

August 5, 1958

To the Graduate Council:

I am submitting herewith a thesis written by John David Smelling, Sr. entitled "Teaching in the University of Tennessee College of Agriculture." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Education.

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Major Professor

We have read this thesis
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Harold J. Smith
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Dale Hawthorn
Dean of the Graduate School

28
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TEACHING IN THE UNIVERSITY OF TENNESSEE
COLLEGE OF AGRICULTURE

A THESIS

Submitted to
The Graduate Council
of
The University of Tennessee
in
Partial Fulfillment of the Requirements
for the degree of
Master of Science

by

John David Smalling, Sr.

August 1958

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TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Statement of the Problem	1
Analysis of the Problem	1
Importance of the Study	2
Assumptions	4
Limitations of the Study	4
Definition of Terms	5
Review of Related Studies	8
Research Methods and Data Sources	12
II. APTITUDES AND RATINGS	17
Values of Aptitudes	18
Ratings	25
Teaching Experience	33
Teaching Preparatory Courses Taken	49
Classification	49
Grade-Point Average	65
Average Ratings	81
Summary	84
III. TEACHING METHODS	91
IV. TEACHING AIDS	.129
V. EXAMINATIONS	.147
VI. SUMMARY	172

CHAPTER	PAGE
BIBLIOGRAPHY	182
APPENDIX A	185
APPENDIX B	188
APPENDIX C	190

LIST OF TABLES

TABLE	PAGE
I. Students' and Teachers' Values of Various Aptitudes	19
II. Students' Ratings of Teachers	27
III. Teachers' Aptitude Values Related to Years of Teaching Experience	34
IV. Students' Ratings of Teachers Related to Teachers' Years of Teaching Experience	42
V. Students' Ratings of Teachers Related to Total Number Teaching Preparatory Courses Taken by Teachers	50
VI. Aptitude Values Related to Students' Classification	51
VII. Students' Ratings of Teachers Related to Classification of Student	59
VIII. Aptitude Values Related to Approximate Grade-Point Average of Students	66
IX. Students' Ratings of Teachers Related to Approximate Grade-Point Average of Students	73
X. Teachers' Average Weighted Scores in Multiples of Five	82
XI. Teachers' Ratings Related to Preparation According to Degree Held and Place Received	83
XII. Teachers' Ratings Related to Preparation According to Highest Degree Held	85

TABLE

PAGE

XIII.	Students' Aptitude Values, Teachers' Aptitude Values, and Teachers' Ratings	89
XIV.	Teachers' Frequency of Use of Various Teaching Methods Related to Course Level	94
XV.	Teachers' Frequency of Use of Teaching Methods Related to Total Number Preparatory Teaching Courses Taken	97
XVI.	Teachers' Frequency of Use of Teaching Methods Related to Total Years Teaching Experience	99
XVII.	Students' Opinions of Frequency of Use of Teaching Methods According to Approximate Grade-Point Average	102
XVIII.	Students' Opinions of Teachers' Frequency of Use of Teaching Methods According to Classification	106
XIX.	Teachers' Attitudes Toward the Use of Various Teaching Methods	109
XX.	Unusual or Extraordinary Teaching Devices Used for Stimulation and Motivation of Students, Reported by Teachers	111
XXI.	Effective Motivating And/Or Stimulating Devices and Activities, Number of Teachers, Ratings of Teachers by Students, as Reported by Students	112

TABLE

PAGE

XXII. Teachers' Most Appealing Personality Characteristics And/Or Teaching Abilities as Reported by Students	114
XXIII. Teachers' Least Appealing Personality Characteristics And/Or Teaching Abilities According to Students	115
XXIV. Written assignment Preference Related to Students' Approximate Grade-Point Average	116
XXV. Written Assignment Preference Related to Students' Classification	117
XXVI. Teachers' Methods of Making Assignments	118
XXVII. Teachers' Assignment Giving According to When Given	119
XXVIII. Outside Reading Requirements by Teachers and Teachers' Ratings by Students	121
XXIX. Purposes of Assignments Listed by Teachers and Teachers' Ratings by Students	122
XXX. Effectiveness of Assignments in Reaching Objectives	123
XXXI. Assignment Comments Listed by Teachers	125
XXXII. Teachers' Frequency of Use of Aids According to Total Number Preparatory Teaching Courses Taken	131

TABLE

PAGE

XXXIII. Teachers' Frequency of Use of Aids According to Total Years Teaching Experience	133
XXXIV. Teachers' Frequency of Use of Teaching Aids Listed by Students According to Classification	135
XXXV. Teachers' Frequency of Use of Teaching Aids Listed by Students According to Approximate Grade-Point Average	137
XXXVI. Use of a Syllabus, Laboratory Manual, or Course Outline According to Teachers' Years of Experience	140
XXXVII. Use of a Syllabus, Laboratory Manual, or Course Outline Related to Teachers' Preparatory Teaching Courses Taken	141
XXXVIII. Reasons for Teachers' Limited Use of Various Teaching Aids	143
XXXIX. Teachers' Most Valuable Teaching Aids and the Teachers' Rating According to Students	144
XL. Frequency of Use of Examinations According to Course Level	151
XLI. Frequency of Use of Examinations Related to Number Preparatory Teaching Courses taken by Teachers	153

TABLE

PAGE

XLII.	Frequency of Use of Examinations According to Total Years Teaching Experience of Teachers	154
XLIII.	Preference for Types of Examinations According to Students' Classification	156
XLIV.	Preference for Types of Examinations According to Students' Approximate Grade-Point Average	157
XLV.	Percentage of Composition of Final Grade According to Total Preparatory Teaching Courses Taken by Teachers	159
XLVI.	Percentage of Composition of Final Grade According to Total Years Teaching Experience of Teachers	160
XLVII.	Preferences of Composition of Final Grade According to Classification of Students	162
XLVIII.	Preferences of Composition of Final Grade According to Approximate Grade-Point Average of Students	164
XLIX.	Use of Types of Examinations, Number of Teachers Listing, and Teachers' Ratings According to Students	167
XL.	Students' Reasons for Preferring or Disliking Certain Types of Examinations	167

CHAPTER I

INTRODUCTION

Statement of the Problem

The purpose of this study was to make an investigation of the aptitudes which good college teachers should possess, college teaching methods used, the employment of various teaching aids by college teachers, the use of examinations, and student ratings of their teachers.

Analysis of the Problem

The first phase of the investigation concerned the values placed on certain characteristics of a good college teacher by teachers and students in the College of Agriculture at the University of Tennessee. This section of the investigation was intended to reveal the desirable characteristics of a good college teacher in respect to professional abilities, personality characteristics, and teacher preparedness. Another part of this phase was concerned with results obtained from students' ratings of teachers.

It is intended, in the second part of this study, to reveal the frequency of use by teachers of various teaching methods during a typical quarter of teaching and the students' opinions of the frequency of use of these methods. Frequency of use of these methods will be revealed in

ten segments; namely, lectures, discussions, small group discussions, student oral reports, laboratories, demonstrations, field trips, individual conferences, written assignments, and resource people. The frequency with which the teacher uses each method will serve as an indicator of the importance which he places on it.

The third phase of this study is concerned with the frequency of use of various teaching aids and the students' opinion of the teachers' frequency of use of them.

The fourth part of this investigation will determine students' preferences for types of examinations and composition of the final grade. The preferences will be compared with the teachers' actual frequency of use of each type of examination and the constitution of the final grade made by teachers.

Importance of the Study

Payne and Spieth¹ emphasize the importance of the study by quoting Vitruvius:

Architects who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority to correspond to their pains, while those who relied only upon theories and scholarship were obviously hunting the shadows, not the substance. But those who have a thorough knowledge of both . . . have the sooner attained their object and carried authority with them.

¹Fernandus Payne and Evelyn Spieth, An Open Letter to College Teachers (Bloomington, Indiana: The Principia Press, Inc., 1935) p.57.

In consideration of the importance of this study, noticeable significance is given to the statement of Dewey² that "collateral learning is the way of formation of enduring attitudes, of likes and dislikes, may be and often is much more important than . . . the history that is learned. For these attitudes [*italics mine*] are what count in the future".

In interviewing college teachers and students, the writer found a marked degree of interest in the quality of college teaching and the improvement of it. Some teachers expressed a desire to increase their professional stature as a teacher by taking courses designed exclusively for college teachers. Some teachers expressed concern over the facts that they had no teaching experience before teaching in college and that they had taken very few teaching methods courses while they had been in school.

The writer feels that the opinions of college teachers and students in regard to aptitudes, methods, aids, and examinations will serve to stimulate and to educate—stimulate those who are already teaching to a greater attainment of efficiency in their teaching and educate both present teachers and prospective college teachers in respect to desirable characteristics in the college teacher, proper teaching methods, and the advisability of the use of various aids and examinations.

²John Dewey, Experience and Education (New York: The MacMillan Co., 1938) p.49.

The decision to include the students' opinions in this study is sustained by other writers'³ statements:

The caliber of . . . [the teacher's] work in the classroom is heavily dependent upon student thought-ways, attitudes, and articulation. . . . The professor who consistently is unintelligible or irrelevant to large numbers of students simply is not participating in the educational process.

Assumptions

It was assumed that each teacher was free to act independently in organizing his courses. It was also assumed that each rating scale and information schedule was conscientiously completed by students and teachers.

Limitations of the Study

This study was limited to the ideas and opinions of forty-five teachers and administrators in the University of Tennessee College of Agriculture and the teaching methods which they used during the winter quarter of 1957-58; the 335 students in fifty-one courses or sections of courses; the compilations and the analyses of them by the writer; and the comparison of those ideas and opinions with those held in other studies reviewed by the writer.

³John W. Riley, et al., *The Student Looks at His Teacher*. (New Brunswick: Rutgers University Press, 1950) p. 16.

"If there were adequate means of measuring the outcomes of instruction, the debates about methodology of instruction would shortly cease."⁴ This quotation of Kelly's serves to point out the fact that even the most exhaustive of studies need more complete measuring devices with which to make them more meaningful.

Definition of Terms

The word "aid" means something which promotes or assists in the teaching procedure. For example, a written lesson plan is an aid.

"Aptitude" incorporates the ideas of readiness in learning, aptness, suitability, capacity or ability and talent.

Cole⁵ says in her book, The Background for College Teaching, that "assignments" are the student's "sailing directions". A broader definition is a duty or piece of work allotted as the responsibility of a particular person or group.

"Small group" is a term used to denote the situation which exists when students are in small groups with the instructor playing a very minor role in directing the discussion.

The word "classroom" does not mean that place in which a situation exists which "is a group situation because of the interdependence

⁴Fred J. Kelly, Toward Better College Teaching, Federal Security Agency, Office of Education (Washington: U. S. Government Printing Office, 1950) p. 51.

⁵Luella Cole, The Background for College Teaching (New York: Farrar and Rinehart, Inc., 1940) p. 368.

and interrelationships which exist there".⁶ The word, as used in this study, embodies the full meaning of the word; that is, the classroom is a place where lectures are given, discussions are held, examinations are given, and where students give reports and hold debates.

The word "discussion" means the learning situation which exists when a group is student-centered and instructor-directed. Questions are asked and answered by both students and instructor.

The word "examination" is used to denote those evaluations made of students' status and progress by the written, oral, and teacher observation methods.

The meaning of the term "field trip" is the place of the learning process not including the classroom and the laboratory. This includes offices, mills, hay fields, and other similar places.

"Group" has as its basic definition "a collection of persons who have, as one quality of their relationship, some interdependence with each other".⁷ Levin's definition of a group will apply when the word group is referred to in this study.

The word "laboratory" means a place where some operation is performed. For example, in the field of economics, the classroom is immediately transformed into a laboratory when students begin solving real problems.

⁶David H. Jenkins, "Interdependence in the Classroom", Journal of Educational Research, 45:145-160, 1951.

⁷Kurt Lewin, Resolving Social Conflicts, (New York: Harper and Brothers, 1948), p. 73.

The word "lecture" means the learning situation in which the instructor tells or relates, asks the questions, and then answers the questions.

The word "method" means an orderly process. This includes classroom processes, working in laboratories, and the taking of field trips.

An "outline" is a preliminary or general sketch of a plan; a short summary, often in the form of heads and subheads; hence, a summarized presentation of the most significant features of a general subject.

The meaning of the word "personality" is the totality of an individual's characteristics. Kruse⁶ says that "usually under the caption of 'personality' . . . inquiry is made as to qualities of integrity, initiative, industry, co-operativeness, enthusiasm, patience, tolerance, and the like, all of which depend more upon how we feel than on what we know".

"Research" means studious inquiry; usually, a critical and exhaustive investigation.

"Teacher" in this study includes instructor and administrator. Several teachers in the College of Agriculture both teach and do research--this word also includes the teacher-researcher, unless otherwise stated.

⁶Paul J. Kruse, "Chapter II, Building Attitudes", Whither Agricultural Education (Des Moines: Meredith Publishing Company, 1938), pp. 11-18.

The word "technique" is used in this study simply as a manner of procedure.

Review of Related Studies

Guthrie⁹ reports that the University of Washington used a rating scale to evaluate its instructors to determine bases for increases in salary and rank. Instructors were asked to rate their colleagues. The scale which follows is arranged in the order of frequency of mention in an American Association of University Professors' questionnaire in May of 1944:¹⁰ (1) Teaching effectiveness, (2) Contribution to his field through research and publication, (3) Value of his departmental and campus activities (other than teaching and research), (4) Value to the community or the state, (5) Ability to cooperate with other members of his department, (6) Knowledge and range of interests, (7) General knowledge and range of interest, (8) Rate of current professional growth, and (9) Recognition by others in his profession. From the appearance in second place of research and publication in this scale of nine items of evaluation and from the fact that salary is determined to no small degree from this rating scale, there would be no wonder if the teachers at the University of Washington, at least, sought to become

⁹Edwin R. Guthrie, "The Evaluation of Teaching", Educational Record 30:109-115, April 1949.

¹⁰Idem cit.

proficient in research in deference to growing professionally in the field of teaching.

Baker and Remmers¹¹ make a very pointed criticism when they state that "there have been a few feeble attacks on relatively unimportant facets of the problem of instructor characteristics and the prediction of teaching efficiency at the college level". They expressed dissatisfaction with the status of research on grounds of triviality, inadequate criteria and failure to ask or answer a meaningful question. They also do not condone armchair philosophizing about means and goals of education.

Various devices for measurement of teaching ability are listed by Barr:¹² tests, rating scales, behavior records, questionnaires, interviews, inventories, and autobiographies. Rating scales, interviews, and questionnaires, chiefly questionnaires and rating scales, were used in this study. Barr¹³ also states that the following are approaches to measurement of teaching efficiency: "measures of qualities commonly associated with teaching efficiency include knowledges, skills, attitudes, teacher behavior and performance, and pupil growth". In dealing

¹¹Paul C. Baker and Herman E. Remmers, "The Measurement of Teacher Characteristics and the Prediction of Teaching Efficiency in College", Review of Educational Research, 22:224-227, 1952.

¹²A. S. Barr, "Measurement of Teaching Ability: Impressions, Trends, Future Research", Journal Experimental Research 14:200-206, 1946.

¹³Idem. ditto.

with factors in teaching efficiency, Barr¹⁴ also includes the following characteristics: "drive, expressiveness, academic attitudes, cultural background, knowledge of subject, attitudes toward teachers and teaching, social sensitivity and proficiency in human relations, teacher-pupil relations, professional judgement, and emotional adjustment". It seems likely that Barr made a very comprehensive list of factors which should be included in any measurement of teaching efficiency. It is noteworthy that he has omitted "accomplishment in research" as such.

At Brooklyn College, among students in the biological sciences, Goodharts¹⁵ found in a study of student attitudes and opinions that ability to explain, organization of subject matter, and knowledge of the subject ranked at the top of the list in that order, while students ranked attitude toward the students, instructor as a "human being", and tolerance to disagreement, eighth, ninth, and tenth. It seems that students in this study, at any rate, are primarily interested in getting an education rather than having their ego bolstered.

Guetskov, Kelly, and McKeachie¹⁶ found that there was no significant differences in educational outcome between three groups instructed in three different manners. Students who did not know of the experiment

¹⁴~~Goodharts~~ *et al.*

¹⁵A. S. Goodharts, "Student Attitudes and Opinions Relating to Teaching at Brooklyn College", School and Society, 68:345-349, 1948.

¹⁶H. Guetskov, *et al.*, "An Experimental Comparison of Recitation, Discussion, and Tutorial Methods in College Teaching", Journal Educational Psychology 45:193-207, 1954.

were given a common core of lectures, movies and test demonstrations, and text and supplementary reading assignments in this comparison between recitation, discussion, and tutorial methods in teaching. It is significant to note, for authenticity's sake, that eight teaching fellows taught three sections, one by each method, and that eight of the twenty-four sections were taught by each of the three methods.

The Massachusetts Institute of Technology has established a "Center for Scientific Aids to Learning, devoted to the accumulation and dissemination of data and to research. Five general fields . . . selected for emphasis [are] printing, documentary reproduction, visual education, sound-recording, and mechanical selection".¹⁷

In a report concerning student behavior in relation to the atmosphere of the classroom created in part by the teacher's behavior and methods, McKeachie¹⁸ states that,

The students' anxiety is heightened or reduced by the instructor's teaching behavior. In general, control of anxiety is easiest if the student is in a highly structured situation, where he knows exactly what he must do. The recitation method probably will arouse anxiety by its constant emphasis on tests and grades, but, grim as it may seem, it provides channels for control of the anxiety. . . . while anxiety may be a valuable motivating force, it inhibits performance if it can not be resolved. By giving an opportunity for a closure or channelization of the tension the teacher improves performance.

¹⁷B. B. Cronkhite, A Handbook for College Teachers, (Cambridge: Harvard University Press, 1950) p. 135.

¹⁸W. J. McKeachie, "Anxiety in the College Classroom", Journal of Educational Research 45:225-231, 1951.

In an experiment, McKeachie¹⁹ reports that a different type of learning resulted when two classes had the same assignments, were given the same tests, and covered the same topics with an attempt to remove the anxiety as much as possible from one group. In the experimental group, the instructors recognized anxiety about achievement and helped students perceive progress and achievement, attempted to bring anxiety under control by encouragement in participation in test construction and grade system determination, reduced anxiety involved in dependence on the instructor by offering initial teacher support, building the group as a supporting agency, and creating an accepting, permissive, social climate.

In summarizing his study, McKeachie²⁰ states that "most of our students have come through a dozen years of competitive, anxiety-motivated schooling".

Research Methods and Data Sources

After talking extensively with college students and teachers, the decision was made to make an intensive investigation into the opinions held by teachers in the College of Agriculture at the University of Tennessee relative to the characteristics of good college teachers and to the values and frequency of use of various methods, aids, and examinations. Conferences with the Agricultural Education staff

¹⁹Loc. cit.

²⁰Loc. cit.

members, the Dean of Resident Instruction, and the College of Agriculture Teaching Improvement Committee members resulted in the inclusion of the students' opinions in the study and in making the study a cooperative one with this committee.

Many aptitude lists have been compiled and many rating scales have been developed. In regard to the development of the Purdue Rating Scale, one of the most widely known, Riley, Ryan, and Lifshits²¹ quote H. H. Rammars:

The Purdue Ratings Scale for instructors was not designed and is not meant to evaluate teaching efficiency from the standpoint of the administrator. It is designed to measure the students' prejudices as an important aspect of the teacher-student relationship; important, that is in determining the learning process. . . . the teacher is to see himself as the students see him.

McKeachie²² also suggests, in choosing a scale, that the following considerations be made: 1) the purposes should be clearly defined, 2) the length of the scale should correspond to the time available for administering the scale, 3) that faculty morale will both suffer and be enhanced, 4) that the items be broad enough to include rapport and professional impressions, and 5) that the categories of the surveyees be defined.

These principles were adhered to from the very beginning; however, the decision to survey the students necessitated the alteration

²¹John W. Riley, *et al.*, *op. cit.*, p. 25.

²²Wilbert McKeachie, *Teaching Tips, A Guide-Book for the Beginning College Teacher*, Third edition (Ann Arbor: The George Wahr Publishing Co., 1936) pp. 110-115.

of the information schedules to a large extent in order to be more inclusive.

The results of a survey made by Riley, Ryan, and Lifshits²³ of the frequency with which fourteen attributes were used in twelve studies over a period of twenty-five years were carefully considered in the selection of the twenty-one aptitudes in this study. The list of the characteristics and the number of times used is as follows:

Knowledge of subject, 10; sympathetic attitude toward and interest in students, 10; interest in subject, enthusiasm, 7; appearance, 7; tolerance, broad-mindedness, liberality, 7; interesting presentation, personality to put course across, 6; sense of humor, sense of proportion, 6; stimulating intellectual curiosity, 5; organization, 5; personality, 5; fairness, 5; sincerity, honesty, moral character, 4; speaking ability, 4; clear explanations, 4.

Concerning the validity of students' ratings, Drucker and Remmers²⁴ found that alumni and students valued similar traits and capacities of teachers in essentially the same order. The students' ratings were slightly but not significantly higher than alumni ratings. The aforementioned writers used the Purdue Rating Scale. The decision to include student ratings is also supported by Guthrie²⁵ when he states that: "There is no better criterion of teaching aptitude than teaching performance; there are no better judges of teaching performance than students

²³John W. Riley, *et al.*, *op. cit.*, p. 27.

²⁴A. J. Drucker and H. H. Remmers, "Do Alumni and Students Differ in Their Attitudes toward Instruct?" *Journal of Educational Psychology*, 1951, 42, 129-143.

²⁵Edwin R. Guthrie, *op. cit.*, p. 14.

students and colleagues." The validity of students' ratings and the values placed by students and teachers alike upon those same aptitudes on which the teachers were rated is supported by the statement that "these contrasts [of aptitudes and teacher ratings] unlock areas of potential classroom tension, areas which could not be reached through simple teacher evaluation alone".²⁶ It is with the support of the reports of these researchers that the students' evaluations have been used.

In regard to the administration of the schedules, McKeachie²⁷ makes the following helpful comments:

- 1) Students should be assured that they will not be punished for their responses, 2) The instructors should leave the room, 3) There should be no identifying data, and 4) free comments should be encouraged.

Every effort was made to keep the identity of the teachers unknown. The individual teacher's score was revealed to no one except the teacher himself and the person who devised the coding system, a member of the Teaching Improvement Committee. Since these schedules were designed primarily for teacher improvement, the College of Agriculture preferred that the teachers and students remain unknown.

College Teaching Improvement Committee members administered the schedules during the week preceding final examinations at the end of the 1958 winter quarter. Schedules were taken to each classroom and given to both students and teachers. The committee members explained the

²⁶John W. Riley, *et. al.*, *OR. Qtr.*, p. 126.

²⁷Wilbert McKeachie, *OR. Qtr.*, p. 115.

purpose of the schedules. To reduce students' fear of reprisal and to obtain a more valid report, the teachers were requested to leave the room. After completion, the schedules were placed inside an envelope, sealed, and the teacher's name placed on the outside. The envelopes were then coded and the teacher's name removed from them. Forty-five personal information schedules and fifty-one schedules containing the information on methods and aids were returned by the teachers. The students completed 335 schedules on their opinions of the values of the aptitudes and 717 schedules on their opinions of the methods and aids which the teachers used.

The 1148 separate schedules were given to the writer, coded, and the information punched on IBM electrical counting cards. Formal frequency distribution, weighted score, and simple sentence tables were made, around which this report is constructed.

CHAPTER II

APTITUDES AND TEACHER RATINGS

One teacher remarked, when he was asked to comment about the limitations of the use of teaching aids in his classroom: "Books have been written about this". However, there is no intention of facetiousness in the following statement that books have been written about the validity of student ratings. Drucker and Remmers¹, Guthrie², and Riley, Ryan, and Lifshitz³ all attest to the validity of the maturity and permanence of student judgement and to the effectiveness of the use of student opinion in measuring teaching proficiency. In deference to objectivity, though, it should be noted that the University of Washington⁴, as reported earlier, used not student ratings but colleague ratings in determining salary increases and promotions. We should be wary in reducing human beings to cold statistics; however, to rationalize every situation admittedly makes for a sympathetic understanding but also leads to a position in which the conclusions drawn are condescending.

¹A. J. Drucker and H. H. Remmers, "Do Alumni and Students Differ in Their Attitudes Toward Instructors?" Journal of Educational Psychology, 1951, 42, 129-143.

²E. R. Guthrie, "The Evaluation of Teaching" Educational Record 30:109-15, April 1949.

³John W. Riley, et. al., The Student Looks at His Teacher, (New Brunswick: Rutgers University Press, 1950) p. 16.

⁴E. R. Guthrie, op. cit.

There is only general agreement on the qualities a good teacher should possess. Coffman⁵ presented the following traits to two thousand students in the Oklahoma A. and M. College (fifty-five teachers were rated): preparation for class meetings, teacher's interest and enthusiasm in the subject, ability to arouse interest in students, assignments, sense of proportion, enunciation, sense of humor, scholarship, ability to express thought, feeling between instructor and students, prevalence of cheating on examinations, self-confidence, tolerance and liberality, punctuality in meeting and dismissing class, personal appearance, personal peculiarities, general estimate of instructor as a teacher. Goodharts⁶ lists, in the order of descending importance, ten qualities of teachers:

- 1) Ability to explain, 2) organization of subject matter,
- 3) knowledge of subject, 4) encouragement to thinking, 5) attitude toward subject, 6) fairness in examinations, 7) speaking ability, 8) attitude toward students, 9) instructor as 'human being', and 10) tolerance to disagreement.

Values of Aptitudes

Table I is a list of teacher aptitudes and the values which the students and teachers placed on the aptitudes. The differences between

⁵William E. Coffman, "Determining Students' Concepts of Effective Teaching from Their Ratings of Instructors", Journal Educational Psychology, 1954, 45, 277-86.

⁶A. S. Goodharts, "Student Attitudes and Opinions Relating to Teaching at Brooklyn College" School and Society, 1948, 68, 345-49.

