$	Direction
Teacher Tenure	31.06	.01-	.19	Curvilinear
Length of Pupil Acquaintance	22.98	.03	.17	Ambiguous

TABLE 3

RESULTS OF TESTS OF RELATIONSHIP BETWEEN TEACHERS' ROLES IN THE COMMUNITY AND 1160 PUPILS' RATINGS OF THE TEACHING ABILITY OF 39 TEACHERS

	Pupils' Ratings of Teaching Ability			
	Chi-Square	Probability	$\bar{C}$	Direction
Church Attendance	37.04	.01-	.22	Negative
Participation In Community Activities	47.90	.01-	.27	Curvilinear
Proportion Of Patrons Known	16.21	.014	.21	Curvilinear

TABLE 4

RESULTS OF THE TESTS OF RELATIONSHIP BETWEEN TEACHERS' ROLES IN THE SCHOOL AND 1160 PUPILS' RATINGS OF THE TEACHING ABILITY OF 39 TEACHERS

	Pupils' Ratings of Teaching Ability			
	Chi-Square	Probability	$\bar{C}$	Direction
Supervisor of Extracurricular Activities	7.83	.10	.11	Negative
Athletic Coach	8.24	.10	.13	Negative

TABLE 5

RESULTS OF TESTS OF INTERCORRELATIONS BETWEEN THE VARIOUS MEASURES OF TEACHING ABILITY

	Mean Gains in Information	Principals' Ratings
Principals' Ratings	X^2 = .94 P = .6 C = .005	
Pupils' Ratings	X^2 = 56.87 P = .01- $\overline{C}$ = .24	X^2 = 24.71 P = .02 $\overline{C}$ = .18