TABLE I

STUDENTS' AND TEACHERS' VALUES OF VARIOUS APTITUDES

Aptitudes	Values and Rank		
	Students'	Difference	Teachers'
1. Interest and enthusiasm in subject	95.75--1	0.50+	96.25--1
2. Ability to arouse interest of students and inspire them to study and learn	91.75--3	+2.75	89.00--5
3. Fair and impartial in his dealing with students	92.00--2	+3.00	89.00--5
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class	86.75--7	+3.00	83.75--8
5. Makes students feel free to ask questions, disagree or express own ideas	85.25--9	+2.75	82.50--10
6. Stimulates creative and independent thinking on part of student	83.75--11	7.50+	91.25--2
7. Makes clear the objectives of the course	83.75--11	+3.75	80.00--11
8. Organizes course well and prepares well	89.75--5	0.25+	90.00--4
9. Well versed in subject	90.50--4	0.25+	90.75--3

TABLE I

STUDENTS' AND TEACHERS' VALUES OF VARIOUS APTITUDES (CONTINUED)

Aptitudes	Values and Rank		
	Students'	Difference	Teachers'
10. Speaks distinctly at proper volume, tone and rate	79.75-15	+2.75	77.00-15
11. Dresses sensibly; neat, well groomed	60.75-20	3.00+	63.75-18
12. Lively sense of humor but avoids obscenity and vulgarity	66.25-18	+3.00	63.25-19
13. Ability to express himself easily and clearly	86.25-8	+3.50	82.75-9
14. Has no distracting mannerisms	66.00-19	+3.50	62.50-20
15. Friendly but not overly familiar with students	68.00-17	+3.25	64.75-17
16. Participates in student clubs and organizations	58.00-21	+2.75	55.25-21
17. Inspires students to adopt high moral habits, social habits, and goals	68.75-16	3.50+	72.25-16
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	89.25-6	+4.25	85.00-7

TABLE I

STUDENTS' AND TEACHERS' VALUES OF VARIOUS APTITUDES (CONTINUED)

Aptitudes	Values and Rank	
	Students ^a	Teachers ^a
19. Expects considerable study and work but is reasonable in demands of student's time	85.25-9	+6.50 78.75-12
20. Has self-confidence	83.75-11	+6.25 77.50-13
21. Makes clear assignments	83.00-14	+5.50 77.50-13
22. Other ^a	--	96.50
Averages	80.68	3.40 2.50+ +3.77 78.70

^aEnjoys his work, engaged in active research, opposes sin, prompt and reliable in meeting classes, refrains from letting personal opinion of student affect his grading.

the students' and teachers' thinking is also shown. The rankings are given primarily for convenience in locating the aptitudes and in comparing the values with each other and those given by the students and teachers. Students and teachers were not asked to actually rank the aptitudes on the schedules.

Both students and teachers gave the greatest value to interest and enthusiasm in the subject. The difference was only slight, two--one-half of one per cent.

The students felt that the aptitude of fair and impartial in his dealings with students was second in importance and gave this aptitude a value of 92.00.

The second place aptitude according to teachers was stimulates creative and independent thinking on part of student. This aptitude was given a value of 91.25 by the teachers--five percentage points below interest and enthusiasm in the subject. The difference between the teachers' and students' values of stimulates creative and independent thinking on part of student is greater than that of any of the other aptitudes. This aptitude was given a value that was less than the values given ten other aptitudes by the students.

The aptitudes of organizes course well and well prepared and well versed in subject were valued highly by students and teachers. The differences between the students' and teachers' values for both aptitudes was only one-fourth of one percentage point. These aptitudes also ranked within the top five by students and teachers.

Teachers valued less highly than students the ability to arouse interest of students and inspire them to study and learn; however, both the values were relatively high.

The difference between the values of the aptitude of gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete was 4.25--the students gave the higher value at 89.25.

Similar rankings were given by the students and teachers to the aptitude of sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class. The values given were 86.75 by the students and 83.75 by the teachers.

The students valued more highly the aptitude of ability to express himself by 3.50 points more than the teachers. The values were 86.25 and 82.75 respectively.

Two aptitudes--makes students feel free to ask questions, disagree or express own ideas and expects considerable study and work but is reasonable in demands of student's time--received 85.25 points each by the students. The aptitude last named was considered 6.50 points less valuable in teaching by the teachers. In fact, the teachers considered this aptitude only "average" in importance.

The next three equally-valued aptitudes were given the value of 83.75 by the students. Stimulates creative and independent thinking on part of student was valued 7.50 points under the value given it by the teachers, as previously pointed out. Makes clear the objectives of the course was also valued in eleventh place by the teachers but the value

was 3.75 points less than that given by the students. Has self-confidence was relatively far above the value given by the teachers---6.25 points.

Has self-confidence was valued by the teachers at 77.50 points and in thirteenth place along with makes clear assignments. This aptitude was given a comparable ranking, fourteenth, by the students but the value was 5.50 points above that which was given by the teachers.

Aptitudes ten, seventeen, and fifteen were all given exact rankings of fifteenth, sixteenth, and seventeenth, respectively by both students and teachers. Ten points, however, separated the fifteenth and seventeenth aptitudes according to the students but in no instance did more than three and one-half points separate the values placed on these three aptitudes by students and teachers.

Three aptitudes closely related to teachers' personal characteristics were valued at least twelve points below the average of the twenty-one. Lively sense of humor but avoids obscenity and vulgarity was given a value of 66.25 by the students, 63.25 by the teachers. Has no distracting mannerisms was valued at 66.00 by the students, 62.50 by the teachers. Dresses sensibly; neat, well groomed was valued at 60.75---3.00 points lower than that of the value placed on this aptitude by the teachers.

The students' twenty-first aptitude, participates in student clubs and organizations, was valued at 58.00---2.75 points above the value the teachers placed on this same aptitude which the teachers also placed last.

The average of the differences between the students' values and those of the teachers' was 3.40. The six aptitudes which the teachers valued higher than the students averaged 2.50 points higher. The fifteen aptitudes which the students valued higher than the teachers averaged 3.77 points higher. The averages of all the values placed on the aptitudes by the students was 80.68; the teachers' values averaged 78.70.

In all but one instance--stimulates creative and independent thinking on part of student--the aptitudes which were valued in the first ten places by the teachers were also considered by the students valuable enough to be placed in the first ten. With all the other aptitudes the rankings varied no more than three places; and with many of them the rankings were the same, although they differed in value by as much as six and one-half points.

Ratings

This division of the chapter reports the data on the ratings which the students gave their teachers.

It was seen from the findings just discussed, that neither teachers nor students valued many of the aptitudes equally. The aptitudes which were valued first and last by the students differed by more than thirty-three points. To value the aptitudes equally in scoring the teachers would definitely be non-objective. The teachers' raw scores, those scores flatly given by the students, were considered in relation to the values which students placed on the aptitudes. (Since the students

rated the teachers, the students' values were used; the teachers' values also could have been used.) Each aptitude value given by the students was considered as having a value of 100 per cent.

Also, 19.32 was added to the aptitudes, since the students' average value of the aptitudes lacked this figure of being 100. The simple formula evolved was this: teacher's raw score multiplied by student's value plus 19.32 equals the teacher's weighted score.

Each aptitude was placed—by reason of its own peculiar characteristics—into four major groups. These groups are "organisation", "communication", "personal characteristics", and "empathy". None of the aptitudes fall exclusively into one group or another—they have been placed in the group in which they most nearly belong. These groups, which have been arbitrarily chosen by the writer, will be considered separately.

Organisation

Teachers received their largest rating on the aptitude which they and the students valued the greatest—interest and enthusiasm in the subject. Their score was 99.75, as seen in Table II. Weston's opinions coincide with this for in the fourth chapter of A Handbook for College Teachers, edited by B. B. Cronkhite⁷, he states that the "Essential components which teaching involves. . . are subject matter, teaching methods, student, and teacher" in that order of importance.

⁷ B. B. Cronkhite, A Handbook for College Teachers (Cambridge: Harvard University Press, 1950) p. 58.

TABLE II

STUDENTS' RATINGS OF TEACHERS

Aptitudes	Ratings and Rank	Differences between Ratings and Values ^a	
		Students'	Teachers'
1. Interest and enthusiasm in subject	99.75--1	+ 4.00	+ 3.50
2. Ability to arouse interest of students and inspire them to study and learn	80.24-12	-11.51	- 8.76
3. Fair and impartial in his dealings with students	93.47--3	+ 1.47	+ 4.47
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class	89.24--4	+ 2.49	+ 5.49
5. Makes students feel free to ask questions, disagree or express own ideas	87.86--5	+ 2.61	+ 5.36
6. Stimulates creative and independent thinking on part of student	78.62-14	- 5.13	-12.63
7. Makes clear the objectives of the course	77.28-15	- 6.47	- 2.72

^aValues found in Table I

TABLE II

STUDENTS' RATINGS OF TEACHERS (CONTINUED)

Aptitudes	Ratings and Rank	Differences between Ratings and Values ^a	
		Students ¹	Teachers ¹
8. Organizes course well and prepares well	83.76-7	- 5.99	- 6.24
9. Well versed in subject	94.07-2	+ 3.57	+ 3.32
10. Speaks distinctly at proper volume, tone and rate	79.61-13	- 0.14	+ 2.61
11. Dresses sensibly; neat, well groomed	70.84-19	+10.09	+ 7.09
12. Lively sense of humor but avoids obscenity and vulgarity	71.13-17	+ 4.88	+ 7.88
13. Ability to express himself easily and clearly	83.15-10	- 3.10	+ 0.40
14. Has no distracting mannerisms	71.06-18	+ 5.06	+ 8.56
15. Friendly but not overly familiar with students	73.45-16	+ 5.45	+ 8.70

^aValues found in Table I

TABLE II

STUDENTS' RATINGS OF TEACHERS (CONTINUED)

Attitudes	Ratings and Rank	Differences between Ratings and Values ^a	
		Students'	Teachers'
16. Participates in student clubs and organizations	65.60-21	+ 7.60	+10.35
17. Inspires students to adopt high moral habits, social habits, and goals	68.68-20	- 0.07	- 3.57
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	83.22-9	- 6.03	- 1.78
19. Expects considerable study and work but is reasonable in demands of student's time	83.43-8	- 1.82	+ 4.68
20. Has self-confidence	87.33-6	+ 3.58	+ 9.83
21. Makes clear assignments	81.90-11	- 1.10	+ 4.40
Averages	81.13	4.39 + 4.62 - 4.14	5.83 + 5.78 - 5.81

^aValues found in Table I

Also, another high score, 94.07, was made by the teachers on an aptitude considered important by the teachers and students. This aptitude is well versed in the subject. Both this and the previously named aptitude were scored three and one-third points or more above both students' and teachers' values.

Organizes course well and prepares well was an aptitude on which the teachers scored above the average, but the score was approximately six points below the standards set by both the students and the teachers.

Four points below the average score was the score given the teachers on makes clear the objectives of the course. Even though both teachers and students valued this aptitude in eleventh place, this score lacked 6.47 and 2.72 points of reaching the expectations of the students and teachers, respectively.

One other aptitude in the field of organization is makes clear assignments. The teachers received a score near the average and a mere 1.10 points below the value placed on this aptitude by the students.

Communication

In the ability to express himself easily and clearly, the teachers rated slightly more than three points under what the students expected in an ideal teacher but still rated two points above the average score of 81.13.

In the aptitude of speaks distinctly at proper volume, tone, and rate, the teachers equalled the students' expectations, and they exceeded their own by more than two and one-half points.

The poorest score, in regard to the students' values, was made by the teachers in the aptitude of ability to arouse interest of students and inspire them to study and learn. The teachers failed by more than eleven and one-half points to equal the students' value placed on this aptitude--and even failed to measure up to their own expectations by more than eight and one-half points.

Personal Characteristics

The rating received by the teachers was more than ten points above the students' value in the matter of dresses sensibly; neat, well groomed.

In lively sense of humor but avoids obscenity and vulgarity, the teachers again scored above the students' and their own values--the score was 71.13.

Also, has no distracting mannerisms, was more than five and eight points above students' and teachers' expectations, respectively.

Again, friendly but not overly familiar with students, was above students' and teachers' values in the same proportion as was "has no distracting mannerisms".

Has self-confidence was one of the aptitudes on which the teachers rated highly. This aptitude was 3.58 points above the value placed on the aptitude by the students and almost nine points above the value of the aptitude according to the teachers.

In only one aptitude in personal characteristics was the score below the values placed on the aptitudes by the students and teachers.

Inspires students to adopt high moral habits, social habits, and goals scored only very slightly under the students' value and 3.57 points under the teachers' value of this aptitude.

Empathy

Fair and impartial in his dealings with students received high values by both students and teachers. Teachers also received a high rating—93.47—on this aptitude.

The teachers received their fourth best rating on sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class. This score was 89.24 and was approximately two and one-half and five and one-half points above students' and teachers' values.

The teachers received comparable ratings to the two previously mentioned aptitudes in makes students feel free to ask questions, disagree or express own ideas. The score was 87.86. This score was also two to five points above students' and teachers' values.

The poorest rating which the teachers made—in their own eyes—was on stimulates creative and independent thinking on part of student. The score of 78.62 was 12.63 points below the value which the teachers placed on this aptitude. However, only 5.13 separated the score and the value which the students placed on this aptitude.

More than ten and seven points above the values of teachers and students, respectively, on participates in student clubs and organizations was the teachers rating of 65.60.

A poorer rating was received by teachers in relation to examinations than in any other area of empathy. The teachers' rating failed to meet by more than six points the students' value placed on the aptitude of gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete.

Although the teachers exceeded by more than four and one-half points their own value placed on expects considerable study and work but is reasonable in demands of student's time, their score of 83.43 failed to meet the students' value by 1.82 points.

Teaching Experience

Aptitude Values

Table III shows that teachers with more than fifteen years teaching experience gave a lower average value, 75.31, to all the aptitudes than any of the other teachers; while the teachers in the ten to fourteen years of experience group valued the aptitudes at 80.73.

Attitude toward subject. The variations from the average value on interest and enthusiasm in the subject were no more than three points. The teachers with five to nine years of experience gave a value three points below the average. This value was 93.25.

Ability to arouse interest and inspire learning. Teachers with ten to fourteen years of experience gave the lowest values to this aptitude. The value was 87.50; the average was 89.00

TABLE III

TEACHERS' APTITUDE VALUES RELATED TO YEARS OF TEACHING EXPERIENCE

Aptitudes	Years of Experience					15 or More Years	Raw Average and Rank (40) ^a
	0 (1) ^a	1-4 (13) ^a	5-9 (11) ^a	10-14 (8) ^a	(7) ^a		
1. Interest and enthusiasm in subject	100.00	94.25	93.25	97.00	96.50	96.25	1
2. Ability to arouse interest of students and inspire them to study and learn	100.00	88.50	91.00	87.50	89.25	89.00	5
3. Fair and impartial in his dealings with students	100.00	92.50	96.50	87.50	89.25	89.00	5
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class	100.00	82.75	81.75	90.75	89.25	83.75	8
5. Makes students feel free to ask questions, disagree or express own ideas	75.00	84.50	84.00	78.25	82.00	82.50	10

^aNumber of teachers reporting.

TABLE III

TEACHERS' APTITUDE VALUES RELATED TO YEARS OF TEACHING EXPERIENCE (CONTINUED)

Aptitudes	Years of Experience					Raw Average and Rank (40) ^a
	0 (1) ^a	1-4 (13) ^a	5-9 (11) ^a	10-14 (8) ^a	15 or More (7) ^a	
6. Stimulates creative and independent thinking on part of student	75.00	86.50	93.25	93.75	92.75	91.25-2
7. Makes clear the objectives of the course	100.00	80.75	79.50	84.50	71.50	80.00-11
8. Organizes course well and prepares well	100.00	86.50	88.75	97.00	85.75	90.00-4
9. Well versed in subject	100.00	90.25	91.00	87.50	92.75	90.75-3
10. Speaks distinctly at proper volume, tone and rate	75.00	78.75	80.00	65.75	71.50	77.00-15
11. Dresses sensibly; neat, well groomed	75.00	61.50	68.25	53.25	67.75	63.75-18
12. Lively sense of humor but avoids obscenity and vulgarity	75.00	67.25	61.25	84.50	57.00	63.25-19

^aNumber of teachers reporting.

TABLE III

TEACHERS' APTITUDE VALUES RELATED TO YEARS OF TEACHING EXPERIENCE (CONTINUED)

Aptitudes	Years of Experience					15 or More Years and Rank (49) ^a
	0 (1) ^a	1-4 (13) ^a	5-9 (11) ^a	10-14 (8) ^a	15 or More (7) ^a	
13. Ability to express himself easily and clearly	100.00	84.75	80.00	84.50	78.50	82.75-9
14. Has no distracting mannerisms	75.00	65.50	63.75	59.50	57.25	62.50-20
15. Friendly but not overly familiar with students	75.00	65.50	60.00	68.75	57.25	64.75-17
16. Participates in student clubs and organizations	75.00	63.50	52.50	56.25	42.75	55.25-21
17. Inspires students to adopt high moral habits, social habits, and goals	75.00	73.00	72.50	81.25	67.75	72.25-16
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	100.00	92.25	77.25	87.50	78.50	85.00-7

^aNumber of teachers reporting.

TABLE III

TEACHERS' APTITUDE VALUES RELATED TO YEARS OF TEACHING EXPERIENCE (CONTINUED)

Aptitudes	Years of Experience					15 or More (7) ^a	Raw Average and Rank (40) ^a
	0 (1) ^a	1-4 (13) ^a	5-9 (11) ^a	10-14 (8) ^a			
19. Expects considerable study and work but is reasonable in demands of student's time	75.00	80.75	77.25	78.25	78.50	78.50	78.75-12
20. Has self-confidence	75.00	78.75	77.25	75.00	78.50	78.50	77.50-13
21. Makes clear assignments	75.00	78.75	79.50	78.25	71.50	71.50	77.50-13
Averages	85.71	79.75	79.07	80.73	75.31	75.31	78.70

^aNumber of teachers reporting.

Fairness. The highest values on this aptitude were given by the teachers with five to nine years of experience and the lowest by the teachers with ten to fourteen.

Sympathetic attitude toward students. Teachers with experience exceeding nine years gave decidedly higher values to this aptitude than did those teachers with nine years of experience or less.

Attitude toward discussion and disagreement. This aptitude, which is related to tolerance, was given the lowest value by the ten to fourteen years group than by any other group of teachers.

Stimulation of thought. The second highest value of all was given to this aptitude. Teachers with less than five years of experience gave a lower value to this aptitude than any other group of teachers. In fact, the value was almost five points below the average of 91.25.

Clear course objectives. No significant deviation from the average was found in this aptitude until the teachers had taught as much as ten years. The ten to fourteen years group valued makes clear the objectives of the course 4.50 points above the average and the fifteen or more years group valued this aptitude 8.50 points below the average.

Course organization. In no group was the value of organizes course well and well prepared as high as it was in the group with ten to fourteen years of experience. The value was 97.00—a value equal to that given by this group to interest and enthusiasm in subject and seven points above the average which all teachers placed on this aptitude.

Knowledge of subject. Only a very small deviation is observed in this aptitude--the teachers with ten to fourteen years of experience valued this aptitude slightly less than the other teachers.

Speaking ability. Teachers who had been teaching ten years or more valued the ability to speak distinctly at proper volume, tone and rate lower than the teachers who had not been teaching as long. Also, those teachers with more than fifteen years of experience valued this aptitude greater than five points more than the teachers with ten to fourteen years of experience.

Appearance. Appearance meant less to teachers with ten to fourteen years of experience than any other group of teachers. The value was ten points below the average of the other teachers.

Sense of humor. The group of teachers which felt very strongly that a sense of humor was an asset in teaching was the ten to fourteen year one. These teachers valued this aptitude almost twenty points above the average.

Ability to express himself. Very little deviation was found among groups of teachers concerning the aptitude of ability to express himself easily and clearly.

No distracting mannerisms. This aptitude was valued more highly by the teachers who had taught less than ten years and less by the teachers who had taught at least ten years.

Friendliness without familiarity. The teachers with more than fifteen years of experience felt more strongly than any of the others

that friendly but not overly familiar with students was not very important. Teachers who had taught from five to nine years also valued this aptitude less than the average.

Participation in student clubs and organizations. The teachers who had taught less than five years felt that participation in student clubs and organizations was valuable to the extent that the value they placed on this aptitude was more than eight points above the average of the other teachers. Nevertheless, of the twenty-one, this aptitude was ranked twentieth by these teachers.

Inspires high moral and social standards and goals. The strongest feeling for the aptitude inspires students to adopt high moral habits, social habits, and goals existed among those teachers who had taught ten to fourteen years; the strongest against this aptitude was among the teachers who had taught more than fifteen years.

Examination construction and fairness. Teachers with less than five years of experience were much more conscious of examination construction and fairness than were the other teachers. Seven points separated their values from the average.

High requirements with reasonableness. All the teachers were in general agreement that the value of high requirements with reasonableness was average—75.75.

Self-confidence. The teachers also agreed with each other that the aptitude of has self-confidence was average in value.

Clear assignments. One group, fifteen years or more, deviated from the average concerning clear assignments. The value which these

teachers placed on the aptitude was six points below the average of 77.50.

Ratings

Teachers' scores, which were given by the students, in Table IV are raw scores. These scores are valid only in comparing them with each other. (The weighted score and rank are given for the reader's convenience.)

The highest average score was received by the teachers with ten to fourteen years of experience and the lowest by the teachers with one to four.

Attitude toward subject. Teachers which had from ten to fourteen years of experience were rated higher on interest and enthusiasm in the subject than were any other group. The teachers who had had one to four years of experience exhibited less interest and enthusiasm than any of the other teachers, according to the students.

Ability to arouse interest and inspire learning. Seventeen points separated the highest and lowest scoring groups on this ability. Teachers with ten to fourteen years of experience scored nine points above the average and teachers with less than five years of experience scored six points less than the average.

Fairness. Teachers with more than fifteen years of experience were scored six points below the average of all teachers; all other groups scored near the average.

TABLE IV

STUDENTS' RATINGS^a OF TEACHERS RELATED TO TEACHERS' YEARS OF TEACHING EXPERIENCE

Aptitudes	Years					Raw Ave ^b (717) ^c (51) ^d	Weighted ^b Score and Rank
	1-4	5-9	10-14	15 or more	No Answer		
	(192) ^c (15) ^d	(122) ^c (9) ^d	(151) ^c (10) ^d	(101) ^c (9) ^d	(151) ^c (8) ^d		
General Rating	65.20	68.60	81.60	62.00	79.40	71.60	—
1. Interest and enthusiasm in subject	76.40	86.40	90.40	82.00	85.80	84.00	99.75—1
2. Ability to arouse interest of students and inspire them to study and learn	58.40	64.00	75.60	62.40	73.60	66.40	80.24—12
3. Fair and impartial in his dealings with students	80.40	78.00	83.00	74.60	84.80	80.60	93.47—3
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class	78.60	81.00	82.60	73.60	83.00	80.60	89.24—4
Raw scores	Number of students					80.60	42

^aRaw scores^bWhen making comparisons, use only raw scores^cNumber of students^dNumber of teachers

TABLE IV

STUDENTS' RATINGS^a OF TEACHERS RELATED TO TEACHERS' YEARS OF TEACHING EXPERIENCE (CONTINUED)

Aptitudes	Years						Weighted ^b Score and Rank
	1-4	5-9	10-14	15 or more	No answer	Raw Ave ^b	
	(192) ^c (15) ^d	(122) ^c (9) ^d	(151) ^c (10) ^d	(101) ^c (9) ^d	(151) ^c (8) ^d	(717) ^c (51) ^d	
5. Makes students feel free to ask questions, disagree or express own ideas	79.40	77.00	84.60	72.80	84.20	80.40	87.66--5
6. Stimulates creative and independent thinking on part of student	67.80	66.60	77.80	64.80	75.40	70.80	78.62-14
7. Makes clear the objectives of the course	60.80	70.60	77.60	61.40	75.20	69.20	77.28-15
8. Organizes course well and prepares well	62.00	71.60	83.80	59.80	77.80	71.80	83.76--7
9. Well versed in subject	71.00	82.60	94.40	82.00	88.00	82.60	94.07--2
10. Speaks distinctly at proper volume, tone and rate	70.40	68.60	83.80	69.00	84.20	75.60	79.61-13

^aRaw scores^bWhen making comparisons, use only raw scores^cNumber of students^dNumber of teachers

TABLE IV

STUDENTS' RATINGS^a OF TEACHERS RELATED TO TEACHERS' YEARS OF TEACHING EXPERIENCE (CONTINUED)

Attitudes	Years						Weighted ^b Score and Rank
	1-4	5-9	10-14	15 or more	No answer	Raw Ave ^b	
	(192) ^c (15) ^d	(122) ^c (9) ^d	(151) ^c (10) ^d	(101) ^c (9) ^d	(151) ^c (8) ^d	(717) ^c (51) ^d	
11. Dresses sensibly; neat, well groomed	81.40	84.80	84.20	82.20	88.40	84.80	70.84-19
12. Lively sense of humor but avoids obscenity and vulgarity	76.80	76.60	83.00	70.20	78.00	78.20	71.11-17
13. Ability to express him- self easily and clearly	66.00	68.00	83.60	69.60	82.20	74.00	83.15-10
14. Has no distracting man- nerisms	74.40	67.80	84.60	72.20	83.80	78.40	71.06-18
15. Friendly but not overly familiar with students	79.60	75.40	82.60	74.20	83.60	79.60	73.45-16
16. Participates in student clubs and organizations	77.40	72.00	76.60	65.60	86.40	79.80	65.60-21

^aRaw scores^bWhen making comparisons, use only
raw scores^cNumber of students
^dNumber of teachers

TABLE IV

STUDENTS' RATINGS^a OF TEACHERS RELATED TO TEACHERS' YEARS OF TEACHING EXPERIENCE (CONTINUED)

Aptitudes	Years						Weighted ^b Score and Rank
	1-4	5-9	10-14	15 or more	No answer	Raw Ave ^b	
	(192) ^c (15) ^d	(122) ^c (9) ^d	(151) ^c (10) ^d	(101) ^c (9) ^d	(151) ^c (8) ^d	(717) ^c (51) ^d	
17. Inspires students to adopt high moral habits, social habits, and goals	69.60	69.20	75.40	70.20	75.60	71.80	68.68-20
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	75.20	71.40	73.40	66.60	80.60	71.60	83.22-9
19. Expects considerable study and work but is reasonable in demands of student's time	72.80	87.20	78.40	71.20	82.20	75.20	83.43-8
20. Has self-confidence	72.00	78.80	88.00	78.40	87.40	81.20	87.33-6
21. Makes clear assignments	71.80	70.60	81.40	74.40	77.80	75.40	81.90-11
Raw score averages ^b	72.40	74.68	82.13	71.29	81.80	76.46	—
Weighted score averages ^b	77.73	79.55	86.48	77.82	85.32	81.38	81.13
^a Raw scores	Number of students						45
^b When making comparisons, use only raw scores	Number of teachers						

Sympathetic attitude toward students. Again, all the teachers rated near the average—except the teachers with more than fifteen years teaching experience. These teachers rated seven points less than the average on sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class.

Attitude toward discussion and disagreement. Attitude toward discussion and disagreement was an aptitude in which only the teachers with ten to fourteen years of experience rated higher than the average. The deviations, however, are not more than five points from average.

Stimulation of thought. According to the students, the teachers with ten to fourteen years of experience were the teachers to stimulate creative and independent thinking on the part of the student. These teachers rated ten points or more higher than any of their fellow teachers.

Clear course objectives. A wide range of ratings is observed in the ratings which the teachers received on making the course objectives clear. Teachers with ten to fourteen years of experience received a rating eight points above the average, teachers with five to nine years received an average rating and teachers with both more than fifteen years and less than five years of experience received ratings approximately eight points below the average.

Course organization. Course organization and preparedness was an aptitude which again saw the teachers with ten to fourteen years of experience receive the highest score—twelve points above average. Teachers with fifteen or more years and teachers with less than five

scored the lowest scores.

Knowledge of subject. The greatest differences in scores was found in the aptitude of well versed in the subject. The teachers in the group with experience of ten to fourteen years received a rating of 94.40. Receiving the poorest rating, 71.00, were the teachers who had been teaching less than five years. The point difference was twenty-one points. The other groups of teachers were near the average.

Speaking ability. The greatest development of speaking ability was with the teachers who had taught less than fifteen years and more than nine. The only rating appearing above the average was in this group of teachers.

Appearance. Only slight deviations in the ratings were found in the aptitude of dresses sensibly; neat, well groomed.

Sense of humor. Teachers with more than fifteen years of experience exhibited less sense of humor than those with fewer years of experience, according to the students.

Ability to express himself. The only group of teachers which was above average in the ability to express himself easily and clearly was the one which had ten to fourteen years of experience.

No distracting mannerisms. The teachers with five to nine years of experience had more distracting mannerisms than any of the other teachers; the teachers with ten to fourteen had fewer than any others.

Friendliness without familiarity. Friendly but not overly familiar with students is an aptitude on which all teachers rated nearly

equally. Teachers with more than fifteen years of experience, however, rated slightly lower than others.

Participation in student clubs and organizations. The teachers with more than fifteen years of experience rated less than any other group of teachers on participation in student clubs and organizations. The teachers who rated the highest were the ones who had taught five to nine years.

Inspires high moral and social standards and goals. All teachers rated near the average on inspires students to adopt high moral habits, social habits and goals, except the teachers with ten to fourteen years of experience. These teachers rated slightly above.

Examination construction and fairness. Teachers with the fewest number of years of experience rated the highest in examination construction and fairness. The teachers with the most years of experience rated the least on this aptitude--66.60.

High requirements with reasonableness. The highest rating on high requirements with reasonableness was received by the teachers with five to nine years of experience. Their rating was twelve points above the average. Both extremes of the teaching experience scale received the low ratings.

Self-confidence. Self-confidence was exhibited more by the group with ten to fourteen years of experience and less by the teachers with five or less.

Clear assignments. Six points above the average of 75.40 was the rating received by the teachers with ten to fourteen years of

experience. All other ratings fell from 1.00 to 4.80 points below the average on this aptitude for making clear assignments.

Teaching Preparatory Courses Taken

Ratings

Since more than two-thirds of the teachers had taken at least one course and no more than seven courses designed to assist them in teaching, there is little significance in the variations of ratings received by teachers related to the number of teaching preparatory courses taken. These data are shown in Table V.

Classification

The following two sections of this chapter show the values which the students place on the aptitudes and the ratings which the students give the teachers. These data are shown by classification of the student.

Aptitude Values

The graduate students gave the highest values to the aptitudes and the sophomores gave the lowest; however, none of the classifications deviated more than 1.00 from the average. Students in all classifications placed approximately the same values on the twenty-one aptitudes. This information is shown in Table VI.

Attitude toward subject. Juniors and seniors gave the greatest values to this aptitude--the only two groups above the average.

TABLE V

STUDENTS' RATINGS OF TEACHERS RELATED TO TOTAL NUMBER
TEACHING PREPARATORY COURSES TAKEN BY TEACHERS

Courses	Number of Teachers	Ratings		
		Range	Range	Average
None	1	—	—	81.43
1-3	10	74.21	87.07	78.87
4-6	11	65.60	90.22	77.81
7-9	3	74.55	86.89	80.97
10-12	4	77.37	91.81	79.64
13 or more	2	68.61	87.69	78.15
No answer	5	77.77	89.20	84.71
Average				81.13

TABLE VI

APTITUDE VALUES RELATED TO STUDENTS' CLASSIFICATION

Aptitudes	Classification					Raw Average and Rank
	Fresh- (51) ^a	Sopho- more (70) ^a	Juniors (68) ^a	Seniors (82) ^a	No Graduates (52) ^a	
1. Interest and enthusiasm in subject	93.00	93.25	97.50	96.25	95.75	100.00 95.75—1
2. Ability to arouse interest of students and inspire them to study and learn	92.25	89.00	92.75	93.25	91.25	91.75 91.75—3
3. Fair and impartial in his dealings with students	89.75	92.00	91.50	91.50	96.25	91.75 92.00—2
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class	83.75	85.75	86.50	88.00	89.00	89.50 86.75—7
5. Makes students feel free to ask questions, disagree or express own ideas	83.75	85.00	87.25	82.50	83.75	87.50 85.25—9

^aNumber of students

TABLE VI

APTITUDE VALUES RELATED TO STUDENTS' CLASSIFICATION (CONTINUED)

Aptitudes	Classification					Row Average and Rank
	Freshmen (51) ^a	Sophomores (70) ^a	Juniors (64) ^a	Seniors (52) ^a	Graduates (12) ^a	
6. Stimulates creative and independent thinking on part of student	80.00	81.50	84.25	82.56	87.00	85.50 83.75-11
7. Makes clear the objectives of the course	82.25	82.25	84.50	85.00	83.25	87.50 83.75-11
8. Organizes course well and prepares well	86.75	89.75	91.50	80.25	95.75	89.50 89.75-5
9. Well versed in subject	88.75	91.75	90.75	89.25	92.00	93.75 90.50-4
10. Speaks distinctly at proper volume, tone and rate	78.50	76.50	82.25	79.00	81.25	79.25 79.75-15
11. Dresses sensibly; neat, well groomed	61.75	54.00	61.50	62.75	62.50	58.25 60.75-20
12. Lively sense of humor but avoids obscenity and vulgarity	67.75	67.75	65.00	66.25	64.50	64.50 66.25-18

^aNumber of students

TABLE VI

APTITUDE VALUES RELATED TO STUDENTS' CLASSIFICATION (CONTINUED)

Aptitudes	Classification					
	Fresh- men (51) ^a	Sopho- mores (70) ^a	Juniors (68) ^a	Seniors (82) ^a	Graduates (52) ^a	No Answer (12) ^a
13. Ability to express himself easily and clearly	86.75	86.50	86.50	84.50	87.00	91.75
14. Has no distracting mannerisms	69.50	64.00	66.50	63.75	68.25	68.75
15. Friendly but not overly familiar with students	68.00	67.50	67.25	66.50	71.50	70.75
16. Participates in student clubs and organizations	59.00	58.75	63.25	57.00	53.00	48.00
17. Inspires students to adopt high moral habits	68.75	69.00	66.75	66.25	70.25	62.50
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	86.75	89.75	89.75	90.25	89.00	87.50
Number of students						

TABLE VI

APTITUDE VALUES RELATED TO STUDENTS' CLASSIFICATION (CONTINUED)

Aptitudes	Classification					Raw Average and Rank
	Fresh- men (51) ^a	Sopho- mores (70) ^a	Juniors (68) ^a	Seniors (82) ^a	Graduates (52) ^a	No Answer (12) ^a
19. Expects considerable study and work but is reasonable in demands of student's time	83.25	83.25	87.75	86.50	85.50	83.25 85.25-9
20. Has self-confidence	86.25	84.25	82.75	83.75	82.75	77.00 83.75-11
21. Makes clear assignments	85.75	80.25	82.25	83.75	82.75	83.25 83.00-14
Raw score averages	80.11	79.70	81.25	80.75	81.50	80.75 80.68
Number of students						

Ability to arouse interest and inspire learning. The sophomores were the least concerned about teachers' abilities to arouse interest and inspire students to study and learn. However, student differences on this aptitude were slight and the average was eleven points above the average of all the aptitudes.

Fairness. Graduate students gave a significantly higher value to this aptitude concerning fairness than any of the other students. Their evaluation was 96.25 while the lowest evaluation was 83.75, given by the freshmen.

Sympathetic attitude toward students. Freshmen were less concerned also about the teachers' sympathetic attitude toward students. The value which they placed on this aptitude was three points below the average of 86.75 while the graduate students' value was 89.00.

Attitude toward discussion and disagreement. The juniors placed the highest value on makes students feel free to ask questions, disagree, or express own ideas. Differences, though, were small between all classifications.

Stimulation of thought. Stimulation of thought was more the concern of graduate students than it was of other students—especially the freshmen, who gave a value to this aptitude seven points below that of the graduate students.

Clear course objective. Agreement prevailed among the students in the evaluation of clear course objectives. Only 1.25 points or less separated all the values.

Course organization. Graduate students felt that course organization was just as valuable as was interest and enthusiasm in the subject. They gave both these aptitudes the highest value of all the aptitudes—95.75. Juniors' values were also above the average; the seniors' values were more than nine points below.

Knowledge of subject. Very little differences exist in the values given well versed in the subject by all the students.

Speaking ability. Speaks distinctly at proper volume, tone and rate received very similar evaluations by all the students.

Appearance. Sophomores were less concerned about dresses sensibly; neat, well groomed than were the other students. The value was six points below the average given by all the students.

Sense of humor. This eighteenth ranked aptitude of lively sense of humor but avoids obscenity and vulgarity was valued, but only slightly so, lower by the graduate students than the other students.

Ability to express himself. There is little variation in the values which all classifications of students gave the aptitude of ability to express himself easily and clearly.

No distracting mannerisms. The highest values placed on has no distracting mannerisms were by freshmen and graduate students, the lowest by the seniors.

Friendliness without familiarity. Friendly but not overly familiar with the students was an aptitude which received only 68.00 points in value, but the students were consistent in their giving of this value.

Participation in student clubs and organizations. The highest value of participates in student clubs and organizations was given by the juniors, the lowest by the graduate students. The difference between these values was almost ten points—a significant difference.

Inspires high moral and social standards and goals. Little variation exists in the values which the different classifications of students placed on the aptitude of inspires students to adopt high moral habits, social habits, and goals.

Examination construction and fairness. All the students felt that the giving of fair, well constructed examinations which require thought as well as factual knowledge and reasonable time given to complete was an aptitude which rated a value of 89.25 points. Deviations from this average were very small.

High requirements with reasonableness. Freshmen and sophomores were equally concerned about the value of high requirements with reasonableness but less so than all the other classifications of students.

Self-confidence. The freshmen felt that the aptitude of self-confidence was important as observed by the value of 86.25 which they placed on this aptitude. All other students gave a smaller value to this aptitude.

Clear assignments. Clear assignments was a more than average concern of freshman students and less of the sophomores. Other students gave values near the average.

Ratings

The teachers' ratings recorded by classification of student in Table VII are raw scores and to be used only in comparing aptitudes. (The weighted scores are given for the reader's convenience.)

Attitude toward subject. Higher ratings were given the teachers on this aptitude by the freshmen and sophomores than were given by the other students; however, deviations from the average were very slight.

Ability to arouse interest and inspire learning. Eight points higher than the average was the rating given the teachers by the graduate students on this ability to arouse interest of students and inspire them to study and learn. The freshmen also rated the teachers higher than the average.

Fairness. The sophomores placed the lowest and the graduate students placed the highest ratings on the teachers in regard to the aptitude of fair and impartial in his dealings with students. These ratings were 76.80 and 85.40 respectively.

Sympathetic attitude toward students. Juniors and graduate students differ greatly on the ratings placed on the aptitude of sincerely interested in progress and problems of students; willing to take time to help them both in class and outside of class. The juniors' rating was 72.80 and the graduate students, 98.80—a difference of twenty-six. The other students' ratings were near the average.

Attitude toward discussion and disagreement. Few variations are found in the ratings which the students gave the teachers on this aptitude related to attitude toward discussion and disagreement.

TABLE VII

STUDENTS' RATINGS OF TEACHERS RELATED TO CLASSIFICATION OF STUDENT

Aptitudes	Classification							Average Weighted Score and Rank
	Fresh-men (110) ^a	Sophomores (100) ^a	Juniors (150) ^a	Seniors (245) ^a	Graduates (88) ^a	No Answer (24) ^a	Average Raw Score (717) ^a	
General Rating	93.60	70.00	80.00	71.80	77.60	53.40	71.60	--
1. Interest and enthusiasm in subject	84.20	85.20	83.40	82.40	82.60	80.80	84.00	99.75--1
2. Ability to arouse interest of students and inspire them to study and learn	71.40	62.20	63.60	66.40	74.40	67.60	66.40	80.24--12
3. Fair and impartial in his dealings with students	80.80	76.80	80.20	81.40	85.40	75.00	80.60	93.47--3
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class	77.40	77.80	82.80	82.20	98.80	73.40	80.60	89.24--4
5. Makes students feel free to ask questions, disagree or express own ideas	80.80	78.60	79.00	81.00	84.60	75.00	80.40	97.86--5

^aNumber of students

TABLE VII

STUDENTS' RATINGS OF TEACHERS RELATED TO CLASSIFICATION OF STUDENT (CONTINUED)

Aptitudes	Classification							Average Weighted Score and Rank
	Fresh- men (110) ^a	Sopho- mores (100) ^a	Juniors (150) ^a	Seniors (245) ^a	Grad- uates (88) ^a	No Answer (24) ^a	Average Raw Score (717) ^a	
6. Stimulates creative and independent thinking on part of student	69.40	71.00	69.60	70.60	75.20	69.20	70.80	78.62-14
7. Makes clear the objectives of the course	71.80	67.60	67.60	68.20	73.80	67.60	69.20	77.28-15
8. Organizes course well and prepares well	72.00	66.80	71.40	70.40	77.80	69.20	71.80	83.76-7
9. Well versed in subject	81.80	81.60	82.20	81.60	88.00	83.40	82.60	94.07-2
10. Speaks distinctly at proper volume, tone and rate	80.80	74.80	74.60	77.20	71.00	75.80	75.60	79.61-13
11. Dresses sensibly; neat, well groomed	83.00	84.60	83.80	85.60	86.40	80.60	84.80	70.84-19
Number of students								

TABLE VII

STUDENTS' RATINGS OF TEACHERS RELATED TO CLASSIFICATION OF STUDENT (CONTINUED)

	Classification							
	Fresh- men (110) ^a	Sopho- mores (100) ^a	Juniors (150) ^a	Seniors (245) ^a	Grad- uates (88) ^a	No Answer (24) ^a	Average Raw Score (717) ^a	Average Weighted Score and Rank
Aptitudes								
12. Lively sense of humor but avoids obscenity and vulgarity	76.80	76.80	79.00	78.20	81.00	75.80	78.20	71.13-17
13. Ability to express him- self easily and clearly	74.20	70.60	74.60	73.80	76.80	75.00	74.00	83.15-10
14. Has no distracting mannerisms	75.80	79.00	74.20	78.00	80.40	74.20	78.40	71.06-18
15. Friendly but not overly familiar with students	76.80	77.00	80.20	80.40	84.00	74.00	79.60	73.45-16
16. Participates in student clubs and organizations	76.20	80.00	72.40	83.40	76.60	86.00	79.80	65.62-21
17. Inspires students to adopt high moral habits	67.00	68.20	72.60	74.00	75.20	70.40	71.80	68.68-20
18. Gives fair, well construc- ted exams which require thought as well as factual knowledge and reasonable time given to complete	73.80	69.40	72.00	72.80	76.00	71.60	71.60	83.22-9

^aNumber of students

TABLE VII

STUDENTS' RATINGS OF TEACHERS RELATED TO CLASSIFICATION OF STUDENT (CONTINUED)

Aptitudes	Classification							Average Weighted Score and Rank
	Fresh- men (110) ^a	Sopho- mores (100) ^a	Juniors (150) ^a	Seniors (245) ^a	Grad- uates (88) ^a	No Answer (24) ^a	Average Raw Score (717) ^a	
19. Expects considerable study and work but is reasonable in demands of student's time	77.60	75.20	72.40	75.80	77.80	80.80	75.20	83.43—8
20. Has self-confidence	80.60	78.20	81.40	81.60	84.00	80.80	81.20	87.33—6
21. Makes clear assignments	75.00	73.00	73.20	75.60	81.40	71.60	75.40	81.90-11
Raw score averages	76.49	74.97	75.25	77.20	80.50	75.13	76.59	—
Weighted score averages	61.04	79.81	80.03	82.60	84.27	79.93	81.28	81.13

^aNumber of students

Stimulation of thought. The graduate students rated the teachers higher than any other on stimulation of thought. Other students' ratings were near the average.

Clear course objective. The teachers on makes clear the objectives of the course were rated similarly by all students--the graduate students gave a slightly higher rating than the average.

Course organization. The lowest rating given the teachers on course organization was given by the sophomores--the highest by the graduate students. The ratings deviated from the average by five and six points respectively.

Knowledge of subject. Well versed in the subject is an aptitude on which the teachers received similar ratings by all classifications of students except graduate students. The graduate students' rating was 88.00.

Speaking ability. Speaks distinctly at proper volume, tone, and rate is an aptitude on which the low rating of the teachers was given by the graduate students and the high by the freshmen.

Appearance. Teachers received near average ratings by all classifications on dresses sensibly; neat, well groomed.

Sense of humor. The teachers received ratings which deviated very little from the average on the aptitude concerning sense of humor.

Ability to express himself. The teachers on the ability of self expression received their lowest rating by the sophomores and the highest by the graduate students; however, the variations were not very large.

No distracting mannerisms. Juniors felt that the teachers should receive a lower rating on has no distracting mannerisms than did any of their fellow students. Other ratings were near the average.

Friendliness without familiarity. Ratings varied little on this aptitude of friendly but not overly familiar with students.

Participation in student clubs and organizations. Juniors gave the poorest rating to the teachers on their participation in student clubs and organizations, notwithstanding the fact that the juniors valued this aptitude higher than any other group of students--as reported earlier.

Inspires high moral and social standards and goals. The students with increasingly higher classifications gave higher ratings to teachers on inspires students to adopt high moral habits, social habits, and goals.

Examination construction and fairness. Graduates were more satisfied with their teachers' examination construction and fairness than were the other students, sophomores in particular.

High requirements with reasonableness. The teachers on the aptitude of expects considerable study and work but is reasonable in demands of student's time received ratings which varied little according to classification.

Self-confidence. No variation of any significance is shown in the aptitude of self-confidence.

Clear assignments. Graduate students were satisfied with their teachers' ability to make clear assignments. The rating which they gave

their teachers was six points above the average. All the other students' ratings were near the average.

Grade Point Average

Variations which are found in the aptitude values and the teacher ratings according to the students are found in the following sections as they relate to the approximate grade-point average of the student.

Aptitude Values

As shown in Table VIII, only 3.14 points separate the highest and the lowest average values placed on the aptitudes related to students' approximate grade-point average.

The students with grades lower than a "C" gave the lowest value and the students with a grade-point average of 2.8-2.9 gave the highest.

Attitude toward subject. Deviations of no more than 2.25 points were made in the values placed on interest and enthusiasm in the subject by all the students.

Ability to arouse interest and inspire learning. The lowest value--and this is of little significance--was given the aptitude of ability to arouse interest of students and inspire them to study and learn by the students with a grade of 2.0-2.1.

Fairness. The students with grades of 2.4-2.5 were the least concerned with their teachers being fair and impartial. They gave a value of 87.50 to this aptitude--7.25 points below the highest value, which was given by the students with grades above a "C".

TABLE VIII

APTITUDE VALUES RELATED TO APPROXIMATE GRADE-POINT AVERAGE OF STUDENTS

Aptitudes	Grade-Point ^a								Raw Average and Rank (335) ^b
	0.1- 1.9 (31) ^b	2.0- 2.1 (45) ^b	2.2- 2.3 (58) ^b	2.4- 2.5 (48) ^b	2.6- 2.7 (28) ^b	2.8- 2.9 (32) ^b	3.0 & above (57) ^b	No Answer (36) ^b	
1. Interest and enthusiasm in subject	94.25	97.25	94.50	93.75	95.50	97.00	95.25	96.50	95.75—1
2. Ability to arouse inter- est of students and in- spire them to study and learn	92.00	89.00	92.00	93.25	92.75	92.25	91.25	91.75	91.75—3
3. Fair and impartial in his dealings with students	88.25	91.00	94.00	87.50	90.25	94.50	94.75	94.50	92.00—2
4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and out- side of class	87.25	85.00	87.50	84.50	86.75	87.50	86.75	88.25	86.75—7

^aThe grade of "A" is worth four quality points; "B", three; etc.
^bnumber of students reporting.

TABLE VIII

APTITUDE VALUES RELATED TO APPROXIMATE GRADE-POINT AVERAGE OF STUDENTS (CONTINUED)

Aptitudes	Grade-Point ^a							No Answer (36) ^b	Raw Average & Rank (335) ^b
	0.1-1.9 (31) ^b	2.0-2.1 (45) ^b	2.2-2.3 (58) ^b	2.4-2.5 (48) ^b	2.6-2.7 (28) ^b	2.8-2.9 (32) ^b	3.0 & above (57) ^b		
5. Makes students feel free to ask questions, disagree or express own ideas	83.75	85.50	84.50	84.50	88.50	89.75	82.00	87.50	85.25--9
6. Stimulates creative and independent thinking on part of student	77.50	86.25	83.50	80.25	85.75	85.25	86.50	84.75	83.75-11
7. Makes clear the objectives of the course	79.75	85.50	95.75	82.25	85.75	85.25	82.00	81.25	83.75-11
8. Organizes course well and prepares well	85.50	91.00	91.75	89.50	87.50	82.25	90.25	89.00	89.75--5
9. Well versed in subject	80.75	92.25	90.50	87.50	90.25	93.75	91.75	90.25	90.50--4
10. Speaks distinctly at proper volume, tone and rate	78.25	80.00	81.50	74.50	80.25	82.75	80.25	82.00	79.75-15

^aThe grade of "A" is worth four quality points; "B", three; etc.
^bNumber of students reporting.

TABLE VIII

APTITUDE VALUES RELATED TO APPROXIMATE GRADE-POINT AVERAGE OF STUDENTS (CONTINUED)

Grade-Point ^a										
Aptitudes	0.1- 1.9 (31) ^b	2.0- 2.1 (45) ^b	2.2- 2.3 (58) ^b	2.4- 2.5 (48) ^b	2.6- 2.7 (28) ^b	2.8- 2.9 (32) ^b	3.0 & above (57) ^b	No Answer (36) ^b	Raw Average & Range (335) ^b	
11. Dresses sensibly; neat, well groomed	54.75	61.25	63.25	57.75	58.00	66.50	59.25	65.75	60.75-20	
12. Lively sense of humor but avoids obscenity and vulgarity	67.00	64.00	64.75	67.25	67.75	72.00	62.25	62.50	66.25-18	
13. Ability to express him- self easily and clearly	85.50	86.25	85.00	85.50	84.75	87.50	86.75	89.00	86.25--8	
14. Has no distracting man- nerisms	69.25	61.25	66.50	60.50	67.75	65.25	63.50	71.50	66.00-19	
15. Friendly but not overly familiar with students	63.75	67.75	64.75	64.50	69.75	68.75	62.75	74.25	68.00-17	
16. Participates in student clubs and organizations	60.00	62.50	58.75	58.25	65.25	54.00	52.75	57.00	58.00-21	
17. Inspires students to adopt high moral habits, social habits, and goals	66.25	64.25	72.25	72.50	63.50	68.75	66.75	66.00	68.75-16	

^aThe grade of "A" is worth four quality points; "B", three; etc.
^bNumber of students reporting.

TABLE VIII

APTITUDE VALUES RELATED TO APPROXIMATE GRADE-POINT AVERAGE OF STUDENTS (CONTINUED)

Grade-Point ^a										Raw Average & Rank (335) ^b
0.1- 1.9 (31) ^b	2.0- 2.1 (45) ^b	2.2- 2.3 (58) ^b	2.4- 2.5 (48) ^b	2.6- 2.7 (28) ^b	2.8- 2.9 (32) ^b	3.0 & above (57) ^b	No Answer (36) ^b			
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	84.75	90.50	91.00	87.50	91.75	91.50	89.50	86.75	89.25-6	
19. Expects considerable study and work but is reasonable in demands of student's time	82.25	85.00	87.00	89.00	81.25	86.75	84.75	83.25	85.25-9	
20. Has self-confidence	87.00	85.00	83.25	83.25	84.00	79.00	82.50	82.00	83.75-11	
21. Makes clear assignments	86.25	81.25	84.50	80.75	86.75	79.75	83.25	82.25	83.00-14	
Averages	78.76	80.56	81.26	79.25	81.13	81.90	79.75	81.24	80.68	

^aThe grade of "A" is worth four quality points; "B", three; etc.
^bNumber of students reporting.

Sympathetic attitude toward students. The students deviated very little in the values which they placed on the aptitude of sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class.

Attitude toward discussion and disagreement. Students with grades above 3.0 were less concerned with the teacher's attitude toward discussion and disagreement than the other students, especially those students with a grade of 2.8-2.9 who placed a value of 89.25 on this aptitude.

Stimulation of thought. Students with grades below "C" cared less than all the others that their teachers have the ability to stimulate thought. Their value, 77.50, was nine points below the highest one, given by the "B" students, and 6.25 points below the average.

Clear course objectives. Little variation in values was reported by students in the aptitude of makes clear the objectives of the course.

Course organization. The slightly lower than average values of organizes course well and prepares well were given by students with grade-points below 2.0 and between 2.3 and 2.8.

Knowledge of subject. Knowledge of the subject was valued very highly by all students except those with grades below "C". These students' average value was 80.75—almost ten points below the average.

Speaking ability. Speaking ability was valued less highly by the students with grade-points of 2.4-2.5. This value along with the value given this aptitude by students with grade points below 2.0 were

the only values below the average.

Appearance. Almost fourteen points separate the highest value, 66.50, and the lowest value, 54.75, of the aptitude concerning appearance. These values were given by students with grade-point averages of 2.8-2.9 and below 2.0, respectively.

Sense of humor. The only significant deviation from the average on lively sense of humor but avoids obscenity and vulgarity is the relatively high value, 72.00, placed on this aptitude by the students with grade-points of 2.8-2.9.

Ability to express himself. No significant differences are found in the values which the students placed on ability to express himself easily and clearly.

No distracting mannerisms. The highest value given to has no distracting mannerisms was that given by the students with a grade-point below "C". The lowest was given by students with a grade-point of 2.4-2.5.

Friendliness without familiarity. Both students above and below the grade of "C" gave low values to friendly but not overly familiar with students. Other values were near the average.

Participation in student clubs and organizations. Participates in student clubs and organizations was an aptitude that was given lower than average value by students with grade above 2.7.

Inspires high moral and social standards and goals. The students with grades of 2.2 and 2.5 and between valued higher than any other students the ability to inspire students to adopt high moral

habits, social habits, and goals. The other students' values were little below the average.

Examination construction and fairness. The values on examination construction and fairness were very similar with all students except for the low value placed on this aptitude by the students with a grade point average below 2.0.

High requirements with reasonableness. Expects considerable study and work but is reasonable in demands of student's time given various values by different grade-point groups. The highest value, 89.00, was given by students in the 2.4-2.5 group and the lowest value, 81.25, was given by the students with a grade average of 2.6-2.7.

Self-confidence. Only small deviations occurred in the values placed on the aptitude of self-confidence. The only noticeable deviation is made by the below "C" students' value of 87.00.

Clear assignments. Less than four points separate both the high and low values from the average in this aptitude.

Ratings

The students with average grades of 2.4-2.5 gave the lowest rating, 78.79, to the teachers, and the students with average grades of 2.6-2.7 gave the highest rating, 84.03. This range is very small--only 5.33 points. The raw scores are used for comparisons.

Attitude toward subject. Little deviation occurred in the rating the teachers received by grade point differences except in the high score, 87.80, and the low score, 79.00.

TABLE IX

STUDENTS' RATINGS^a OF TEACHERS RELATED TO APPROXIMATE
GRADE-POINT AVERAGE OF STUDENTS

Aptitudes	Grade-Point ^b								No Answer (70) ^d	Average Raw Score (717) ^d	Weighted ^c Score and Rank
	0.1- 1.9 (56) ^d	2.0- 2.1 (94) ^d	2.2- 2.3 (141) ^d	2.4- 2.5 (115) ^d	2.6- 2.7 (66) ^d	2.8- 2.9 (69) ^d	3.0 & above (106) ^d				
General Rating	74.20	73.00	70.00	64.20	76.00	75.40	75.40	72.40	71.60	—	
1. Interest and enthusiasm in subject	84.20	85.40	82.40	79.00	87.80	85.20	85.60	84.40	84.00	99.75-1	
2. Ability to arouse in- terest of students and inspire them to study and learn	67.20	66.40	65.80	60.20	69.40	67.00	69.20	69.80	66.40	80.24-12	
3. Fair and impartial in his dealings with students	81.00	80.80	78.80	77.40	87.40	85.80	82.20	79.40	80.60	93.47-3	
4. Sincerely interested in progress or prob- lems of students; will- ing to take time to help them both in class and outside of class	77.60	80.20	79.20	76.80	83.60	82.00	83.00	81.40	80.60	89.24-4	

^aRaw scores

^bThe grade of "A" is worth four quality points; "B", three; etc.

^cUse only the raw scores in making comparisons

^dNumber of students

TABLE IX

STUDENTS' RATINGS^a OF TEACHERS RELATED TO APPROXIMATE
GRADE-POINT AVERAGE OF STUDENTS (CONTINUED)

Aptitudes	Grade-Point ^b										Average Raw Score (717) ^d	No Answer (70) ^d	3.0 & Above (106) ^d	2.8- 2.9 (69) ^d	2.6- 2.7 (66) ^d	2.4- 2.5 (115) ^d	2.2- 2.3 (141) ^d	2.0- 2.1 (94) ^d	0.1- 1.9 (56) ^d	Weighted ^c Score and Rank
5. Makes students feel free to ask questions, disagree or express own ideas	79.60																			87.87--5
6. Stimulates creative and independent thinking on part of student	70.40																			78.62-14
7. Makes clear the objectives of the course	68.40																			77.28-15
8. Organizes course well and prepares well	71.60																			83.76--7
9. Well versed in subject	83.60																			94.07--2

^aRaw scores^bThe grade of "A" is worth four quality points; "B", three; etc.^cUse only the raw scores in making comparisons^dNumber of students

TABLE IX

STUDENTS' RATINGS^a OF TEACHERS RELATED TO APPROXIMATE GRADE-POINT
AVERAGE OF STUDENTS (CONTINUED)

Aptitudes	Grade-Point ^b								Average ^c Raw Score (717) ^d	Weighted ^c Score & Rank
	0.1- 1.9	2.0- 2.1	2.2- 2.3	2.4- 2.5	2.6- 2.7	2.8- 2.9	3.0 & above	No Answer		
	(56) ^d	(94) ^d	(141) ^d	(115) ^d	(66) ^d	(69) ^d	(105) ^d	(70) ^d		
10. Speaks distinctly at proper volume, tone and rate	77.40	75.40	75.40	72.80	81.60	80.60	71.80	75.40	75.60	79.61-13
11. Dresses sensibly; neat, well groomed	83.40	83.60	85.60	84.40	87.60	85.60	84.20	83.80	84.80	70.84-19
12. Lively sense of humor but avoids obscenity and vulgarity	83.40	78.00	76.80	76.20	81.20	84.00	75.60	78.60	78.20	71.13-17
13. Ability to express himself easily and clearly	75.40	73.80	73.40	69.00	78.40	76.60	73.00	77.20	74.00	83.15-10
14. Has no distracting mannerisms	77.00	77.00	75.60	75.40	81.60	81.20	75.00	79.20	78.40	71.06-18
15. Friendly but not overly familiar with students	78.20	79.20	79.80	76.60	81.20	82.40	81.60	79.40	79.60	73.45-16

^aRaw scores

^bThe grade of "A" is worth four quality points; "B", three; etc. Use only the raw scores in making comparisons of number of students

TABLE IX

STUDENTS' RATINGS^a OF TEACHERS RELATED TO APPROXIMATE
GRADE-POINT AVERAGE OF STUDENTS (CONTINUED)

Aptitudes	Grade-Point ^b								Average ^c Raw Score (717) ^d	Weighted ^c Score and Rank
	0.1- 1.9 (56) ^d	2.0- 2.1 (94) ^d	2.2- 2.3 (141) ^d	2.4- 2.5 (115) ^d	2.6- 2.7 (66) ^d	2.8- 2.9 (69) ^d	3.0 & above (106) ^d	No Answer (70) ^d		
16. Participates in student clubs and organisations	79.40	79.00	75.40	78.80	75.40	77.20	69.60	83.60	79.80	65.60-21
17. Inspires students to adopt high moral habits, social habits, and goals	64.00	74.00	73.80	69.60	69.20	76.00	71.60	73.80	71.80	68.68-20
18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete	70.40	76.60	70.20	70.00	75.20	72.40	73.00	71.20	71.60	83.22--9
19. Expects considerable study and work but is reasonable in demands of student's time	75.80	79.60	71.80	73.40	80.00	76.80	75.00	74.60	75.20	83.43--8

^aRaw scores^bThe grade of "A" is worth four quality points; "B", three; etc.^cUse only the raw scores in making comparisons^dNumber of students

TABLE IX

STUDENTS' RATINGS^a OF TEACHERS RELATED TO APPROXIMATE
GRADE-POINT AVERAGE OF STUDENTS (CONTINUED)

	Grade-Point ^b								Average ^c Raw Score (717) ^d	Weighted ^c Score and Rank
	0.1- 1.9 (56) ^d	2.0- 2.1 (94) ^d	2.2- 2.3 (141) ^d	2.4- 2.5 (115) ^d	2.6- 2.7 (66) ^d	2.8- 2.9 (69) ^d	3.0 & Above (106) ^d	No Answer (70) ^d		
20. Has self-confidence	80.80	82.40	81.60	76.60	84.40	82.40	81.00	84.60	81.20	87.33-6
21. Makes clear assignments	73.60	79.00	73.40	70.80	81.80	78.00	75.80	77.40	75.40	81.90-11
Raw average score	76.30	77.60	75.85	73.60	80.20	78.51	76.40	77.80	76.76	—
Weighted average score	80.98	81.93	80.52	78.70	84.03	82.66	80.96	82.09	81.05	81.13

^aRaw scores^bThe grade of "A" is worth four quality points; "B", three; etc.^cUse only the raw scores in making comparisons^dNumber of students

Ability to arouse interest and inspire learning. The lowest rating given the teachers on this aptitude of ability to arouse interest and inspire learning was given them by the students in the 2.4-2.5 grade group. This was the only rating which fell appreciably below the average.

Fairness. Ten points separated the low and high ratings on this aptitude concerning fairness. The students with grades of 2.4-2.5 again gave the low rating--77.40--and the students with grades of 2.6-2.7 gave the high rating--87.40.

Sympathetic attitude toward students. Very little variation from the average were the ratings given the teachers on the aptitude concerned with having a sympathetic attitude toward students.

Attitude toward discussion and disagreement. Almost ten points separate the ratings given by the students with grades of 2.4-2.5 and those with 2.6-2.7. However, within these ratings are the only significant variations from average.

Stimulation of thought. The teachers' ratings on stimulates creative and independent thinking on part of student was 70.80. The students with grades of 2.8-2.9 gave the teachers a rating of 75.00, in comparison, while the students with grades of 2.4-2.5 gave the lowest rating, 64.80.

Clear course objectives. The ratings for the teachers on makes clear the course objectives varied little from the average of 69.20.

Course organization. Both groups of students between 2.4 and 2.7 agree for one of the few times that the teachers should be rated higher

than the average. The other ratings are near the average.

Knowledge of subject. Knowledge of the subject rated higher than the average with all students but those in the 2.4-2.5 and 2.8-2.9 point groups. Even these ratings were not exceptionally low.

Speaking ability. A significantly higher than average rating was given the teachers by the students in the 2.6-2.7 point group. The rating was 81.60—six points above the average.

Appearance. Few deviations from the average rating were given the teachers on dresses sensibly; neat, well groomed.

Sense of humor. The teachers' highest rating on sense of humor came from the 2.8-2.9 students and their poorest from the 3.0 and above students. Almost nine points separated the thinking of these two groups of students.

Ability to express himself. Small variations in the ratings given the teachers on ability to express himself easily and clearly are the rule. The two exceptions are the 2.4-2.5 group and the 2.6-2.7 group. The former gave the smaller rating at 69.00 and the latter the larger, 78.40.

No distracting mannerisms. The largest degree of variation in the teachers' ratings on the absence of distracting mannerisms was 6.60. The 2.6-2.7 students gave the higher rating at 81.60 and the 3.0 and above students the lower.

Friendliness without familiarity. The teachers' ratings on friendly but not overly familiar with students were consistent in all grade point groups.

Participation in student clubs and organizations. The lowest rating on participates in student clubs and organizations was given by the students with an average grade above "C". This is a significant one also--ten points below the average given by all the students. Other ratings are near the average.

Inspires high moral and social standards and goals. The teachers' lowest rating was given them by the students below the grade of "C" on the aptitude of inspires students to adopt high moral habits, social habits, and goals. This rating was fourteen points below the highest rating of 76.00 which was given by students with 2.8-2.9 averages.

Examination construction and fairness. The rating of 76.60 was the highest given the teachers concerning examination construction and fairness. The students with averages of 2.0-2.1 gave this rating. The lowest, given by the 2.4-2.5 group, was 70.00, only 1.60 below the average.

High requirements with reasonableness. Only in this aptitude did the students in the range of 2.2-2.3 rate the teachers lower than any other group. However, the rating was near the average as was the other students' ratings.

Self-confidence. The differences in the ratings on teacher self-confidence were very small among various grade-point averages.

Clear assignments. Concerning makes clear assignments, eleven points separate the high rating, given by the 2.6-2.7 students, from the low rating, given by the 2.4-2.5 students. These ratings were 81.80 and 70.80 respectively.

Average Ratings

The following ratings are given in "multiples of five", "preparation according to degree and place received", and "preparation according to highest degree held".

Multiples of Five

The average weighted score of the twenty-one aptitudes of all the thirty-six teachers who had taught during the winter quarter of the year 1957-58 was 81.13. The median and the mean, in this instance, are the same--the teachers who rated above 81.13 are eighteen in number and likewise eighteen teachers failed to meet the average. Table X shows that ten teachers rated below 75.00--five of them below 70.00. Eight teachers rated from 85-89 points, and two rated above 90 points. The range in ratings was from a low of 64.37 to a high of 91.81.

Degree and Place Received

Table XI shows the ratings of the teachers in relation to degree held and in which institutions the degrees were obtained.

There seems to be little significance in the ratings received by teachers who received their Bachelor of Science degrees from various institutions. Slightly lower ratings were received by teachers who had received their degree from the University of Tennessee.

The twelve teachers who received their Master of Science degrees from outside the South rated at least two points more than teachers receiving the Master of Science degree from institutions within the South;

TABLE X
TEACHERS' AVERAGE WEIGHTED SCORES IN MULTIPLES OF FIVE

Multiples of Five	Ratings			Average
	Number of Teachers	Range	Range	
95-100	0	—	—	—
90-94	2	90.22	91.81	91.02
85-89	8	85.61	89.20	86.87
80-84	8	81.43	84.99	82.86
75-79	8	76.51	79.66	78.38
70-74	5	72.30	74.75	74.02
65-69	4	65.60	68.61	66.61
64 and below	1	—	—	64.37

TABLE XI

TEACHERS' RATINGS RELATED TO PREPARATION ACCORDING TO
DEGREE AND PLACE RECEIVED

Degree and Place Received	Ratings		
	Number of Teachers	Range	Average
B. S.^a:			
U. T. ^b	5	64.37	84.99
South ^c	11	65.80	91.81
Other ^c	14	65.60	90.22
No Answer	6	72.30	89.20
			77.59
			79.34
			79.37
			82.63
M. S.^a:			
U. T. ^b	9	64.37	90.22
South ^c	8	65.80	85.96
Other ^c	12	65.60	91.81
No Answer	1	—	—
			78.18
			78.00
			80.23
			72.30
Ph. D.^a:			
U. T. ^b	0	—	—
South ^c	1	—	—
Other ^c	16	65.60	90.22
No Answer	1	—	—
			91.81
			79.11
			72.30

^aOr comparable degree^bOther than University of Tennessee; Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Texas, Virginia, and West Virginia^cAll Institutions, other than those in South

however, the nine teachers with Master of Science degrees from the University of Tennessee received ratings slightly higher than those from other parts of the South.

No significance can be attached to the data which are reported on those nineteen teachers with doctoral degrees—one man failed to indicate at which school his degree was conferred and all other doctoral degrees, with one exception, were obtained at institutions outside the South. This one exception received the highest rating of any teacher in the College.

Highest Degree Held

Table XII shows that there is very little difference in the ratings which the teachers with Master of Science degrees received and those received by the teachers with doctoral degrees. The thirteen teachers with only Master of Science degrees received a weighted average score of 78.04 and the teachers with doctoral degrees received a rating that was 1.38 points higher.

Summary

In summary, only in small measures did the students, in regard to classification and grade-point average, disagree with one another in placing values on the aptitudes. Teachers and students showed a decided degree of compatibility in the values which they placed on the twenty-one selected teacher aptitudes. They disagreed by four or more percentage

TABLE XII

TEACHERS' RATINGS RELATED TO PREPARATION ACCORDING TO HIGHEST DEGREE HELD

Degree	Ratings		
	Number of Teachers	Range	Average
B. S. ^a	0	—	—
M. S. ^a	13	64.37 87.07	78.04
Ph. D. ^a	18	65.60 91.81	79.42
No answer	5	77.77 89.20	84.71

^aOr comparable degree

points on only five aptitudes, and then only as much as seven and one-half points. The most marked degree of lack of harmony in their values was in "stimulation of thought"—the teachers placed the higher value on this aptitude. The average number of points difference between the students and teachers was only 3.40. Of the aptitudes which the teachers valued higher than the students, the point difference was 2.50; and of the aptitudes which the students valued higher, the point difference was 3.77 points. Close agreement was found between the values of both teachers and students top eight aptitudes, except the aptitude previously mentioned—"stimulation of thought". Agreement generally prevailed, also in the values of the aptitudes ranked in the last seven by students and teachers.

Bousfield⁸ found that when he asked 507 students to list, in the order of importance, five traits which they thought were desirable in a college professor the following values were given:

1. Fairness	91.90
2. Mastery of subject	90.00
3. Interesting presentation of material	89.50
4. Well organized material	89.00
5. Clearness of exposition	88.00
6. Interest in students	*
7. Helpfulness	83.10
8. Ability to direct discussion	82.90
9. Sincerity	80.50
10. Keenness of intellect	78.50
11. Enthusiasm	76.20
12. Wide range of information	74.80
13. Sense of humor	71.40
14. Good voice	70.00

⁸Weston A. Bousfield, "Students' Ratings of Qualities Considered Desirable in College Professors", School and Society, 1940, 51, pp. 253-56.

15. Tolerance	68.50
16. Poise	58.40
17. Good appearance	50.20
18. Accomplishment in research	39.00
19. Reputation as a scholar	32.20

* Value omitted from the report

In all categories of comparable terminology between the report just quoted and the investigation made at the University of Tennessee, the rankings are similar; and the values placed on the aptitudes in this study are considerably higher.

The average rating received by members of the staff in the present study by their students was 81.13. Fourteen of all the aptitudes were valued by the students above the average of 80.65 and, of all of these, only on three—"ability to arouse interest and inspire learning", "stimulation of thought", and "clear course objectives"—did the teachers fail to meet the average score of 81.13; and, of these three, only Aptitude No. 2, fell more than four points below average. The teachers' ratings failed to meet the values placed on the aptitudes by the teachers by a larger margin than they did the students' aptitude values.

Teachers with ten to fourteen years of teaching experience, both college and other, made a higher average weighted score than did any of their colleagues. Teachers with more than fifteen years of experience, made the lowest rating of any group of teachers. The average value placed on all the aptitudes varied only slightly between groups of teachers with varying degrees of experience.

Graduate students gave a significantly higher rating to teachers than did the sophomores, who rated the teachers lower than any other

classification of students.

Graduate students again gave a higher average value to all the aptitudes than did the sophomores who again were under their fellow students in evaluating the aptitudes.

Both extremes in the rating of teachers were found near each other in categorizing the students according to approximate grade-point average. The students with a grade-point average of 2.6—2.7 gave the highest ratings to teachers, while the students immediately under them in grades gave the lowest ratings to teachers. Both ratings were very close together though—84.03 and 78.70. The same group of students which gave the lowest rating to the teachers also gave the lowest average value to the aptitudes—2.4—2.5; but the highest value was given to the aptitudes by the students in the 2.8—2.9 grade-point group.

There is little significance in the difference between the ratings of those men with Master of Science degrees and those with Doctor of Philosophy degrees.

Small differences are found, in referring to Table XI, in the ratings of men receiving any kind of degree from the University of Tennessee, any other university or college in the South, or any other institution.

Table XIII is a summarizing table of data previously presented in this chapter. Data of students' and teachers' aptitude values and the ratings received by the teachers are presented here for the reader's convenience in comparing these items with one another.

TABLE XIII

STUDENTS' APTITUDE VALUES, TEACHERS' APTITUDE VALUES, AND TEACHERS' RATINGS

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
General Rating Aptitude ^h "B"							
1	96.25-1	+ 0.50	95.75-1	71.60	99.75-1	+ 4.00	+ 3.50
2	89.00-5	2.75+	91.75-3	84.00	80.24-12	-11.51	- 8.76
3	89.00-5	3.00+	92.00-2	66.40	93.47-3	+ 1.47	+ 4.47
4	83.75-8	3.00+	86.75-7	80.60	89.24-4	+ 2.49	+ 5.49
5	82.50-10	2.75+	85.25-9	80.40	87.86-5	+ 2.61	+ 5.36
6	91.25-2	+ 7.50	83.75-11	70.80	78.62-14	- 5.13	-12.63
7	80.00-11	3.75+	83.75-11	69.20	77.28-15	- 6.47	- 2.72
8	90.00-4	+ 0.25	89.75-5	71.80	83.76-7	- 5.99	- 6.24
9	90.75-3	+ 0.25	90.50-4	82.60	94.07-2	+ 3.57	+ 3.32
10	77.00-15	2.75+	79.75-15	75.60	79.61-13	- 0.14	+ 2.61
11	63.75-18	+ 3.00	60.75-20	84.80	70.84-19	+10.09	+ 7.09
12	63.25-19	3.00+	66.25-18	78.20	71.13-17	+ 4.88	+ 7.88

^aTeachers' aptitude values^bPercentage point difference in teachers' and students' values (plus signs indicate in which columns the figures are greater.)^cStudents' aptitude values^dTeachers' raw scores^eTeachers' weighted scores (column 'C' multiplied by column 'D' plus 19.32--the difference between 100 and the students' average values.)^fPercentage point difference in students' values and weighted scores^gPercentage point difference in teachers' values and weighted scores^hThe complete name of the aptitude will be found on Schedules "A" and "C" in Appendix C and on several preceding tables

TABLE XIII

STUDENTS' APTITUDE VALUES, TEACHERS' APTITUDE VALUES, AND TEACHERS' RATINGS (CONTINUED)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Aptitude ^a "B" -							
13	82.75-9	3.50+	86.25-8	74.00	83.15-10	- 3.10	+ 0.40
14	62.50-20	3.50+	66.00-19	78.40	71.06-18	+ 5.06	+ 8.56
15	64.75-17	3.25+	68.00-17	79.60	73.45-16	+ 5.45	+ 8.70
16	55.25-21	2.75+	58.00-21	79.80	65.60-21	+ 7.60	+10.35
17	72.25-16	+ 3.50	68.75-16	71.80	68.68-20	- 0.07	- 3.57
18	85.00-7	4.25+	89.25-6	71.60	83.22-9	- 6.03	- 1.78
19	78.75-12	6.50+	85.25-9	75.20	83.43-8	- 1.82	+ 4.68
20	77.50-13	6.25+	83.75-11	81.20	87.33-6	+ 3.58	+ 9.83
21	77.50-13	5.50+	83.00-14	75.40	81.90-11	- 1.10	+ 4.40
22	96.50-	-	-	71.80	-	-	-
Averages: (1-21)	78.70	3.40 + 2.50 3.77+	80.68	76.76	81.13	4.39 +4.62 -4.14	5.83 + 5.78 - 5.81

^aTeachers' aptitude values^bPercentage point difference in teachers' and students' values
(Plus signs indicate in which column the values are greater.)^cStudents' aptitude values^dTeachers' raw scores^eTeachers' weighted scores (Column 'e' multiplied by column 'd' plus 19.32--the difference between 100 and the students' average values.)^fPercentage point difference in students' values and weighted scores^gPercentage point difference in teachers' values and weighted scores^hThe complete name of the aptitude will be found on Schedules "A" and "C" in Appendix C and on several preceding tables.

CHAPTER III

TEACHING METHODS

The purpose of this chapter was to interpret the data which were collected concerning the teachers' frequency of use of various teaching methods, the teachers' comments about the methods, and the opinions the students held about the frequency with which teachers used the methods.

"In no other way can you, at one time, transmit [*italics mine*] so much to so many with such effectiveness, as through speech", says Weston in Cronkhite's¹ A Handbook for College Teachers. In a mild rebuttal, this writer asks one question: Is "transmitting" teaching? Weston² also states that "in spite of its disadvantages, the lecture remains the most effective means by which you may transmit to your whole class of students the subject matter of your teaching." As to the difficulty in using various methods of teaching, Payne and Spieth³ maintain that "It is far easier to deliver a lecture than to conduct a successful discussion hour. The last needs more preparation than the first." McKeachie⁴ feels that "the recitation method will probably

¹B. B. Cronkhite, A Handbook for College Teachers, (Cambridge: Harvard University Press, 1950) p. 64.

²Ibid., p. 65.

³Fernandus Payne and Evelyn W. Spieth, An Open Letter to College Teachers, (Bloomington: The Principia Press, 1935) p. 201.

⁴W. J. McKeachie, "Anxiety in the College Classroom", Journal of Educational Research, 1951, 45, 225-31.

arouse anxiety by its constant emphasis on tests and grades, but grim as it may seem, it provides channels for control of the anxiety." Cronkhite⁵ emphasizes the purposes of laboratory work and the function of the teacher in teaching with the laboratory method with the words of William H. Weston

. . . in relation to lectures, textbooks, discussions, or other aspects of your courses, the function of laboratory work is to exemplify, strengthen, support, corroborate, extend, and supplement the knowledge and understanding gained through these other means. The primary function of laboratory work as a teaching procedure is to enable the student to learn from the material itself directly, and your function as a teacher is to foster, expedite, facilitate, stimulate, and otherwise aid this important process.

The use of field study as a teaching procedure is particularly applicable in the study of agriculture. Weston⁶ remarks that "within the limits of its applicability, you will find field study as a teacher procedure, a very effective and useful adjunct to the more widely useful laboratory work."

Cole⁷ believes that "the lecture has its chief value, perhaps, in the elementary course and becomes less and less useful as students advance in their work." She also adds, in consideration of the evaluation of the lecture as an effective teaching device, that "too many people judge the lecture method by its poorer exponents. . . . In the hands of

⁵B. B. Cronkhite, op. cit., p. 110.

⁶B. B. Cronkhite, op. cit., p. 118.

⁷Luella Cole, The Background for College Teaching, (New York: Farrar and Rinehart, Inc., 1950) p. 327.

an expert, lecturing is an educative way of teaching some courses, in some departments, at some level."

Table XIV is designed to show the frequency according to course level with which various teaching methods were used by teachers in the University of Tennessee College of Agriculture. The teachers were asked whether they used a particular teaching method frequently, occasionally, rarely, or never. These terms were changed to one, two, three, and four, respectively, for compilation purposes. Course levels in the University of Tennessee College of Agriculture are: 100-Freshmen, 200-Sophomore, 300-Junior, 400-Senior, and 500-Graduate. The average frequency with which the teachers used the lecture was greater than for any other method—1.26. The method was used progressively less from the 100 courses to the 300 and 400 levels. The frequency with which the courses engaged in discussions was 1.45—second in frequency to the lecture method. The 300 and 500 level courses used this method more frequently than the other courses did. Resource people were used less frequently than any other teaching method—the average being 3.09. Written assignments were used at an average frequency of 1.96—the frequency being greater in the 200 level courses. The frequency with which the lecture method was used in the 200 level courses is also the same frequency as that of the written assignments. As expected in science courses, laboratories were used with a frequency of 2.07, with the students in the 200 level courses again working in the laboratory more often than the others.

It is significant that small group discussions and students' oral reports were used less frequently than individual conferences.

TABLE XIV

TEACHERS' FREQUENCY OF USE OF VARIOUS TEACHING METHODS RELATED TO COURSE LEVEL

Method	Course level						Average (51) ^a
	100 (8) ^a	200 (6) ^a	300 (14) ^a	400 (14) ^a	500 (3) ^a	No answer (6) ^a	
Lecture	1.13	1.17	1.21	1.50	1.50	1.17	1.26
Discussions	1.63	1.50	1.21	1.50	1.33	1.67	1.45
Small group discussions	2.88	2.50	2.50	2.50	3.00	2.50	2.87
Students' oral reports	3.13	3.50	2.60	2.31	2.33	3.33	2.75
Laboratory	1.43	1.33	2.33	2.62	1.50	2.33	2.07
Demonstrations	1.38	1.50	2.50	2.62	2.50	2.50	2.21
Field trips	2.13	2.17	2.42	2.54	3.00	3.00	2.68

Key:

- 1—Frequently
 2—Occasionally
 3—Rarely
 4—Never
^aNumber reporting

TABLE XIV

TEACHERS' FREQUENCY OF USE OF VARIOUS TEACHING METHODS RELATED TO COURSE LEVEL (CONTINUED)

Method	Course Level					No answer (6) ^a	Average (51) ^a
	100 (8) ^a	200 (6) ^a	300 (14) ^a	400 (14) ^a	500 (3) ^a		
Individual conferences	2.00	2.67	2.46	2.46	2.00	2.17	2.43
Written assignments	2.33	1.17	2.08	1.64	1.33	2.50	1.96
Resource people	3.13	2.60	2.92	3.15	3.00	3.50	3.09
Other	0.00	1.00	0.00	2.00	0.00	0.00	1.00

Key:

- 1—Frequently
- 2—Occasionally
- 3—Rarely
- 4—Never

^aNumber Reporting

Counseling of students was done less with students in the 200 numbered courses and more with the freshmen and graduate students. Students' oral reports were used more frequently with students in the 400 and 500 courses and were used infrequently with students in the 200 numbered courses--the frequency being 3.50.

Table XV shows the frequency with which teachers, who took various numbers of teaching preparatory courses, used the teaching methods. Teachers with thirteen or more courses to their credit employed the lecture method in their teaching less than did the other teachers. They used discussions more than any other group of teachers except the ones who had taken ten to twelve courses, and they used field trips and resource people more often than any of their fellow teachers did. Teachers who had taken fewer than seven courses relied hardly at all upon resource people to aid them in their teaching. Teachers with seven to nine courses taken seemed to "personalize" their teaching more frequently than did other teachers--they used both the small group discussion and individual counseling methods more frequently in their teaching. The teachers who had taken four to six preparatory courses used the laboratory and demonstration techniques much more frequently than did the other teachers. The student who received instruction from teachers with varying degrees of preparatory work made approximately the same number of written assignments in all courses.

In Table XVI the frequency of use of teaching methods is shown in relation to the number of years of teaching experience. Teachers

TABLE XV

TEACHERS' FREQUENCY OF USE OF TEACHING METHODS RELATED
TO TOTAL NUMBER PREPARATORY TEACHING COURSES TAKEN

Method	Courses Taken						Average (51) ^a
	None (3) ^a	1-3 (9) ^a	4-6 (15) ^a	7-9 (5) ^a	10-12 (6) ^a	13 or more (5) ^a	
Lecture	1.00	1.11	1.27	1.20	1.00	1.80	1.26
Discussions	1.67	1.56	1.53	1.40	1.34	1.40	1.45
Small group discussions	3.33	3.32	2.39	2.60	3.00	3.20	2.87
Students' oral reports	3.00	3.11	3.07	2.60	2.60	2.80	2.75
Laboratory	1.00	2.38	1.60	3.00	2.00	2.00	2.07
Demonstrations	1.33	2.44	1.74	3.20	2.20	2.40	2.21
Field trips	1.33	2.89	2.73	3.20	2.60	2.20	2.68

^aNumber reporting

Key:

- 1—Frequently
- 2—Occasionally
- 3—Rarely
- 4—Never

TABLE XV
TEACHERS' FREQUENCY OF USE OF TEACHING METHODS RELATED
TO TOTAL NUMBER PREPARATORY TEACHING COURSES TAKEN (CONTINUED)

Method	Courses Taken							Average (51) ^a
	None (3) ^a	1-3 (9) ^a	4-6 (15) ^a	7-9 (5) ^a	10-12 (6) ^a	13 or more (5) ^a	No Answer (8) ^a	
Individual conferences	2.00	2.56	2.46	2.40	2.50	2.00	1.83	2.43
Written assignments	1.00	2.22	2.20	2.00	2.20	2.00	1.29	1.96
Resource people	2.33	3.56	3.54	3.00	3.17	2.80	1.80	3.09
Other	0.00	1.00	2.00	0.00	1.00	0.00	0.00	1.00

^aNumber reporting

Key:

- 1--Frequently
- 2--Occasionally
- 3--Rarely
- 4--Never

TABLE XVI

TEACHERS' FREQUENCY OF USE OF TEACHING METHODS RELATED
TO TOTAL YEARS TEACHING EXPERIENCE

Methods	Years					Average (51) ^a
	1-4 (15) ^a	5-9 (9) ^a	10-14 (10) ^a	15 or more (9) ^a	No Answer (8) ^a	
Lecture	1.27	1.11	1.30	1.22	1.43	1.26
Discussions	1.33	1.77	1.30	1.55	1.25	1.45
Small group discussions	2.58	3.22	3.20	2.78	2.80	2.87
Student oral reports	2.86	3.00	3.10	2.44	1.50	2.75
Laboratories	1.71	2.00	1.80	2.56	2.80	2.07
Demonstrations	1.93	1.89	2.20	2.56	2.60	2.21
Field trips	2.71	2.44	2.90	2.44	3.00	2.68

^aNumber reporting

Key:

- 1--Frequently
- 2--Occasionally
- 3--Rarely
- 4--Never

TABLE XVI

TEACHERS' FREQUENCY OF USE OF TEACHING METHODS RELATED
TO TOTAL YEARS TEACHING EXPERIENCE
(CONTINUED)

Methods	Years				No Answer (8) ^a	Average (51) ^a
	1-4 (15) ^a	5-9 (9) ^a	10-14 (10) ^a	15 or more (9) ^a		
Individual conferences	2.53	2.22	2.60	2.78	1.83	2.43
Written assignments	2.21	1.78	2.30	2.33	1.29	1.96
Resource people	3.39	3.22	3.20	3.11	1.80	3.09
Other	1.50	0.00	0.00	0.13	0.00	1.00

^aNumber reporting

Key:

- 1--Frequently
- 2--Occasionally
- 3--Rarely
- 4--Never

with from five to nine years of teaching experience used more frequently than any other group the following methods: lectures, demonstrations, field trips, individual conferences, and written assignments. In only one instance is there a gradually increasing frequency of use and that is with resource people. The teachers with fifteen or more years of experience used resource people more frequently than any other group. Within no group was any method used more than was that of the lecture, except with the teachers who had from ten to fourteen years of experience—there discussions were used equally as frequently. The use of laboratories, demonstrations, individual conferences, and written assignments as teaching procedures by teachers who had had fifteen or more years of teaching experience was less than that of all other teachers. Teachers with less than five years of experience tended to rely more upon their own teaching abilities rather than those of resource people.

The students were asked for their opinion of the teacher's use of methods. They were asked to state whether the teacher used the method too frequently, not frequently enough, or whether the teacher's use was satisfactory. These data, in Tables XVII and XVIII, are related to both grade-point average and classification. The totals show that the use of the lecture method, laboratories, and written assignments was satisfactory, or nearly so, with the students. Of the 335 students, more than one hundred felt that all the remaining methods should have been used more frequently, and of these, more than 150 students felt that small group discussions, demonstrations, individual conferences, and visiting

TABLE XVII

STUDENTS' OPINIONS OF FREQUENCY OF USE OF TEACHING METHODS
ACCORDING TO APPROXIMATE GRADE-POINT AVERAGE

Method	Grade-Point Average											
	0.1 - 1.9 (31) ^a			2.0 - 2.1 (45) ^a			2.2 - 2.3 (58) ^a			2.4 - 2.5 (48) ^a		
	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d
Lecture	2	4	23	6	2	36	16	2	40	8	5	35
Discussions	4	6	19	2	18	25	2	22	34	1	21	26
Small group discussions	1	20	9	3	20	21	3	25	29	2	27	18
Student oral reports	2	15	13	3	18	22	4	14	40	1	12	35
Laboratories	4	5	20	4	13	27	4	17	37	2	13	33
Demonstrations	0	18	12	3	22	20	0	36	22	1	23	24
Field trips	0	11	19	0	14	30	0	29	29	2	13	33

^aNumber of students reporting

^bUsed too frequently

^cNot used frequently enough

^dSatisfactory

^eNo answer

TABLE XVII

STUDENTS' OPINIONS OF FREQUENCY OF USE OF TEACHING METHODS
ACCORDING TO APPROXIMATE GRADE-POINT AVERAGE (CONTINUED)

Method	Grade-Point Average														
	0.1 - 1.9 (31) ^a			2.0 - 2.1 (45) ^a			2.2 - 2.3 (58) ^a			2.4 - 2.5 (48) ^a			2.6 - 2.7 (28) ^a		
	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d
Individual conferences	1	18	11	0	20	24	1	32	24	0	29	18	0	15	13
Written assignments	3	6	20	2	10	33	5	7	46	4	6	38	2	5	21
Visiting speakers	0	23	6	0	27	16	3	34	19	0	32	16	0	15	13
Other	0	0	0	0	2	1	0	1	1	2	0	3	0	0	0

^aNumber of students reporting

^bUsed too frequently

^cNot used frequently enough

^dSatisfactory

^eNo answer

TABLE XVII

STUDENTS' OPINIONS OF FREQUENCY OF USE OF TEACHING METHODS
ACCORDING TO APPROXIMATE GRADE-POINT AVERAGE (CONTINUED)

Method	Grade-Point Average											
	2.8 - 2.9 (32) ^a			3.0 & Above (57) ^a			No Answer (36) ^a			Total (335) ^a		
	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d
Lecture	4	3	25	9	5	43	8	2	25	60	25	245
Discussions	1	11	20	1	16	40	1	11	23	12	117	202
Small group discussions	0	14	18	1	22	23	3	15	16	13	157	158
Student oral reports	3	8	21	1	18	37	2	7	23	17	104	207
Laboratories	4	6	21	2	21	32	3	7	21	23	92	209
Demonstrations	0	18	14	2	24	29	1	16	17	7	176	147
Field trips	1	10	21	2	19	23	2	14	19	8	120	201
												6

^aNumber of students reporting

^bUsed too frequently

^cNot used frequently enough

^dSatisfactory

^eNo answer

TABLE XVII

STUDENTS' OPINIONS OF FREQUENCY OF USE OF TEACHING METHODS
ACCORDING TO APPROXIMATE GRADE-POINT AVERAGE (CONTINUED)

Method	Grade-Point Average											
	2.8 - 2.9 (32) ^a			3.0 & Above (57) ^b			No Answer (36) ^a			Total (335) ^a		
	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d
Individual conferences	0	15	16	0	14	43	1	10	22	3	153	171
Written assignments	8	3	21	2	5	49	5	5	25	31	47	253
Visiting speakers	1	25	6	2	24	30	1	16	16	7	196	122
Other	2	1	0	2	0	0	0	0	0	6	4	5
												320

^aNumber of students reporting

^bUsed too frequently

^cNot used frequently enough

^dSatisfactory

^eNo answer

TABLE XVIII

STUDENTS' OPINIONS OF TEACHERS' FREQUENCY OF USE OF TEACHING METHODS ACCORDING TO CLASSIFICATION

Method	Classification											
	Freshmen (51) ^a			Sophomores (70) ^a			Juniors (68) ^a			Seniors (82) ^a		
	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d
Lecture	6	5	40	8	6	53	20	4	42	14	5	63
Discussions	4	15	32	3	24	41	2	29	35	2	28	52
Small group discussions	1	27	22	6	34	29	1	34	31	2	39	39
Student oral reports	1	16	33	4	24	41	4	18	44	5	31	44
Laboratories	4	12	31	5	12	51	3	23	39	9	26	47
Demonstrations	1	26	23	1	35	33	3	35	28	0	49	33
Field trips	0	20	31	1	23	44	2	28	36	2	25	55
No Answer												
Graduates												
(52) ^a												
1b												
2c												
3d												
No Answer												
(12) ^a												
1b												
2c												
3d												
Total												
(335) ^a												
1b												
2c												
3d												

^aNumber of students reporting

bUsed too frequently

cNot used frequently enough

dSatisfactory

eNo answer

TABLE XVIII

STUDENTS' OPINIONS OF TEACHERS' FREQUENCY OF USE OF TEACHING
METHODS ACCORDING TO CLASSIFICATION (CONTINUED)

Classification																						
Method	Freshmen (51) ^a			Sophomores (70) ^a			Juniors (68) ^a			Seniors (82) ^a			Graduates (52) ^a			No Answer (12) ^a			Total (335) ^a			
	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d	
Individual conferences	0	27	23	1	33	33	0	33	33	1	38	43	1	17	33	0	5	6	3	153	171	8
Written assignments	1	10	39	9	9	51	7	9	51	6	12	64	5	6	40	3	1	8	31	47	253	4
Visiting speakers	1	33	15	0	48	19	1	45	18	3	41	38	2	20	29	0	9	3	7	196	122	10
Other	0	1	1	2	1	0	3	1	2	1	1	2	0	0	0	0	0	0	6	4	5	320

^aNumber of students reporting^bUsed too frequently^cNot used frequently enough^dSatisfactory^eNo answer

speakers should have been more frequently used. Of all the methods under consideration, the students felt strongly that the use of the demonstrations and visiting speakers should have been more frequently used than they actually were used. Sixty students felt that the teachers lectured too frequently, and thirty-one felt that too many written assignments were given.

It seems that the higher the students' grade-point average, the more satisfied he became with the teachers' existing use of field trips, visiting speakers, discussions, and individual conferences; but the less satisfied he was with their use of demonstrations.

Juniors and seniors felt more strongly than any others that the teachers lectured too frequently. These same students were less intense in their feeling that the use of more small group discussions would be valuable. Graduate students, more than any of the others, felt that the teachers' use of discussions, small group discussions, student oral reports, and individual conferences was satisfactory. The freshmen appeared to want more individual conferences than did any of the other students.

The teachers were asked if they had any strong convictions for or against the use of any particular teaching method. (See Table XIX). The number reporting does not make for valid comparisons, but some of the comments are interesting. Four different men felt that discussions, laboratories, and lectures were valuable in their teaching. One man liked a mixture of lecture and discussions; two each used reports on related literature, small groups, and written assignments. Three men felt that

TABLE XIX

TEACHERS' ATTITUDES TOWARD THE USE OF
VARIOUS TEACHING METHODS

Method	Number of Teachers Reporting
<u>For:</u>	
Demonstrations followed by laboratory work	1
Discussions	4
Field trips	1
Laboratories	4
Lectures	4
Mixture of lecture and discussions	1
Reports on related literature	2
Small groups	2
Written assignments	2
<u>Against:</u>	
Discussions Large Class	1
Field trips Waste of time	2
Lecture	2
Oral reports	3
Resource people Waste of time	1
Small groups Beginning course	3

the use of small group discussions did not lend themselves well to a beginning course and that oral reports were not very effective in their teaching. One man said that his classes were too large for the use of general discussions, while two liked the use of the lecture method. In the opinion of three teachers, field trips and resource people were a waste of the teacher's and the student's time.

Tables XX and XXI report the results obtained when teachers and students were asked what stimuli were used to motivate the students to greater learning.

The teachers admitted by the absence of replies that either they had no extraordinary devices; or that if they did have any, they were unaware of the fact.

The students were more responsive to the query about stimuli than were the teachers--the extraordinary things which the teacher does that make an impression on the student appear to become common-place to the teacher. The number of different teachers is listed with the average rating made by those teachers. In items 10, 11, and 12, the frequency of mention for many of the teachers was so great that an analysis was made of the number of times the individual teacher was mentioned and those teachers' ratings averaged. Twelve different teachers were mentioned by the students at least once for the effect that the teacher's personality had on their learning, four were mentioned twice, and six were mentioned three or more times. In each case, the average rating increased over the previous one. However, the twelve teachers who were named three or more times for their use of visual aids received an average rating below that of the teachers who were named fewer times.

TABLE XX

UNUSUAL OR EXTRAORDINARY TEACHING DEVICES USED
FOR STIMULATION AND MOTIVATION OF STUDENTS,
REPORTED BY TEACHERS

Device	Number Teachers Reporting
Acquaint students with research workers	1
Graduate students need little stimulus	1
Keep on high intellectual level	1
Outline on board of topics	1
Learn by doing: Practical experiences Real life experiences Judge animals on foot, then see carcass Individual help Mistakes made and corrected	7
Teacher's own personal experiences	1
Relate problems to human experiences	6
Use of library	2
Written review questions	1

TABLE XXI

EFFECTIVE MOTIVATING AND/OR STIMULATING DEVICES AND ACTIVITIES,
 NUMBER OF TEACHERS, RATING OF TEACHERS BY STUDENTS,
 AS REPORTED BY STUDENTS

Devices and Activities	Teachers Listed	
	Number	Rating
Assignments	12	89.92
Demonstrations	6	82.50
Discussions	4	87.97
Examinations	17	78.82
Field trips	5	78.25
Interest in students	8	84.41
Laboratories	19	79.90
Lectures	17	81.29
Library	2	77.84
Personality of teacher		
Teacher listed once	12	80.98
Teacher listed twice	4	82.78
Teacher listed three times	6	87.05
Practical application		
Teacher listed once	6	80.35
Teacher listed twice	6	79.10
Teacher listed three times	9	84.97
Visual Aids		
Teacher listed once	9	82.20
Teacher listed twice	3	86.00
Teacher listed three times	12	79.50

Thirty-three of the thirty-six teachers surveyed were mentioned for the favorable effect which their lecturing ability had on their students. This information may be found in Table XXII. Also, these data show that the most appealing thing about almost all of the teachers' teaching was in the field of student-teacher relationships. The students felt that the least appealing phase of the teachers' teaching was in lecturing and in student-teacher relationships (see Table XXIII).

Slightly more emphasis was given in this study to obtaining information about assignments and reports than some of the other teaching methods. The students were asked whether they preferred written assignments. The replies are reported in Tables XXIV and XXV by classification and grade-point average. Of all the students, 71.6 per cent were in favor of written reports and 23.9 were not as enthusiastic. Seniors, graduate students, and juniors were in favor of written reports by more than seventy-three per cent; while freshmen and sophomores were in agreement at 60.8 and 60 per cent, respectively. Only fifteen students out of a total of 335 failed to reply to this question. Students with a grade-point average of 2.6--2.7 and those above 3.0 favored written assignments by more than 80 per cent, at least five points above any of the others. Students with a grade below a "C" favored written assignments decidedly less than any of the others--in all cases more than nineteen points.

Tables XXVI and XXVII show the teachers' methods in making assignments and the time when the teachers gave them. Thirteen teachers made

TABLE XXII

TEACHERS' MOST APPEALING PERSONALITY CHARACTERISTICS
AND/OR TEACHING ABILITIES AS REPORTED BY STUDENTS

Characteristics and Abilities	Number Times Listed
Ability to direct discussions	18
Encouragement of discussions	
Quantity of reviews, questions asked and answered and group participation	
Ability to lecture	33
Speaking voice, illustrations and examples given, no notes, explains, easy to follow, can "put it across"	
Practical application	24
Preparation	
Thorough, organization, knowledge	
Stimulation of learning	24
Student-teacher relationships	83
Fair and impartial, good and fair examination treatment, freedom in classroom, friendly, has sense of humor, good discipline, interested in student, willing to help, admits errors, punctual, well dressed	
Enthusiasm and interest in subject	22
Use of aids	21
Visual aids, reference materials	

TABLE XXIII

TEACHERS' LEAST APPEALING PERSONALITY CHARACTERISTICS
AND/OR TEACHING ABILITIES ACCORDING TO STUDENTS

Characteristics and Abilities	Number Times Listed
Ability to lecture	34
Long lectures, boring, note-taking, too high-brow, not loud enough, too formal, too fast, not definite, does not cover material, roams, too broad, too loud, out and dried, reading from text, monotone, not clear, small writing on board, answers own questions	
Assignments	11
Too long, not clear, infantile	
Discussions	5
Lack of, unnecessary	
Examinations	20.
Essay, quizzes, "pop" quizzes	
Too long, not clear, too broad, too few, short quizzes, late in returning	
Interest and enthusiasm, lack of	4
Practicality, lack of	14
Preparation and organization, lack of	27
Student-teacher relationships	30
Use of profanity, inconsiderate, unfair, grading, humiliates students, interest in majors only, lectures two hours without break, English themes, unpredictable, have to take teacher's word, deduct points for late assignments, pressure for grade, one set standard, late in giving assignments, references too broad, put on spot, too exact, makes fun of students, uses personal references, too cocky	
Visual-aids	6
Over-use, out of date	

TABLE XXIV

WRITTEN ASSIGNMENT PREFERENCE RELATED TO STUDENTS' APPROXIMATE GRADE-POINT AVERAGE

Approximate Grade-Point Average	Preference						Total	
	Yes			No			No Answer	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
0.1 - 1.9	16	51.6	12	38.7	3	9.7	31	100.00
2.0 - 2.1	32	71.1	11	24.4	2	4.5	45	100.00
2.2 - 2.3	43	74.1	13	22.4	2	3.5	58	100.00
2.4 - 2.5	34	70.8	12	25.0	2	4.2	48	100.00
2.6 - 2.7	23	82.1	5	17.9	0	0.0	28	100.00
2.8 - 2.9	24	70.6	9	26.5	1	2.9	34	100.00
3.0 and above	44	80.0	10	18.2	1	1.8	55	100.00
No answer	24	66.7	8	22.2	4	11.1	36	100.00
Total	240	71.6	80	23.9	15	4.5	335	100.00

TABLE XXV

WRITTEN ASSIGNMENT PREFERENCE RELATED TO STUDENTS' CLASSIFICATION

Classification	Preference							
	Yes		No		No Answer		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Freshmen	31	60.8	16	31.4	4	7.8	51	100.00
Sophomores	42	60.0	26	37.1	2	2.9	70	100.00
Juniors	50	73.3	15	22.2	3	4.5	68	100.00
Seniors	67	81.7	13	15.9	2	2.4	82	100.00
Graduate Students	41	78.8	7	13.5	4	7.7	52	100.00
No Answer	9	75.0	3	25.0	0	—	12	100.00
Total	240	71.6	80	23.9	15	4.5	335	100.00

TABLE XXVI

TEACHERS' METHODS OF MAKING ASSIGNMENTS

Method	Teachers	
	Number	Per Cent
Orally	13	26
Written	10	20
Both	28	55
No Answer	0	0
Total	51	101

TABLE XXVII

TEACHERS' ASSIGNMENT GIVING ACCORDING TO WHEN GIVEN

When Given	Teachers	
	Number	Per cent
All at beginning of course	17	33
Daily at beginning of class period	13	26
Daily at end of class period	9	18
Periodically or at beginning of topic	30	59
Total	69	136

their assignments orally, ten wrote them, and twenty-eight replied that they used both methods. Seventeen teachers replied that they gave all assignments at the beginning of the course, thirteen said that they regularly gave assignments daily at the beginning of the class period, and nine said they gave them at the end of each class period. Thirty teachers gave assignments periodically or at the beginning of new topics.

Table XXVIII reveals the nature of the outside reading required by teachers and the ratings which those teachers received. In only the use of bulletins, periodicals and journals, and reference books was the number of teachers reporting large enough to be of any significance. The teachers using bulletins, periodicals, and journals rated higher than the average score of 81.13, while those twenty-one teachers who required reading from reference books rated under the average with a score of 76.29.

The teachers were asked to explain what they expected their assignments to accomplish. The data shown in Table XXIX indicate the majority of the replies were to "increase knowledge and information and to develop competence", but these teachers received a lower rating than did all other teachers. Some typical replies were: "to help the student apply his knowledge", "for clarification of lecture materials", "ground-work for class lectures, discussions, and laboratories", "to increase interest", and "to stimulate discussion during the class period".

As shown in Table XXX, fifteen of the thirty-two teachers who

TABLE XXVIII

OUTSIDE READING REQUIREMENTS BY TEACHERS AND TEACHERS'
RATINGS BY STUDENTS

Readings	Teachers	
	Number	Ratings
Bulletins	10	83.16
Library	2	84.55
Mimeographs	3	81.49
Periodicals and journals	10	83.88
Reference books	22	76.29
Reports	1	86.89
Review work	1	78.80

TABLE XXIX

PURPOSES OF ASSIGNMENTS LISTED BY TEACHERS AND TEACHERS'
RATINGS BY STUDENTS

Purposes	Number	Teachers
		Rating
Application	4	85.42
Clarification	5	82.75
Groundwork for class lectures, discussions, and laboratories	9	80.91
Increase interest	5	82.40
Increase knowledge and infor- mation and develop competence	25	79.81
Stimulate discussion	2	86.62

TABLE XIX

EFFECTIVENESS OF ASSIGNMENTS IN REACHING OBJECTIVES

Effectiveness	Number of Teachers
Poor	1
Fair	15
Good	8
Very good	3
Excellent	5

replied to the question of the effectiveness of their assignments felt that the assignments were only "fair" in reaching their objectives. This is almost half of the teachers reporting. Five felt that the use of their examinations had excellent results. An overwhelming majority of the students felt that written assignments (or reports) were valuable in their learning processes.

The teachers were asked to comment on the use of assignments. The replies are tabulated in Table XXXI. They are categorized into the emphasis which is placed on them, their importance and objectives of them, and the difficulties encountered with them.

Regarding purposes and values of assignments, Cole⁸ says: "it is the consensus of opinion that the progress of students in a course bears a direct relation to the degree of challenge in the work required of them". Stewart⁹ maintains that the characteristics of good assignments should be:

- 1) clearly and definitely stated
- 2) appropriate in scope and difficulty
- 3) required thinking of quality
- 4) practical
- 5) interesting

In summary, teachers used widely varying degrees of frequency in teaching the classes in the College of Agriculture. The two most commonly used methods were the "lecture" and "discussion", followed closely

⁸Luella Cole, The Background for College Teaching, (New York: Farrar and Rinehart, Inc., 1950) p. 368.

⁹W. F. Stewart, Methods of Good Teaching (Columbus: Published by the Author, 1950) p. 129.

TABLE XXXI

ASSIGNMENT COMMENTS LISTED BY TEACHERS

Comments	Number Reporting
Emphasis	5
Effectiveness is good only if reported on	1
Students instructed on how to study assignments . . .	1
More important reading assignments emphasized . . .	1
More rigid assignments would be given if cooperation from other teachers could be expected . . .	2
Importance and Objectives	7
Familiarize with library	1
Texts not adequate	1
Students should more fully realize importance . . .	1
Should be closely related to each other and to class work	1
Problem solving is very effective	1
Few given	1
"I don't worry about this"	1
Difficulties Encountered	3
Difficulty in knowing what assignments to give. . .	1
Forget to give without outline	1
Hard for students to prepare because of library being closed at night	1

by "written assignments". The order of frequency of use then is: "laboratory", "demonstrations", "individual conferences", "field trips", "students' oral reports", "small group discussions", and "resource people". The lecture method was used more frequently in 100 courses than any other method in any other course. The lecture and written assignments were used in the 200 level courses next frequently, followed closely by the use of lectures and discussions in the 300 level courses. The instances in which the average frequency figure is 3.00 or more are: small group discussions in the 500 level group, students' oral reports in both the 100 and 200 level courses, field trips in the 500 level courses, and resource people in all of the course levels but the 200 and 300 ones.

Teachers who had taken thirteen or more teaching preparatory courses used the lecture less and the discussion method more than did any of the other teachers. Resource people when used at all were used more frequently by teachers who had taken thirteen courses or more. In every method but the lecture, the teachers with less than four courses to their credit employed the teaching methods less frequently than average. Teachers in the four to six courses group and those in the seven to nine courses group used the methods very near the average frequency except in the cases of laboratories and demonstrations with the teachers who had taken between seven and nine courses and with resource people in the ones who had taken four to six.

Lectures, demonstrations, field trips, and individual conferences were used more frequently by teachers with five to nine years of

experience than by any of the other teachers.

The students showed a marked degree of displeasure in the teachers' frequent use of teaching methods in all cases except lecture method, laboratories, and written assignments.

Juniors and seniors desired more frequent use of teaching methods other than lecturing. Graduate students were more lenient than others in their criticisms of the teachers' frequency of use of almost all methods.

Teachers felt that they used few extraordinary teaching devices, while the students were aware of many stimuli in the nature of personality and teaching methods which the teachers used to encourage them to greater learning.

Graduate students, seniors, and juniors were much more in favor of written assignments than were the freshmen and sophomores. Students with the poorest grades favored, by 51.6 per cent, the giving of written assignments. Other students favored, by as much as 82 per cent, the giving of written assignments.

All of the teachers replied to the request of how they gave their assignments. Fifty-five per cent of the total gave their assignments both orally and written. Because of the fact that some teachers gave their assignments at more than one time, the total per cent was 136--that is, eighteen teachers made their assignments either daily at the beginning or the ending of class, periodically, or at more than one of these times.

Comments were made by teachers concerning the nature of the outside reading assignments and of the effectiveness with which they thought their assignments met their objectives.

Concerning the results which may be obtained from teaching methods, McKeachie¹⁰ quotes the following statement made by H. C. Smith and D. M. Johnson: "student-centered teaching produces higher scores than instructor-centered teaching on tests of reasoning ability and creativity". McKeachie¹¹ also says that "as compared with instructor-centered teaching, student-centered teaching results in little decrement to the learning of facts (providing the classes have text-books and tests are based on the texts)".

¹⁰W. J. McKeachie, "Student-Centered Versus Instructor-Centered Instruction", Journal Educational Psychology, 1954, 45, 143-50.

¹¹Loc. cit.

CHAPTER IV

TEACHING AIDS

Do the "oratorical" lecture and the "student-centered" discussion have a "corner" on effective teaching? Is the total learning which goes on within one fifty-minute class period limited to that which depends on the experiences of the teacher and students alone? Is not an aid an effective tool in presenting a wider range of experiences for application by the learner? When does an aid become a "crutch"?

One teacher, in reply to a request to suggest some way of improving the use of aids, cautioned against the use of "gadgets" for "gadgetry's" sake and insisted on more intellectual stimulation by teachers. In chapter eight of A Handbook for College Teachers, Tate¹ maintains that:

Communication provides the medium whereby the experience of the race can be drawn upon by an individual. Communication, therefore, is the key to much of our knowledge. Scientific aids to learning derive largely from the methods and devices of modern communication.

The importance of the use of aids is substantiated by the fact that the Massachusetts Institute of Technology has established a "center for scientific aids to learning, devoted to the accumulation and dissemination of data and to research. Five general fields . . . selected for

¹
B. B. Cronkhite, A Handbook for College Teachers
(Cambridge: Harvard University Press, 1950) p. 134.

emphasis are printing, documentary reproduction, visual education, sound-recording, and mechanical selection.²

Table XXXII shows the frequency of use of aids by the teachers in the College of Agriculture. This table also shows the frequency of use related to the total number of college teaching preparatory courses taken by the teachers. In all the 1,530 class periods met in the fifty-one courses taught, teachers used the chalk and board at least once in 64 per cent of the periods.

Text books were used in more than one-third of the class periods but in no more than 20 per cent of the class periods was any other aid used. Mimeographs, reference books, and written lesson outlines were all used at least two hundred times during the quarter. Models and samples, files of related materials, charts or maps, and bulletins were used between 125 and 150 times. Magazines and professional journals were used approximately seventy-five times each during the quarter.

Moving pictures, slides, and newspapers, were evidently limited in their adaption or else they were unavailable, for they were used only approximately thirty-five times each by the teachers. Relatively little use was made of filmstrips, the opaque projector, view graphs, the tape recorder, and the flannel board. The students spoke very strongly in favor of the use of some of these aids. These data are recorded in a later table.

²Ibid., p. 135.

TABLE XXII

TEACHERS' FREQUENCY OF USE OF AIDS ACCORDING TO TOTAL
NUMBER PREPARATORY TEACHING COURSES TAKEN

Aids	Courses Taken							(b) (51)a	(e)	(d)
	0	1-3	4-6	7-9	10-12	13 or more	No Answer			
	(3)a	(9)a	(15)a	(5)a	(6)a	(5)a	(8)a			
Moving pictures	4	3	16	2	2	2	1	30	0.6	2.0
Filmstrips	0	1	1	1	0	1	2	6	0.1	0.4
Slides	0	7	21	2	2	5	2	39	0.8	2.6
Opaque projector	0	0	1	0	0	3	0	4	0.1	0.3
View graphs	0	1	4	0	0	0	0	5	0.1	0.2
Tape recorder	0	0	0	2	0	0	2	4	0.1	0.3
Chalk and board	42	196	325	69	170	95	86	983	19.3	64.0
Flannel board	0	5	0	0	0	0	0	5	0.1	0.3
Models and samples	1	14	64	0	12	4	40	135	2.7	8.8
Magazines	5	0	22	27	6	12	5	77	1.5	5.0
Mimeographs	22	25	51	16	34	12	49	209	4.1	13.7
Newspapers	2	0	0	26	5	2	0	35	0.7	2.3
Professional journals	4	13	13	15	6	13	11	75	1.5	4.9
Reference books	6	12	99	55	12	30	63	277	5.4	18.1
Texts	53	82	171	30	60	112	30	538	10.6	35.2
Written lesson outline	23	22	143	0	0	8	62	258	5.1	16.9
Files of related materials	18	21	68	22	0	1	12	132	2.6	8.6
Charts or maps	9	13	36	28	22	6	17	129	2.5	8.4
Bulletins	8	11	19	39	30	15	17	139	2.7	9.1
Others	0	11	0	29	3	8	6	57	1.1	3.7

a-Number of courses

b-Number of times used

c-Per cent number times used per course

d-Per cent class periods in which used

Those teachers who had taken between seven and nine preparatory courses relied more on the use of magazines, reference books, charts or maps, and bulletins than did the other teachers, while appearing to use the chalk and board and texts fewer times than did their fellow teachers. The chalk board was used more frequently in courses taught by teachers with one to six courses to their credit and with those with ten to twelve. The teachers who had taken thirteen or more courses deviated little from the average except in the use of texts--here they used textbooks twice as frequently as did almost all the other teachers.

Mimeographs were used more by the teachers in the ten to twelve group and by those who had had no courses. Those teachers who had had four to six preparatory courses relied more heavily on the use of their files than did others. Written lesson outlines are used more frequently in courses taught by teachers with four to six preparatory courses taken.

Table XXXIII shows the variations in frequency of use of teaching aids in fifty-one courses according to number of years of teachers' experience. There was very little variation in the use of chalk and board, and all teachers used this aid more frequently than any other. Text books were used less frequently by the teachers with one to four and with ten to twelve years of experience. This was the only deviation from the average by teachers in the ten to twelve years group. Magazines, newspapers, professional journals, charts or maps, and bulletins, were used more in the courses taught by the teachers with more than fifteen years of experience than they are by the other teachers.

TABLE XXXIII

TEACHERS' FREQUENCY OF USE OF AIDS ACCORDING TO TOTAL YEARS TEACHING EXPERIENCE

Aids	Total Years of Experience						(b) (51) ^a	(e)	(d)
	1-4 (15) ^a	5-9 (9) ^a	10-14 (10) ^a	15 or more (9) ^a	No Answer (8) ^a				
Moving pictures	13	9	6	1	1	30	0.6	2.0	
Filmstrips	2	0	1	1	2	6	0.1	0.4	
Slides	7	12	8	10	2	39	0.8	2.6	
Opaque projector	1	0	3	0	0	4	0.1	0.3	
View graphs	3	0	1	1	0	5	0.1	0.2	
Tape recorder	0	0	0	2	2	4	0.1	0.3	
Chalk and board	336	170	231	162	86	983	19.3	64.0	
Flannel board	5	0	0	0	0	5	0.1	0.3	
Models and samples	35	28	16	16	40	135	2.7	8.8	
Magazines	22	11	7	32	5	77	1.5	5.0	
Mimeographs	71	39	25	25	49	209	4.1	13.7	
Newspapers	8	2	0	25	0	35	0.7	2.3	
Professional journals	16	14	12	23	10	75	1.5	4.9	
Reference books	63	54	47	20	63	277	5.4	18.1	
Texts	104	155	85	164	30	538	10.6	35.2	
Written lesson outline	42	87	31	36	62	258	5.1	16.9	
Files of related materials	67	30	0	23	12	132	2.6	8.6	
Charts or maps	42	21	13	36	17	129	2.5	8.4	
Bulletins	28	16	17	61	17	139	2.7	9.1	
Others	13	0	25	13	6	57	1.1	3.7	

a--Number of courses
b--Number of times usedc--Percentage of number of times used per
course

d--Per cent of class periods in which used

Models and samples and mimeographs were relied upon by teachers with less than ten years of experience to aid in the learning processes more so than by teachers with more experience. Teachers with the fewest years of experience ironically enough, relied upon their accumulation of files of related materials more than teachers who had been teaching longer than they. Slides, reference books, and written lesson outlines were used more by teachers with five to nine years of experience than they were by any other teachers. It seemed to take one to four years before teachers realized the need for lesson outlines, after which there was a marked increase in their use, then after ten or more years of experience the teachers tended to rely less heavily on the use of a written lesson outline.

As shown in Table XXXIV, in only one area of aids were the students greatly dissatisfied with the small number of times which the teachers used the teaching aids. This was in the field of audio-visual aids. The total of all the audio-visual aids used—including moving pictures, filmstrips, slides, opaque projectors, view graphs, and tape recorder—was eighty-eight times in 1530 class meetings. Approximately one-half of the students were satisfied with this use while one-half felt that these aids could be used more often. Only six students felt that visual aids were used too much.

Ninety-three students felt that course outlines, syllabi, or laboratory manuals should be used more frequently. In fact, one student suggested that in order to facilitate covering a wider range of materials

TABLE XXIV

TEACHERS' FREQUENCY OF USE OF TEACHING AIDS LISTED BY STUDENTS ACCORDING TO CLASSIFICATION

Aids	Classification									
	0	Freshmen	Sophomores	Juniors	Seniors	Graduates	Average			
	(12)a	(51)a	(70)a	(68)a	(82)a	(52)a	(335)a			
	1b 2c 3d	1b 2c 3d	1b 2c 3d	1b 2c 3d	1b 2c 3d	1b 2c 3d	1b 2c 3d	1b 2c 3d	1b 2c 3d	0 ^e
Chalk and board	0 1 11	5 1 44	0 7 62	2 9 55	2 13 67	5 4 43	14 35 282	4		
Films, slides, etc.	1 6 5	1 20 30	0 35 34	2 38 26	0 43 39	2 20 30	6 162 164	3		
Charts, graphs, etc.	1 3 8	3 11 37	4 11 53	5 24 38	9 15 58	1 8 43	23 72 237	3		
Mimeographs	5 2 5	4 7 40	11 5 51	14 2 50	21 13 46	6 8 37	61 37 229	8		
Bulletins	1 4 7	2 21 28	4 18 47	5 13 48	8 13 61	5 6 40	25 75 231	4		
Reference books	2 2 8	1 17 33	2 11 54	3 7 56	8 11 62	8 1 42	24 49 258	7		
Magazines, newspapers, journals	0 4 8	2 16 33	0 15 52	0 16 51	4 19 58	2 7 42	8 77 244	6		
Course outlines, syllabi or laboratory manuals	1 2 9	0 10 40	3 20 46	0 28 37	2 25 54	1 8 41	7 93 227	8		

^aNumber of students reporting^bUsed too frequently^cNot used frequently enough^dSatisfactory^eNo answer

efficiently, the students could well afford to share the expense of such an enterprise.

Sixty-one students felt that they could learn better with less use of mimeographs, while thirty-seven wanted mimeographs used more often. Of these thirty-seven students, two-thirds were seniors. Seniors, along with juniors and sophomores, felt that mimeographs should be used less often than did freshmen and graduate students. Seniors represented almost half of the thirty-five students who wanted chalk and board used more often. Almost one-third of the students who would like to see the more frequent use of bulletins and reference books were freshmen. Almost one-third of all the fifty-one freshmen replying to the question were in favor of more use of magazines, newspapers, and journals.

Table XXXV shows that only in the grade-point groups below 2.0 and above 2.7 were the students more satisfied than not with the frequency of use of films, slides, and the like. In the grade-point averages between 2.0 and 2.7, a majority of the students felt that more frequent use of these aids would be helpful. In regard to the use of mimeographs, students with a grade-point average of 2.6 and above seemed to care less than those with grades below 2.6 that mimeographs were used excessively in their courses. More than one-half of the students who felt that charts, graphs, and the like should be used more often had a grade-point average of 2.0 to 2.7. Almost one-third of the students who stated that mimeographs were being used too frequently had grade-point averages of 2.4 to 2.7--only three students within this

TABLE XV

TEACHERS' FREQUENCY OF USE OF TEACHING AIDS LISTED BY STUDENTS
ACCORDING TO APPROXIMATE GRADE-POINT AVERAGE

Aids	Grade-Point Average														
	0.1 - 1.9			2.0 - 2.1			2.2 - 2.3			2.4 - 2.5			2.6 - 2.7		
	(31) ^a			(45) ^a			(58) ^a			(48) ^a			(28) ^a		
	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d	1 ^b	2 ^c	3 ^d
Chalk and board	2	0	27	0	6	38	2	11	45	0	6	42	3	4	21
Films, slides, etc.	0	13	18	1	20	23	1	38	18	1	23	24	1	17	10
Charts, graphs, etc.	6	3	21	2	16	28	5	12	41	2	8	38	4	11	13
Mimeographs	5	3	22	7	5	30	9	9	40	10	1	36	10	2	16
Bulletins	3	10	17	3	14	28	4	15	39	4	22	31	4	3	21
Reference books	2	9	19	0	11	33	6	6	44	1	6	41	2	4	22
Magazines, newspapers, journals	2	10	17	0	9	35	2	16	39	0	11	37	1	7	20
Course outlines, syllabi or laboratory manual	1	4	24	0	16	28	1	15	41	1	20	27	2	12	14

^aNumber of students reporting
^bUsed too frequently
^cNot used frequently enough

Satisfactory
No answer

TABLE XXV

TEACHERS' FREQUENCY OF USE OF TEACHING AIDS LISTED BY STUDENTS
ACCORDING TO APPROXIMATE GRADE-POINT AVERAGE (CONTINUED)

	Grade-Point Average												
	2.8 - 2.9			3.0 and above			No Answer			Total			
	(32) ^a			(57) ^a			(36) ^a			(335) ^a			
	1b	2c	3d	1b	2c	3d	1b	2c	3d	1b	2c	3d	0e
Chalk and board	2	3	27	2	3	52	3	2	30	14	35	282	4
Films, slides, etc.	0	14	18	1	23	33	1	14	20	6	162	164	3
Charts, graphs, etc.	1	8	23	1	8	48	2	6	26	23	72	237	3
Mimeographs	4	6	20	7	6	44	9	5	21	61	37	229	8
Bulletins	2	6	23	3	7	47	2	8	25	25	75	231	4
Reference books	6	1	23	3	5	49	4	7	24	24	49	255	7
Magazines, newspapers, journals	1	6	24	0	9	48	2	9	24	8	77	244	6
Course outlines, syllabi or laboratory manual	0	9	22	0	15	40	2	2	31	7	93	227	8

^aNumber of students reporting^bUsed too frequently^cNot used frequently enough^dSatisfactory^eNo answer

grade-point range felt that mimeographs should be used more frequently.

Textbooks were used in 75 per cent of the fifty-one courses taught. The teachers of the thirteen courses in which no text was used were asked why a text was not used in their courses. Two teachers replied that they preferred to use resource people and bulletins and references in the library. Eleven stated that the textbooks available were neither sufficient nor suitable for the course.

The thirty-six teachers who stated that they taught at least one course were asked to state whether they prepared a syllabus, laboratory manual, and/or course outline and if they did to explain how they were used. Tables XXXVI and XXXVII show that the percentage is the highest among the teachers who had taken four to nine courses specifically in preparation for teaching, and that there was relatively little difference in the number of years of experience of teachers who did and did not prepare this teaching aid. This aid was used in twenty-eight courses; it was not used in twenty-three courses.

Teachers who answered in the affirmative were asked why they used syllabi, manuals, and outlines. Ten teachers stated that they used these aids chiefly as a course outline, five used topic outlines principally for the students' use, four used topic outlines principally for their own use, two each used the outline with daily assignments for sequence and proper topic emphasis. In one course, the teacher used a syllabus as a text and one used an outline following the text used in the course. One teacher prepared a "comprehensive bibliography for the students" and one prepared an outline according to departmental regulations.

TABLE XXXVI

USE OF A SYLLABUS, LABORATORY MANUAL, OR COURSE OUTLINE ACCORDING
TO TEACHERS' YEARS OF EXPERIENCE

Years of Experience	Yes		No		Total Number
	Number	Per Cent	Number	Per Cent	
1-4	9	60	6	40	15
5-9	4	44	5	56	9
10-14	4	40	6	60	10
15 or more	5	55	4	45	9
No answer	6	75	2	25	8
Total	28	54.7	23	45.3	51

TABLE XXXVII

USE OF A SYLLABUS, LABORATORY MANUAL, OR COURSE OUTLINE
RELATED TO TEACHERS' PREPARATORY
TEACHING COURSES TAKEN

Courses Taken	Replies				Total Number
	Yes Number	Yes Per Cent	No Number	No Per Cent	
None	0	—	3	100.0	3
1-3	2	23.0	7	77.0	9
4-6	12	80.0	3	20.0	15
7-9	4	80.0	1	20.0	5
10-12	2	33.3	4	66.6	6
13 or more	1	20.0	4	80.0	5
No answer	6	75.0	2	25.0	8
Total	27	54.9	24	45.1	51

The reasons which teachers listed for the limited use of aids in Table XXXVIII, largely lack of availability and organization. Seven teachers would like to see aids made more readily available. One teacher suggested that student labor be used in the preparation of charts and graphs. Six teachers felt that teacher time should be made available for preparation of aids. Six teachers felt that the poor adaptation of most aids limited their use. Typical comments were: movies are too general, some are mere entertainment, texts and references are not up-to-date, and the teaching situations are not adapted to explaining by the use of visual aids. Two teachers felt that the use of most of the aids was prohibited because of their excessive cost. Three teachers thought that the tendency for the overuse of aids was an easy one to acquire and that this seriously limited the use of them.

Table XXXIX shows the very wide range of aids which were listed by teachers as being particularly valuable during their teaching. There are too few teachers reporting in each group to lend very much significance to what aids the "good" teachers use; nevertheless, these data are notable in two instances—the many different aids which teachers use and the "average" ratings of those teachers who think that reference books and films and slides are valuable and the slightly more than average ratings received by the teachers who like the use of chalk and board.

In summary, chalk and board were used more frequently by the teachers than any other aid. Texts were also used frequently—538 times

TABLE XXVIII
REASONS FOR TEACHERS' LIMITED USE OF VARIOUS TEACHING AIDS

Reasons	Number Reporting
Adaptation	6
Movies are too general	1
Teaching situation not adapted to explaining by use of visual aids	1
Magazines and tape recorder not adapted to course	1
Texts and references not up to date	2
Movies are mere entertainment	1
Expense	2
Charts are expensive	1
Expensive	1
Time	8
Movies too long for class use	1
Short class periods	1
Time for preparation	6
Availability and Organization	13
Too few animals and usefulness is finished after slaughter	2
Lack of aids	7
Room arrangement not satisfactory for showing	1
Lack of projection equipment in class	1
Classes too large	2
Overuse	3
Tendency for overuse	3

TABLE XXXIX

TEACHERS' MOST VALUABLE TEACHING AIDS AND THE TEACHERS'
RATING ACCORDING TO STUDENTS

Aids	Number of Teachers Listing	Teacher Ratings
Bulletins Written critical appraisal and reading assignments	2	86.64
Case studies Realistic	1	81.47
Chalk and board Easy for students, points delivered graphically, schematic diagrams	8	83.23
Charts and maps	2	72.02
Field trips	2	75.53
Films and slides	9	80.24
Live animals Used in evaluation	4	81.72
Mimeographs Act as reference materials	5	74.55
Old exams passed out periodically Stimulate study	1	65.60
Outline of course Student relates experience to outside study or unit of work, logical procedure	2	74.96
Own professional training and experience	1	81.65

TABLE XXXIX

TEACHERS' MOST VALUABLE TEACHING AIDS AND THE TEACHERS'
RATING ACCORDING TO STUDENTS (CONTINUED)

Aids	Number of Teachers Listing	Teacher Ratings
Professional journals	2	77.86
Reference books Best means of getting information to students	8	81.24
Samples Create interest	5	76.79
Texts	4	80.51

during the quarter. Very little use was made of filmstrips, opaque projector, view graphs, tape recorder, and flannel boards. Moving pictures, slides, magazines, newspapers, and professional journals were used between thirty and seventy-seven times by the teachers. Models and samples, mimeographs, reference books, written lesson outlines, files of related materials, charts or maps, and bulletins were all used fewer times than texts and chalk and board but much more frequently than the audio-visual aids.

It is the infrequent use of audio-visual materials which the students would have liked to have been corrected. This is the only category of aids in which the students were very much displeased. Almost one-half of the students indicated that they would like for the use of audio-visual aids to have been increased. The only teaching aid which the students felt was used too frequently was mimeographs.

Texts were used in 75 per cent of the courses taught. The teachers who taught the remaining 25 per cent stated that the texts available for use were not suitable for the course.

Slightly more than one-half of the courses taught had course outlines, syllabi, or laboratory manuals used in them. The teachers with less than five years of experience used these teaching aids in their courses more than the other teachers used them.

The lack of availability of suitable aids was the chief controlling factor in the teachers' infrequent use of them.

Many different kinds of aids were used by teachers in promoting their teaching objectives.

CHAPTER V

EXAMINATIONS

"Probably the best test of a pupil in any area is to measure his reactions in a normal life situation."¹ Not always can our testing procedures carry us into real life situations. The problem for both the student and the teacher, primarily the teacher, is to do the best they can to project themselves into a place which will most nearly approximate a real life situation in the administration of examinations.

What are the methods which can be used to predict the student's reaction when he faces a real life problem? Examinations, the source of anxiety for teacher and student alike, seem to be a very simple, direct answer. Yet, the term holds many implications. To emphasize the important role which examinations play in the college classroom, McKeachie² says:

The student's anxiety is heightened or reduced by the instructor's teaching behavior. In general, control of anxiety is easiest if the student is in a highly structured situation, where he knows exactly what he must do. . . . while anxiety may be a valuable motivating force, it inhibits performance if it can not be resolved. By giving an opportunity for a closure or channelization of the tension, the teacher improves performance.

In other words, McKeachie is saying here that an examination is in order when tension mounts.

¹W. F. Stewart, Methods of Good Teaching, (Columbus: Published by the author, 1950) p. 204.

²W. J. McKeachie, "Anxiety in the College Classroom" Journal of Educational Research, 1951, 45, 225-31.

But McKeachie³ in another report makes some pertinent points which emphasize the fact that not all problems concerned with examinations are those of purpose and organization:

The important thing in the course is what the student gains, not what grade he makes, . . . while such words are intellectually accepted, motivationally the grade remains the most important aspect of the course for most students.

.
Let us confess that from the student's point of view, tests and marks are frequently the most important part of our job.

Evans⁴ believes that the essay examination is a real teaching tool; in fact, she feels that the discussion-type examination is probably the best single instrument for teaching students the art of thinking straight and writing well.

The purpose of examination is summed up very well, both in a negative way and in a positive way, by Weston⁵:

. . . in the preparation of examinations, never lose your adherence to your purpose of securing an adequate and dependable basis for evaluating the knowledge and understanding the student has gained from the course. The teacher and the student are not playing against each other in a game involving skill, bluff, finesse, and chance; rather [the teacher] is endeavoring to take an estimative inventory of what the student has in stock and of how effectively he uses it, while he [the student] is endeavoring to display as much as he can as effectively as he can in the very limited time available.

³Wilbert McKeachie, Teaching Tips, a Guide-Book for the Beginning College Teacher, 3d edition, (Ann Arbor, Michigan: The George Wahr Publishing Co., 1956) pp 23-24.

⁴Betsy Evans, "Blue-Book Fever" NEA Journal, 1958, Vol. 47, No. 4, p. 233.

⁵William H. Weston in B. B. Cronkhite's A Handbook for College Teachers (Cambridge: Harvard University Press, 1950) p. 79.

Many facets of examination construction present harrassing problems, among which are length, type, and frequency of use. "There are two time-consuming procedures involved in the administration of an examination. The first is the construction of the examination. The second is the grading."⁶ According to Payne and Spieth,⁷ . . . "[examinations] should be long enough to place a premium upon terseness, and upon quick, accurate thought." To assist in the construction of examinations, we may well keep in mind the following statements: "To [the essay examination] . . . belong all the questions that ask students to outline, describe, explain, discuss, evaluate, summarize, compare or contrast."⁸ "A test is objective if any number of people who score it always gets the same answer. The characteristic forms have been devised merely to help produce this result. The objectivity of a test does not . . . make a test either valid or reliable. . . ."⁹ "In general, the multiple-choice, completion, short-answer, and matching forms are suitable for measuring the mastery of facts and the ability to draw simple conclusions from them."¹⁰

⁶Wilbert McKeachie, op. cit., p. 24.

⁷Fernandus Payne and Evelyn Spieth, An Open Letter to College Teachers (Bloomington: The Principia Press, Inc., 1935) p. 196.

⁸Luella Cole, The Background for College Teaching (New York: Farrar and Rinehart, Inc., 1940) pp. 415-416.

⁹Ibid., p. 428.

¹⁰Ibid., pp. 415-416.

Examinations and grades in this study were considered from the following points of view: teachers' frequency of use of examinations, students' preferences for types of examinations, the composition of the final grade by the teachers, students' preference of the composition of the final grade, and some of the comments made by teachers and students concerning the limitations and adaptations of various kinds of examinations.

The teachers' frequency of use of examinations by course level is shown in Table XL. The teachers were asked if they used various examinations frequently, occasionally, rarely, or never. These terms were given numerical values of 1, 2, 3, and 4, respectively. The frequency of use was then calculated. The essay was felt by teachers to be reliable enough in measuring students' abilities that it was used more frequently than any others. The open book examination was used least frequently. The unpopularity of the open book was further emphasized by the fact that this type examination was not used at all in the 100-numbered courses.

The teachers felt that three types of examinations were useful in the courses designed for freshmen, though; true-false, matching, and unannounced examinations. However, the data in a later table show that one of these in particular was very unpopular with freshmen students. The combination of several of these types of examinations was also frequently used by the teachers. The three most frequently used types of examinations—essay, combination, and multiple choice—were the most frequent choices of the teachers of the "200" courses. The student may

TABLE XL

FREQUENCY OF USE OF EXAMINATIONS ACCORDING TO COURSE LEVEL

Exams	Course Level					Average
	100	200	300	400	500	
Oral	3.40	3.50	3.00	3.17	3.33	3.23
Multiple choice	2.00	1.80	3.08	2.90	3.33	2.76
True, false	2.20	2.33	3.58	3.55	3.33	3.18
Matching	2.20	2.60	3.42	3.40	3.33	3.08
Selection ^a	1.60	2.25	3.36	3.22	3.67	2.83
Essay	2.00	1.00	1.31	1.39	2.33	1.59
Open book	4.00	3.00	3.55	3.80	3.00	3.59
Take home	3.50	2.75	3.50	3.67	3.00	3.43
Unannounced	2.20	2.40	3.08	3.25	4.00	3.17
Combination	1.75	1.35	2.23	1.80	2.00	1.90

Key:

- 1—Frequently
- 2—Occasionally
- 3—Rarely
- 4—Never

^a"Selection" was confused with "completion" to the extent that the data concerning this examination are unreliable.

expect, until he graduates, the essay type to be used progressively less frequently than any other. However, at no time was the frequency of use of the essay exceeded by any other type of examination except once in the 500 courses and twice in the 100 courses. Graduate students were given fewer discussion and objective type examinations and were never given unannounced examinations. In fact, rarely did teachers of graduate courses give any type of examination except objective and essay. They preferred a combination of all types. The open book and take home examinations were used more in 500-level courses than they were in undergraduate courses. Those students who had 300-level courses were tested orally more than any other students; but, even so, oral examinations were given only rarely.

The frequency of use of examinations according to teaching preparatory courses taken shows that the unannounced examination was used progressively less by teachers who had taken more courses, according to data in Table XLI. The true-false examination was used less frequently by teachers who had taken as many as seven courses. In those courses taught by teachers who had taken no college courses, the frequencies of use of matching, open book, and take home, were greater than in courses taught by teachers who had taken at least one course.

The frequency of use of the oral examination increased in proportion to the teachers' increased number of years of experience, as shown in Table XLII. However, teachers with more teaching experience used the multiple choice examination less frequently. The essay type was used more frequently by teachers with five to nine years of

TABLE XLJ

FREQUENCY OF USE OF EXAMINATIONS RELATED TO NUMBER
PREPARATORY TEACHING COURSES TAKEN BY TEACHERS

Examinations	None (3) ^a	Number Courses Taken					Average (51) ^a
		1-3 (9) ^a	4-6 (15) ^a	7-9 (5) ^a	10-12 (6) ^a	13 or more (5) ^a	No Answer (8) ^a
Oral	3.33	3.75	3.36	3.00	3.75	2.80	2.00
Written:							
Multiple choice	2.67	2.14	2.64	3.00	3.00	3.33	3.25
True, false	3.00	2.86	2.75	4.00	3.50	3.60	3.25
Matching	2.33	3.00	2.75	3.60	3.50	3.50	3.25
Selection ^b	2.33	2.80	2.18	3.40	4.00	3.25	3.00
Essay	1.00	2.38	1.71	1.00	1.00	1.75	2.00
Open book	2.67	3.80	3.89	3.60	3.50	3.20	4.00
Take home	2.67	3.80	3.44	3.80	3.25	3.40	3.25
Unannounced	2.00	2.86	3.08	3.40	3.25	4.00	3.17
Combination	3.00	2.00	1.50	2.60	2.50	1.25	2.20

^aNumber courses from which data were received

^b"Selection" was confused with "completion" to the extent that the data concerning this examination are unreliable

Key:

- 1—Frequently
- 2—Occasionally
- 3—Rarely
- 4—Never

TABLE XLII

FREQUENCY OF USE OF EXAMINATIONS ACCORDING TO TOTAL
YEARS TEACHING EXPERIENCE OF TEACHERS

Examination	Years Experience					Average
	1-4 (15) ^a	5-9 (9) ^a	10-14 (10) ^a	15 or more (9) ^a	No Answer (8) ^a	
Oral	3.64	3.37	3.20	3.00	2.00	3.23
Written:						
Multiple choice	1.85	2.50	2.62	3.33	3.25	2.76
True, false	2.86	3.00	3.55	3.55	3.25	3.18
Matching	2.92	2.83	2.77	3.67	3.25	3.08
Selection ^b	2.72	2.40	2.55	3.67	3.00	2.83
Essay	1.33	1.00	1.60	2.20	2.00	1.59
Open book	3.81	3.33	3.28	3.59	4.00	3.59
Take home	3.81	3.33	3.57	3.36	3.25	3.43
Unannounced	3.07	2.57	3.37	3.78	3.16	3.17
Combination	1.78	2.16	1.44	2.17	2.20	1.90
						2

^aNumber of courses from which data were received.^b"Selection" was confused with "completion" to the extent that the data concerning this examination are unreliable.

Key:

- 1--Frequently
 2--Occasionally
 3--Rarely
 4--Never

experience than by teachers with either more or less experience. It is significant that the number of years of teaching experience produced few patterns in frequency of use of examinations.

In the list of nine examinations, students placed the unannounced examination in ninth place, as shown in Table XLIII, the multiple choice examination was the students' first choice. The other choices were combination, second; matching, third; selection, fourth; essay, fifth; true-false, sixth; open book, seventh; and take home, eighth. Graduate students preferred multiple choice, selection, and matching less often than did the others. Freshmen preferred the true-false and matching more than did other students, but liked the essay type less than more advanced students.

Students' preferences for types of examinations related to grade-point average are shown in Table XLIV. Two of the first three choices—multiple choice, selection, and matching—of those students with less than a "C" average failed to appear at all in the first three choices of those students with grades above "C". The essay, which has an average ranking of fifth place, was the third choice of students with a grade-point of 3.0 or above. Many students replied to the query of why they liked a combination of all types of examinations that "the combination gives the student a better opportunity of making 'good'". In contrast, the students with only a "D" average preferred this type of examination less than they did four others, and only slightly more than they preferred the essay type. It is apparent that the take home and open book examinations were not very popular with the students. Some

TABLE XLIII

PREFERENCE FOR TYPES OF EXAMINATIONS ACCORDING TO STUDENTS' CLASSIFICATION

Examinations	Classification					No Answer (12) ^a	Average Rank (335) ^a
	Freshmen (51) ^a	Sophomores (70) ^a	Juniors (68) ^a	Seniors (82) ^a	Graduate Students (52) ^a		
Multiple choice	2.33	2.26	2.62	2.78	3.60	2.70	2.68
True, false	3.86	4.43	4.08	5.50	5.02	4.00	4.75
Matching	3.09	3.37	3.72	4.04	4.36	3.36	3.80
Selection ^b	3.64	3.69	3.93	3.99	4.36	3.73	3.95
Essay	4.91	4.28	3.95	3.67	4.00	4.50	4.25
Open book	5.90	5.30	7.00	6.81	5.85	7.56	6.49
Take home	6.92	6.73	6.64	6.87	5.36	7.00	6.51
Unannounced	7.93	7.73	7.96	7.77	7.45	7.50	7.77
Combination	3.87	3.15	3.33	2.23	2.72	3.36	3.26

^aNumber reporting.^b"Selection" was confused with "completion" to the extent that the data concerning this examination are unreliable.

Key:

1--Frequently
2--Occasionally3--Rarely
4--Never

TABLE XLIV

PREFERENCE FOR TYPES OF EXAMINATION ACCORDING TO STUDENTS' APPROXIMATE GRADE-POINT AVERAGE

Examinations	Grade-Point Average										Average Rank (335) ^a
	0.1-1.9 (31) ^a	2.0-2.1 (45) ^a	2.2-2.3 (58) ^a	2.4-2.5 (48) ^a	2.6-2.7 (28) ^a	2.8-2.9 (32) ^a	3.0 & Above (57) ^a	No Answer (36) ^a			
Multiple choice	1.84	2.49	2.60	2.75	2.64	2.89	3.34	2.68	2.68	1	
True, false	4.10	4.58	4.79	5.15	5.12	5.38	5.04	3.36	4.75	6	
Matching	4.03	3.74	3.44	4.15	4.00	4.00	4.04	3.19	3.80	3	
Selection ^b	3.73	4.16	3.07	4.23	3.08	4.22	4.02	3.86	3.95	4	
Essay	4.90	4.19	4.63	3.66	4.78	4.27	3.49	4.79	4.25	5	
Open book	6.33	6.27	6.24	6.89	7.19	6.33	6.68	6.49	6.49	7	
Take home	7.00	6.19	6.17	7.35	6.38	6.16	6.07	7.33	6.51	8	
Unannounced	7.32	7.37	8.11	7.21	7.58	7.96	8.40	7.70	7.77	9	
Combination	4.13	3.95	3.54	2.59	3.37	2.86	2.50	3.47	3.26	2	

^aNumber reporting^b"Selection" was confused with "completion" to the extent that the data concerning this examination are unreliable

students claimed that they were not tests at all.

How much emphasis should the student place on the various composites of the final grade in order to match the emphasis which the teacher placed on them? Table XLV shows the percentage of various factors which teachers used in composing the final grade. (A later table will show the students' preferences in this matter.) An average of thirty per cent of the final grade depended on the abilities which the student revealed on his final examination. Two other examinations, the mid-term and the hour made up another 30 per cent. Quizzes and written reports accounted for slightly more than 11 per cent each. Little value was placed on attitude and attendance. Some teachers stated that they considered attendance and attitude only in borderline cases. Class participation and oral reports made up only slightly more than 4 per cent each of the final grade. Teachers who had taken fewer teaching preparatory courses gave less value to the final examination in determining the final grade; teachers with ten or more gave more. The hour examination was given less emphasis by the teachers who had taken ten courses or more and more emphasis by the teachers with fewer courses.

Patterns begin to develop when the data are surveyed in Table XLVI. These data show that teachers with fifteen or more years of teaching experience placed more than average weight on attitude, class participation, and attendance. In fact, teachers with less than fifteen years of experience almost failed to consider attendance at all. The data in regard to oral reports and teaching experience are valueless because of the fact that the eight teachers who failed to indicate their

TABLE XLV

PERCENTAGE OF COMPOSITION OF FINAL GRADE ACCORDING TO TOTAL
PREPARATORY TEACHING COURSES TAKEN BY TEACHERS

Constituents	Courses Taken						No Answer (8) ^a	Average (51) ^a
	None (3) ^a	1-3 (9) ^a	4-6 (15) ^a	7-9 (5) ^a	10-12 (6) ^a	13 or More (5) ^a		
Final examination	25.09	27.52	29.87	30.50	38.23	36.25	17.57	29.53
Mid-term examination	25.09	21.10	9.44	13.45	27.39	26.85	7.68	16.54
Hour examination	22.08	20.65	21.33	15.28	3.79	3.42	21.69	16.54
Quizzes	16.71	14.65	10.48	17.11	4.13	18.45	4.08	11.21
Attendance	0.00	1.45	0.47	1.28	0.00	0.00	1.51	0.56
Written reports	8.71	6.79	12.41	9.79	13.99	14.71	17.13	11.87
Oral reports	2.08	0.25	1.93	3.57	2.26	0.00	16.52	4.11
Class participation	0.85	1.70	3.73	6.22	10.21	0.00	4.64	4.11
Attitude	0.00	0.00	0.97	0.00	0.00	0.00	1.71	0.56
Other	0.00	5.89	8.91	2.65	0.00	0.00	7.22	5.05
Total per cent	100.61	100.00	99.54	99.85	100.00	99.68	99.75	100.08

^aNumber reporting

TABLE XLVI

PERCENTAGE OF COMPOSITION OF FINAL GRADE ACCORDING TO TOTAL
YEARS TEACHING EXPERIENCE OF TEACHERS

Constituents	Years				No Answer (8) ^a	Average (51) ^g
	1-4 (15) ^a	5-9 (9) ^a	10-14 (10) ^a	15 or More (9) ^a		
Final examination	33.8	28.7	33.5	33.1	18.6	29.53
Mid-term examination	19.9	14.1	16.7	19.7	8.1	16.54
Hour examination	10.9	26.0	11.8	15.9	20.2	16.54
Quizzes	9.6	10.3	21.6	1.4	4.3	11.21
Attendance	0.5	0.0	0.7	1.4	1.6	0.56
Written reports	10.4	9.4	10.3	14.3	15.8	11.87
Oral reports	2.1	0.8	1.5	2.0	17.5	4.11
Class participation	2.9	4.3	1.5	6.7	4.8	4.11
Attitude	1.0	2.1	0.1	5.4	1.6	0.56
Other	9.7	4.7	1.5	0.0	7.6	5.05
Total per cent	99.8	100.4	99.1	99.9	100.1	100.08

^aNumber reporting

years of teaching experience gave a value of 17.5 per cent of the final grade to oral reports—this figure is more than fourteen points above the average of 4.11.

The value which teachers with more than fifteen years of experience placed on quizzes was small. Teachers with ten to fourteen years of experience gave more value to quizzes than any other factor except the final examination—approximately 30 per cent made up the final grade in these teachers' courses. The hour examinations were almost 10 per cent more important than the average in the courses taught by teachers with five years of experience or less. The value of the mid-term was consistent with teachers.

From the students' preferences of the composition of the final grade in Table XLVII the fact can be seen that students felt that the final examination should have made up approximately 23 per cent of the final grade—seven points below that figure which the teachers actually used. As reported in chapter three, the majority of the students were in favor of written assignments; but the students felt that less emphasis should have been placed on them in determining the final grade than that emphasis given by teachers. Students thought more weight should have been allowed for attendance and attitude than the teachers actually gave—the point differences were four for written reports, attitude, and attendance. The preferences of the freshmen were the only ones which closely approached the teachers' actual composition in regard to final examinations; and that figure fell short by more than four points.

TABLE XLVII

PREFERENCES OF COMPOSITION OF FINAL GRADE ACCORDING TO CLASSIFICATION OF STUDENTS

Constituents	Classification						Total Average (335) ^a
	Freshmen (51) ^a	Sophomores (70) ^a	Juniors (68) ^a	Seniors (82) ^a	Graduates (52) ^a	No Answer (12) ^a	
Final examination	25.2	21.2	23.8	20.8	23.8	23.8	22.7
Mid-term examination	19.4	18.2	18.7	18.1	20.4	18.2	18.8
Hour examination	17.7	19.2	21.7	21.1	14.7	19.3	19.2
Quizzes	12.0	12.9	12.6	13.1	11.0	12.8	12.5
Attendance	4.7	5.8	3.6	3.1	3.5	3.1	4.1
Written reports	5.9	6.2	7.1	8.1	8.3	6.5	7.1
Oral reports	4.1	6.0	3.9	6.0	5.7	8.0	5.0
Class participation	5.6	5.5	4.5	5.6	7.5	5.2	5.6
Attitude	5.1	4.8	3.9	3.5	4.8	3.2	4.3
Other	0.3	0.0	0.2	0.5	0.0	0.0	0.2
Total per cent	100.00	99.8	100.0	99.9	99.7	100.1	99.5

^aNumber reporting

Students were less concerned about attitude after they had been in school at least one year. Class participation was favored less by juniors and more by graduate students than any other groups. The freshmen and sophomores gave more than average value to attendance. Written reports received significantly higher values as the student advanced in his schooling. Other variations among different student classifications except those just mentioned were too small to be significant.

The relatively unimportant factors—those which students considered should make up approximately 7 per cent or less of the final grade—were felt by students with a grade-point average of 2.2-2.3 to be less important than any other group of students, according to the data in Table XLVIII. The only exception to this is the opinion held about attendance by the students with a grade of 2.6-2.7. Higher than the average were the values placed on oral reports and class participation by the students with an average of 2.6-2.7. Students with a grade below "C" felt that attendance and attitude were more important than did students with higher grades.

Table XLIX is a list of the reasons which teachers gave for using or not using certain types of examinations. The average rating received by all teachers was 81.13, as reported in chapter two. Two groups of teachers received more than average rating in these findings—one which used a specific kind of examination because it was fair and one which used a particular kind of examination because it was a good learning and teaching device.

The students were asked their reasons why they liked or disliked

TABLE XLVIII

PREFERENCES OF COMPOSITION OF FINAL GRADE ACCORDING TO
APPROXIMATE GRADE-POINT AVERAGE OF STUDENTS

Constituents	Grade-Point Average							No Answer (36) ^a	Average (335) ^a
	0.1- 1.9 (31) ^a	2.0- 2.1 (45) ^a	2.2- 2.3 (58) ^a	2.4- 2.5 (48) ^a	2.6- 2.7 (28) ^a	2.8- 2.9 (32) ^a	3.0 & Above (57) ^a		
Final examination	22.4	24.2	22.2	21.8	25.7	21.4	24.2	22.8	22.7
Mid-term examina- tion	18.5	18.9	21.1	19.3	18.0	17.6	18.4	17.7	18.8
Hour examination	16.9	19.2	21.2	20.4	17.5	20.3	18.9	17.7	19.2
Quizzes	12.1	11.8	14.3	11.6	13.7	12.5	11.2	12.6	12.5
Attendance	5.8	3.4	3.0	3.5	2.7	3.0	4.2	5.1	4.1
Written reports	6.7	9.7	6.2	8.5	7.4	7.9	7.7	6.9	7.1
Oral reports	5.4	5.5	3.4	4.7	7.6	6.2	5.3	5.6	5.0
Class participation	6.9	4.2	4.1	5.3	7.6	6.8	5.0	6.2	5.6
Attitude	5.6	3.2	3.6	4.6	4.0	3.9	4.3	5.4	4.3
Other	0.5	0.3	0.3	0.3	0.4	0.3	0.3	0.0	0.2
Total per cent	99.2	99.6	99.6	99.4	100.2	99.9	99.5	100.0	99.5

164

^aNumber reporting

TABLE XLIX

USE OF TYPES OF EXAMINATIONS, NUMBER OF TEACHERS LISTING,
AND TEACHERS' RATINGS ACCORDING TO STUDENTS

Reasons	Ratings
Fairness	83.99
Combination -----2	
Objective -----2	
Essay -----1	
Completion -----1	
Good construction and good tool for evaluation	76.74
Combination -----3	
Essay -----6	
Take home -----2	
Learning and teaching device	84.28
Essay -----9	
Combination -----1	
Weekly quizzes -----1	
Open book -----1	
Take home -----1	
Suited to course	79.66
Essay -----2	
Small class -----1	
Objective -----2	
Oral -----1	
Poor construction and poor tool for evaluation	74.68
True-false -----4	
Guessing	
Multiple choice -----3	
Matching -----3	

certain types of examinations. The data in Table L shows that no students listed any reasons for liking the unannounced test. Thirty-eight reasons were given for disliking the unannounced test—most of which were because the student felt they were unfair. One hundred reasons were given for preferring the combination examination, eighty-five for the multiple choice, and sixty-five for the essay. Seventy-four reasons were stated for disliking the essay examination, and fifty-six for true-false. Many of the students felt that the true-false examination was unfair, difficult, and confusing. However, fourteen students preferred the true-false examination. Two students stated that they disliked the essay type because one was "boared" with the test and the test made the other's hand "tard". Evidently they disliked English grammar, also.

In summary, the most frequently used examination during this particular quarter was the discussion or essay type. The teachers then chose to combine the discussion with objective type tests. The next most frequently used examinations were objective in nature—multiple choice, selection, matching, and true-false. Unannounced examinations were used at approximately the same frequency as were true-false examinations. The open book and the take home types of examinations were used very rarely by teachers.

The essay, combination, and multiple choice were not only used more frequently on the average but were used more frequently in the 200-level courses than they were in any of the other courses. The

TABLE I

STUDENTS' REASONS FOR PREFERRING OR DISLIKING
CERTAIN TYPES OF EXAMINATIONS

Examinations	Reasons			
	Preferences	Number Reporting	Dislikes	Number Reporting
Multiple choice	Fair-23	85	Memorizing-5	17
	Better grade-10		Unfair-8	
	Easy to take-17		Confusing-4	
	Stimulating-5			
	Suggested answers-15			
	Covers material-12			
	Easy to grade-3			
True-false	Better chance-6	14	Confusing and difficult-19	56
	Can reason-1		No thinking-16	
	Covers material-2		Unfairness-21	
	Fairness-5			
Matching	Easy to take-7	18	Confusing-3	10
	Covers material-2		Unfair-5	
	Fair-9		No thinking-2	
Selection	Thought required-2	3	Unfair-1	2
	Fair-1		No thinking-1	
Essay	Cause to think and learn-9	65	Inadequate time-17	72
	Expression, ease of-43		Bluffing-6	
	More accurate-10		Unfair-39	
	Fair-3		Nervousness-2	
			Inaccurate-5	
			"Can not write or express myself"-3	
Open book	Better chance-2	8	Difficult to grade-2	22
	Fair-2		Unfair-10	
	Non-memorizing-3		No time-8	
	Last review-1		Not a test-8	

TABLE L

STUDENTS' REASONS FOR PREFERRING OR DISLIKING
CERTAIN TYPES OF EXAMINATIONS (CONTINUED)

Examinations	Preferences	Reasons		Number Reporting
		Number Reporting	Dislikes	
Take home	Easy-1 Find out other answers-4 Plenty of time-3 Better grades-1 Lasting impression-1	10	Difficult to grade-2 Unfair-11 Not a test-8 Time to take-2	23
Unannounced	(None)	0	Inadequate preparation time-10 Nervousness-1 Unfair-19 Catch off guard-8	38
Combination	Material coverage-17 Better grades-9 Accuracy-22 Self-expression-8 Fair-39 Stimulates-5	100	Lack of time-2	2
Completion	Material coverage, short time-4 Material coverage, completeness-2 Easy to take-2 Fair-7	15	Unfair-3 No thinking-1	4
Short examinations	--		Unfair-2	2

unannounced test was used more frequently in the 100-level courses and not used at all in the 500-level ones. The open book test was not used at all in the 100-level courses.

The combination of objective and essay type examinations was used more frequently by the teachers who had taken thirteen or more college teaching preparatory courses than by any other group. The teachers who had taken seven or more courses used the true-false examination less frequently than those who had taken fewer. The use of the unannounced examination decreased as the number of courses taken increased.

The essay examination was used more frequently than the average by the teachers with five to nine years of experience. The data showed that the more experience the teachers had, the more they used the oral examination. The frequency of use of the multiple-choice examination decreased as the number of years of experience decreased.

Students preferred the multiple choice and the combination examinations more than any other types. The essay type of examination, which the teachers used more frequently than any other, was chosen fifth by the students. The unannounced examination was preferred less by the students than by any other type. All the objective type examinations, except true-false, were preferred by the students rather than the essay.

In no instance did any classification of students deviate from the average in their choices of their four last examinations except in the freshmen and sophomore preference of the true-false type rather than the essay. The freshmen further indicated their dislike of the essay type examination by choosing fifth the type of examination which

is only made up in part of essay type questions--the combination. The graduate students preferred the first choice of all students--multiple choice--less than did the students in undergraduate work.

Multiple choice was ranked second in preference by students with a grade-point of 3.0 or above even though these students preferred multiple choice less than did the other students with lower grades. Students with grade-point averages below that of "C" chose the objective type tests over the discussion type; and if they wanted the essay type at all, they wanted it in conjunction with the objective in the form of a combination type. This group of students disliked the unannounced examination less than the other students disliked it except for those with a grade-point average of 2.4-2.5. The students below the grade-point of 2.4 preferred more than average the open book examination, while those above this grade were below the average in their preference.

Teachers composed final grades of their students from the following factors and gave each factor the indicated percentage: final examination, thirty; mid-term and hour, seventeen each; quizzes and written reports, approximately 12 per cent each; the remaining factors of oral reports, class participation, attendance, and attitude, 9 per cent.

Those teachers who had taken more teaching preparatory courses emphasized class participation more. More emphasis was given the hour examination and less the final examination by those teachers who had taken few courses. Few patterns emerge from the data collected in regard

to the composition of the final grade and the number of courses which the teachers had taken.

Teachers with fifteen or more years of experience valued the quizzes much lower in determining the student's final grade than did other teachers. The more experienced teachers gave more than average value to attitude, class participation, written reports, and attendance than did the teachers with less than fifteen years of experience.

The further advanced the student, the more the student preferred written reports. Sophomores felt that more consideration should be given attendance, written reports, and attitude than did the average. Freshmen, though, felt even more than sophomores that attitude was important in determining the final grade.

Students, with grade-point averages of 2.2-2.3 more than any others, gave less value to the factors which were relatively unimportant in determining the final grade. Students with averages below 2.0 considered attendance and attitude above the average value placed on these factors, while students with grades of 2.6-2.7 placed lower values on these factors and more on oral reports and class participation.

CHAPTER VI

SUMMARY

This study was made to ascertain the degree of importance which University of Tennessee College of Agriculture teachers and students placed on certain teacher aptitudes and students' ratings of the teachers in terms of those aptitudes; the teachers' frequency of use of teaching methods, teaching aids, and examinations; and the students' opinions concerning teaching methods, teaching aids, and examinations as used by the teachers.

Methods of Research

The data were secured through the use of information schedules, completed by forty-five teachers and 335 students.

One schedule contained the teacher's personal data and the values which they placed on twenty-one aptitudes. Another schedule contained the data about each course which the teacher taught relative to methods, aids, and examinations. One of the two students' schedules obtained the values which the students placed on the aptitudes and the other the students' opinions about methods, aids, and examinations. These schedules were administered by the members of the College Teaching Improvement Committee. During the last week of the winter quarter of 1957-58, schedules were taken by the committee members to each class, completed by students and teachers, placed in envelopes, sealed, and coded to lose the identity of the surveyees.

The information was placed on IBM electrical counting cards and the data obtained from them.

Aptitudes

Both teachers and students gave a wide range of values to the twenty-one aptitudes. Interest and enthusiasm in the subject received the highest value and participates in student clubs and organizations received the lowest value by the teachers and students alike. Teachers rated twelve aptitudes above the average and nine below. Students rated fourteen aptitudes above the average and seven below.

Seldom did the rankings of the aptitudes by teachers and students differ more than three places and several of the rankings were the same. The teachers' average value of the twenty-one aptitudes was approximately two percentage points below the average value given by the students. The teachers' and students' values varied no more than five percentage points on seventeen aptitudes. On four aptitudes, the variation ranged from 5.50 points to 7.50 points. The six aptitudes which received greater values by the teachers than by the students averaged 2.50 percentage points higher, while the fifteen aptitudes which received higher values by the students averaged 3.77 percentage points higher.

In general, the students gave higher values to the aptitudes which were related to empathy and personal characteristics of the teachers. Teachers gave higher values to those aptitudes concerned with inspiration of the student and interest in the student. Teachers and students

gave equal values to aptitudes related to course organization and preparation.

Teachers who had taught fifteen years or longer gave much lower values to the aptitudes than the other teachers. These teachers were more selective than the other teachers; that is, they gave higher values to the aptitudes which received the higher average values and they gave lower values to the aptitudes which did not reach the average. A notable exception to this is the high value which they placed on the aptitude concerning appearance.

Small variations are found in the average values which students of various classifications gave the aptitudes. The highest values, given by the graduate students, and the lowest values, given by the sophomores, differed by no more than approximately two percentage points.

Similarly, small variations are found in the values placed on the aptitudes by students with different grade-point averages. The value placed on the aptitudes by the students with grades below "C" was 3.14 percentage points below the value given the aptitudes by the students in the 2.8-2.9 grade-point group--the group which gave the highest value.

Ratings

Since the students felt that not all aptitudes were equal in value, the ratings of the teachers were compared with the students' aptitude values. This puts the teachers' rating on each aptitude in the

proper perspective. Eighteen of the thirty-six teachers were rated above the average and eighteen of the teachers below the average.

Small differences in ratings are found according to the number of teaching preparatory courses taken by the teachers. Few teachers had taken more than six courses and only one reported having taken no courses.

Slightly higher ratings were received by the teachers who received the Master of Science degree from institutions outside the South. There are few variations from the average in the ratings received by teachers with various degrees from the University of Tennessee, other institutions within the South, and institutions outside the South.

The teachers with doctoral degrees received slightly higher ratings than did teachers with only Master of Science degrees but this difference was less than two percentage points.

The teachers with ten to fourteen years of experience received the highest ratings of any of the teachers. Teachers with more than fourteen years of experience and teachers with less than ten years of experience all received scores below the average. On only two aptitudes, those concerning appearance and participation in student clubs and organizations, did the teachers in the ten to fourteen years of experience group receive ratings below the average.

Graduate students rated the teachers higher than did any other classification of student. Sophomores gave the lowest ratings. On

speaking ability, participation in students' clubs and organizations, and ability to arouse interest and inspire learning, graduate students rated teachers lower than the average. On attitude toward the subject, stimulation of thought and no distracting mannerisms the sophomores gave slightly higher than average ratings to the teachers.

The lowest ratings were given by the students with grades of 2.4-2.5 in regard to the differences in ratings by grade-point average. The highest ratings were given by the students with slightly higher grades--the students in the 2.6-2.7 group. On only three aptitudes were the values given by the 2.6-2.7 group lower than those given by the 2.4-2.5 group; course organization, participation in student clubs and organizations, and inspires high moral and social standards and goals. Only 5.33 points separate the values given by the two groups of students.

Teaching Methods

The teachers were asked to indicate the frequency with which they used various teaching methods. The lecture method was used most frequently, followed by discussions, written assignments, laboratories, demonstrations, individual conferences, field trips, student oral reports, small group discussions, and resource people in that order.

The lecture was used most frequently in courses that were taught to freshmen and less frequently in courses designed for seniors and graduate students. Laboratories and demonstrations were used more frequently in courses in the lower levels than in the others. Oral reports,

however, were used more frequently in higher numbered courses.

The teachers with fifteen or more years of experience used resource people and students' oral reports more frequently than the other teachers. Laboratories and demonstrations were used less frequently by these teachers than any of the other teachers.

Teachers who had taken thirteen or more teaching preparatory courses used the lecture less and discussions and resource people more than did other teachers. Very little variations are noted in the various number of preparatory courses taken and the frequencies with which the methods were used.

Nearly one-third of the students felt that all teaching methods, except lecture, laboratories, and written assignments, should have been used more frequently. Several of the students felt that written assignments and the lecture should have been used less frequently than the teachers used them.

The students with the higher grades were less critical of the frequency with which the teachers employed the various teaching methods.

Graduate students were more satisfied with the teachers' frequency of use of the teaching methods than were the other classifications of students.

Almost three-fourths of all the students replied that they were in favor of written assignments. Graduate students, seniors, and juniors were more in favor of the written assignment, as were those students with grade-point averages of 2.6-2.7 and those above 3.0.

The majority of the teachers replied that they gave their assignments periodically or at the beginning of new topics.

Only a few of the teachers felt that their assignments accomplished "very good" and "excellent" results.

Teaching Aids

Teaching aids used most frequently by the teachers were chalk and board and textbooks. Audio-visual aids were used less frequently than any of the other aids.

Students were satisfied in general with teachers' use of the aids except for teachers' infrequent use of audio-visual materials.

Texts were used in 75 per cent of the courses and course outlines, syllabi, or laboratory manuals were used in more than one-half of the courses.

Examinations

Teachers used essay, combination, and multiple-choice type examinations most frequently. These examinations were used more frequently in courses designed for sophomores than in other courses. The unannounced examination was used more frequently in freshmen courses and not used at all in graduate courses.

The teachers with varying numbers of preparatory teaching courses taken used various examinations ranging from "frequently" to "never".

The more experience the teachers had, the more use they made of oral and multiple types of examinations. The essay type examination was used most frequently by teachers with five to none years of teaching

experience.

Students preferred the multiple choice and the combination of objective and discussion-type examinations more than any others. Students preferred the unannounced examination least.

Of the nine types of examinations, freshmen, sophomores, juniors, seniors, and graduate students disagreed with each other on their first five choices. However, these students were in close agreement that the true-false, take-home, open-book, and unannounced types of examinations should be last.

Students with grade-point averages below "C" preferred objective-type tests much more than did the other students. These students also disliked the unannounced examination more than did the other students, except for one group. The open-book examination was preferred more by students with a grade-point average below 2.4 and less by students with higher grades.

Teachers compiled students' final grades from the following, with the percentages shown: final examination, 30 per cent; mid-term examination, 17 per cent; hour examinations, 17 per cent; quizzes, 12 per cent; written reports, 12 per cent; oral reports, class participation, attendance, attitude, a total of 9 per cent.

Few variations were found in the data concerning the composition of the final grade and the various numbers of teaching preparatory courses taken or the various numbers of years of teaching experience.

Variations were small in students' preference for the composition of the final grade related to classification and approximate

grade-point average. However, the differences between the teachers' actual composition and the students' preferences were as much as seven percentage points on some of the constituents of the final grade.

In conclusion, this study has revealed that teachers and students were in close agreement on the values which twenty-one aptitudes should receive. Teachers and students alike felt that few aptitudes were equal in value in the teaching process.

Students with various classifications and approximate grade-point averages agreed with each other, in general, in the ratings which teachers received.

The data on the teachers' frequencies of use of teaching methods and aids showed that the lecture, discussions, written assignments, laboratories, demonstrations, individual conferences, field trips, student oral reports, small group discussions, and resource people were used in that order. Students were satisfied with the teachers' existing use of lecture, laboratories, and written assignments, but preferred that the teachers use more frequently the other methods.

The chalk and board and textbooks were the most frequently used teaching aids by teachers. The students were satisfied with the teachers' frequency of use of aids except for the teachers' infrequent use of audio-visual materials.

The teachers' frequency of use of ten different examinations were as follows, in the order of frequency of use: essay, combination of essay and objective, multiple choice, selection, matching, unannounced, true-false, oral, take-home, and open book. The students' preferences

for examinations included the multiple choice first place, the essay in fifth, and the unannounced last.

The teachers composed the final grade of the student by giving the final examination one-third weight, the mid-term and hour examinations one-sixth each, quizzes and written reports one-tenth each and oral reports, class participation, attitude and attendance a total of less than one-tenth. Students felt more weight should have been given to the mid-term and hour examinations, attendance and attitude and less weight to the final examination and written reports. The students' preferences and the teachers' composition approximated each other on the other factors.

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APPENDIX A

APPENDIX A

MEMORANDUM

To: Teaching Staff, College of Agriculture

From: Teaching Improvement Committee

Your committee on teaching improvement has decided to assist in conducting a survey of students and instructors in the College of Agriculture on teaching techniques after a careful consideration of the advantages and limitations of such a study.

Mr. John Smalling, a graduate of U. T. and a vocational agriculture teacher, is seriously interested in the improvement of instruction at all levels. He suggested to Dr. Wieggers the possibility of making a survey of faculty and students of the College of Agriculture as a study for his thesis for the M.S. Degree in Agricultural Education. Dr. Wieggers approved the basic idea if it was approved by Dean Peacock and the faculty. Dean Peacock, after a conference with Mr. Smalling, suggested that the problem be presented to the Teaching Improvement Committee for our evaluation.

The committee considered the basic idea and decided that such a study would contribute valuable information to our objective of teaching improvement in the College of Agriculture. We took the basic survey schedule submitted by Mr. Smalling and revised it in many ways in order to obtain information we felt would be of most value. We believe that the survey will:

1. Give the faculty a general picture of how effective our teaching is in the College of Agriculture.
2. Give the faculty a general picture of how other instructors feel about certain teacher aptitudes, teaching methods and techniques.
3. Give each instructor an opportunity to evaluate his teaching methods in each course.

The survey will consist of the following schedules:

Schedule A: Only one copy to be completed by each student

Schedule B: One copy to be completed by each student in each course.

These schedules will be taken under the supervision of a member of

the committee.

Schedule C: To be completed by instructor and returned to the committee member at time Schedule B is taken in your course.

Schedule D: One copy to be completed for each course by the instructor and returned to member of committee at the time Schedule B by students is completed.

Members of the committee will contact you concerning the details of the survey. Your participation in this survey is optional, however, we seriously request your cooperation. We have worked out a system of coding which will be known to one member of the committee and no one else. Your identity or the students will not be known to anyone else. All schedules will be placed in an envelope and sealed at the time of the class surveys. They will be coded and turned over to Mr. Smalling for analysis. Student ratings of each constructor will be available to each instructor after Mr. Smalling compiles the information.

Dr. Wiegers has assured us that no broad conclusions will be made in the thesis. Only findings will be reported.

Dean Peacock is enthusiastic about this program and has given us his full support.



APPENDIX B

APPENDIX B

189

DATE: March 4, 1958

TO: Faculty members in the College of Agriculture who are not teaching this quarter.

FROM: Teaching Improvement Committee

Attached is a memorandum which was sent earlier to faculty members who are teaching this quarter concerning the survey of teaching in the College of Agriculture.

Although you are not teaching this quarter, we would like to include your responses to Schedule C, attached, in the survey. Please complete it and send it to Horace Smith not later than Friday, March 7.

If you would like to have your report back after the study is completed, seal the envelope and attach to it your name on a folded piece of paper. When the envelope is received, your code number will be written on the envelope and the slip of paper destroyed. Only one person knows the code and he will not open the envelope.

VRC/db

Attachment

APPENDIX C

APPENDIX C

SCHEDULE A

UNIVERSITY OF TENNESSEE
COLLEGE OF AGRICULTURE

STUDENT RATING OF TEACHER APTITUDES AND TECHNIQUES

Classification (Fresh., Soph., etc.) _____

Approximate Grade Point Average _____

I. TEACHER APTITUDES

The following characteristics are often considered to be desirable for a good teacher. Please indicate by symbols how you feel as to the importance of each characteristic (Highly important, HI; Important, I; of some importance, SI; or insignificant, INS.)

- ____1. Interest and enthusiasm in subject.
- ____2. Ability to arouse interest of student and inspire them to study and learn.
- ____3. Fair and impartial in his dealings with students.
- ____4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class.
- ____5. Makes students feel free to ask questions, disagree or express own ideas.
- ____6. Stimulates creative and independent thinking on part of student.
- ____7. Makes clear the objectives of course.
- ____8. Organizes course and prepares well.
- ____9. Well versed in subject.
- ____10. Speaks distinctly at proper volume, tone and rate.
- ____11. Dresses sensibly; neat, well groomed.
- ____12. Lively sense of humor but avoids obscenity and vulgarity.
- ____13. Ability to express himself easily and clearly.
- ____14. Has no distracting mannerisms.
- ____15. Friendly but not overly familiar with students.

- ___16. Participates in student clubs and organizations.
- ___17. Inspires students to adopt high moral habits, social habits, and goals.
- ___18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete.
- ___19. Expects considerable study and work but is reasonable in demands of student's time.
- ___20. Has self confidence.
- ___21. Makes clear assignments.

II. TEACHING METHODS, TECHNIQUES AND AIDS

Please indicate by "x" your opinion of the way agricultural instructors use the following:

	Used too frequently	Not used frequently enough	Satisfactory
A. METHODS AND TECHNIQUES			
1. Lecture (Instructor tells, asks and answers)			
2. Discussions (Questions asked and answered by both student and instructor)			
3. Small group discussions			
4. Student oral reports			
5. Laboratories (Include problem solving, experiments, etc.)			
6. Demonstrations			
7. Field trips			
8. Individual conferences			
9. Written assignments (reports, problems, review questions, etc.)			
10. Visiting speakers			
11. Other (Please specify)			
B. AIDS			
1. Chalk and board			
2. Films, slides, etc.			
3. Charts, graphs, etc.			
4. Mimeographs			
5. Bulletins			

	Used too frequently	Not used frequently enough	Satisfactory
6. Reference books			
7. Magazines, newspapers, journals			
8. Course outlines, syllabi or labora- tory manual			

III. EXAMINATIONS

1. Rank in order of your preference the following types of exams (1st, 2nd, etc.) with which you are familiar.

_____ Multiple choice	_____ Open book
_____ True, false	_____ Take home
_____ Matching	_____ Unannounced
_____ Selection	_____ Combination
_____ Essay	

2. Why do you prefer a certain type of exam?

3. Why do you dislike other types of exams?

4. Are you in favor of written assignments? _____

5. What percent of the final grade do you believe should be represented by:

Final exam _____	Written reports _____
Mid-term exam _____	Oral Reports _____
Hour exams _____	Class participation _____
Quizzes _____	Attitude _____
Attendance _____	Other (specify) _____

SCHEDULE B

UNIVERSITY OF TENNESSEE
COLLEGE OF AGRICULTURE
Classification (Fresh., Sop., etc.) _____
Approximate Grade Point Average _____

CODE NO. _____

I. STUDENT RATING OF INSTRUCTOR

Please make this rating as conscientiously as possible. Its purpose is to help the instructor improve. Your identity will not be revealed to the instructor. The instructor's identity will not be revealed to others.

A. Indicate by symbol how you would rate the teacher of this course (Excellent, E; Very Good, VG; Good, G; Fair, F; or Poor, P). _____

B. Indicate by the same symbols how you would rate the teacher on each of the following characteristics.

- _____ 1. Interest and enthusiasm in subject.
- _____ 2. Ability to arouse interest of student and inspire them to study and learn.
- _____ 3. Fair and impartial in his dealings with students.
- _____ 4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class.
- _____ 5. Makes students feel free to ask questions, disagree or express own ideas.
- _____ 6. Stimulated creative and independent thinking on part of student.
- _____ 7. Makes clear the objectives of course.
- _____ 8. Organizes course well and well prepared.
- _____ 9. Well versed in subject.
- _____ 10. Speaks distinctly at proper volume, tone and rate.
- _____ 11. Dresses sensibly; neat, well groomed.
- _____ 12. Lively sense of humor but avoids obscenity and vulgarity.
- _____ 13. Ability to express himself easily and clearly.
- _____ 14. Has no distracting mannerisms.

- _____15. Friendly but not overly familiar with students.
- _____16. Participates in student clubs and organizations.
- _____17. Inspires students to adopt high moral habits, social habits, and goals.
- _____18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete.
- _____19. Expects considerable study and work but is reasonable in demands of student's time.
- _____20. Has self confidence.
- _____21. Makes clear assignments.
- _____22. Other (Please specify)



C. IMPRESSIONS OF INSTRUCTOR AND COURSE

1. Give one example of this instructor's teaching which appealed to you most.
2. Give one example of this instructor's teaching which appealed to you least.
3. What aspect of the course did you like most?
4. What aspect of the course did you like least?
5. What unusual or extraordinary teaching device did the teacher use that stimulated or motivated you to greater learning?

SCHEDULE C

UNIVERSITY OF TENNESSEE
COLLEGE OF AGRICULTURE

CODE NO. _____

Faculty Survey

TEACHER APTITUDES, TEACHING METHODS AND TECHNIQUES

I. STATUS OF TEACHER

- A. Number of years teaching experience: _____
College Other
- B. Percentage of time spent: _____, _____, _____
Administration Teaching Research
- C. College Preparation: _____

Degree Held Institutions

Number of college courses taken in:

Education _____

Psychology _____

Philosophy _____

Public Speaking _____

Other Related Courses _____

- D. Number of different subjects you taught this year _____
- E. Number of different subjects you teach regularly _____
- F. How many different areas of interest within your field are represented by these courses? _____

II. APTITUDES

The following characteristics are often considered to be desirable for a good teacher. Please indicate by symbols how you would rate these characteristics (Highly important, HI; Important, I; Of some importance, SI; or Insignificant, INS).

- _____ 1. Interest and enthusiasm in subject.
- _____ 2. Ability to arouse interest of students and inspire them to study and learn.
- _____ 3. Fair and impartial in his dealings with students.
- _____ 4. Sincerely interested in progress or problems of students; willing to take time to help them both in class and outside of class.
- _____ 5. Makes students feel free to ask questions, disagree or express own ideas.
- _____ 6. Stimulates creative and independent thinking on part of student.
- _____ 7. Makes clear the objectives of course.
- _____ 8. Organizes course well and well prepared.
- _____ 9. Well versed in subject.
- _____ 10. Speaks distinctly at proper volume, tone and rate.
- _____ 11. Dresses sensibly; neat, well groomed.
- _____ 12. Lively sense of humor but avoids obscenity and vulgarity.
- _____ 13. Ability to express himself easily and clearly.
- _____ 14. Has no distracting mannerisms.
- _____ 15. Friendly but not overly familiar with students.
- _____ 16. Participates in student clubs and organizations.
- _____ 17. Inspires students to adopt high moral habits, social habits, and goals.
- _____ 18. Gives fair, well constructed exams which require thought as well as factual knowledge and reasonable time given to complete.

- _____ 19. Expects considerable study and work but is reasonable in demands of student's time.
- _____ 20. Has self-confidence.
- _____ 21. Makes clear assignments.
- _____ 22. Other (Please specify).

III. IMPROVEMENT OF TEACHING IN COLLEGE OF AGRICULTURE

- A. Please list any ideas you have to improve the teaching in the College of Agriculture.

- B. What would you suggest as desirable topics for future Teaching Improvement Seminars?

SCHEDULE D

UNIVERSITY OF TENNESSEE
COLLEGE OF AGRICULTURE

CODE NO. _____

Level of Course (100, 200, 300, 400, 500) _____

TEACHING METHODS AND TECHNIQUES

Please complete a copy of this schedule for each course you are teaching this quarter.

A. METHODS

Indicate the frequency you used the following in this course.

	<u>Frequently</u>	<u>Occasionally</u>	<u>Rarely</u>	<u>Never</u>
1. Lecture (Instructor tells, asks, and answers)				
2. Discussions (Questions asked and answered by both student and instructor)				
3. Small group discussions				
4. Student oral reports				
5. Laboratories (include problem solving, experiments, etc.)				
6. Demonstrations				
7. Field trips				
8. Individual conferences (at your request)				
9. Written assignments (reports problems, review questions, etc.)				
10. Resource people				
11. Other (Please specify)				

Do you have any strong convictions for or against the use of any of the above methods or techniques?

What unusual or extraordinary teaching devices do you use to stimulate or motivate your students to greater learning? Please explain.

B. AIDS

Please indicate the approximate number of periods during this course that you have used each of the following in the classroom as a teaching aid.

<u>No.</u> <u>Periods</u> <u>Used</u>		<u>No.</u> <u>Periods</u> <u>Used</u>	
_____	Moving pictures	_____	Magazines
_____	Filmstrips	_____	Mimeographs
_____	Slides	_____	Newspapers
_____	Opaque projectors	_____	Professional journals
_____	View graphs	_____	Reference books
_____	Tape recorder	_____	Texts
_____	Chalk and Board	_____	Written lesson outline
_____	Flannel boards	_____	Files of related material
_____	Models & samples	_____	Charts or maps
_____	Other (specify)	_____	Bulletins

What were the most valuable aids during the last quarter in which you used them, and how were they most effective in your teaching?

What are the serious limitations of any of the above aids?

What suggestions would you make to improve the use of aids for yourself or for the entire college faculty?

C. EXAMINATIONS

1. Please indicate the frequency of the use of the following types of exams in this course.

	<u>Frequently</u>	<u>Occasionally</u>	<u>Rarely</u>	<u>Never</u>
a. Oral				
b. Written				
(1) Multiple choice				
(2) True or False				
(3) Matching				
(4) Selection				
(5) Essay				
(6) Combination				
(7) Open book				
(8) Take home				
(9) Unannounced				

2. Why do you use (or not use) certain types of exams?
3. Have you returned all examination papers to the students? _____
4. Do you make corrections of subject matter on the paper? _____
5. Do you make corrections of errors in grammar on the papers? _____
6. Do you deduct points for grammatical errors? _____
7. Do you (or an assistant) grade your papers? _____
8. If you only grade some of the papers, what percent? _____
9. Do you correct and/or grade written assignments? _____
10. How many class periods usually elapse before you return the papers? _____
11. Do you review examinations and papers with the class when papers are returned? _____
12. Do you examine students on reading assignments as well as on material covered in class? _____
13. What do you think should be done to improve your examinations or examinations given by others in the college?
14. What percent does each of the following constitute in arriving at the final grade?
- | | |
|---------------------|---------------------------|
| Final exam _____ | Written reports _____ |
| Mid term exam _____ | Oral reports _____ |
| Hour exams _____ | Class participation _____ |
| Quizzes _____ | Attitude _____ |
| Attendance _____ | Others (specify) _____ |

D. ASSIGNMENTS

1. Are assignments made: orally____, written____, both____.
2. When are the assignments given to students:
all at the beginning of course ____
daily at beginning of class meeting ____
daily at end of class meeting ____
periodic or at beginning of each topic ____
3. Do you use a text in this course? ____ If not, why?
4. Describe briefly the nature and extent of outside reading which you required?
5. What did you expect your assignment to accomplish?
6. How effective do you think your assignments were in terms of reaching your objectives?
7. Did you prepare a syllabus, lab manual or course outline for this course? If so, explain briefly.

8. Other comments on assignments.

2. CHANGES IN TEACHING THIS COURSE

Please indicate changes you made in teaching this course from previous quarters. Why were the changes made?