STUDENT ATTITUDES REGARDING THE USE OF PANEL PRESENTATIONS AND TWO METHODS OF GRADING THEM IN COLLEGIATE CONSUMER ISSUES CLASSES

By

Karon Lynette Cunningham

Bachelor of Science
Hardin-Simmons University
Abilene, Texas
1972

Master of Education
Southwestern Oklahoma State University
Weatherford, Oklahoma
1976

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF EDUCATION
May, 1979

STUDENT ATTITUDES REGARDING THE USE OF
PANEL PRESENTATIONS AND TWO METHODS
OF GRADING THEM IN COLLEGIATE
CONSUMER ISSUES CLASSES

Thesis Approved:

Arnola C. Ownby
Thesis Adviser

Jeanine M. Rhea

Marvin Barth

William E. Segrell

Norman N. Durham
Dean of the Graduate College

PREFACE

Many people have provided ideas and encouragement toward the completion of this dissertation. I would like to express my appreciation and affection for each of their contributions.

My chairperson, Dr. Arnola C. Ownby, has provided hours of guidance, editing, assistance, and support throughout the many drafts of this dissertation. She and the other committee members--Dr. Jeanine Rhea, Dr. Marvin Barth, and Dr. William Segall--are warmly appreciated for their guidance and prompt processing of my proposal and dissertation so that I might meet the deadlines of time I had set for myself.

Dr. Neil Luebke is gratefully acknowledged for providing the idea and permission to adapt his grading criteria used for the panel grading.

I would like to thank Dr. Larry Hartman for permission to use the semantic differential attitude survey developed in his doctoral study.

Dr. Dave Perrin, who provided assistance with statistical methods and procedures, is gratefully acknowledged. Dr. Jerry Young and Cheryl Witt are appreciated for their assistance in interpreting the statistical data.

While planning current and relevant methods of teaching a consumer issues class is a difficult and changing process, I appreciate the guidance and assistance of Dr. Herbert N. Jelley.

Mr. Stan Mitchell is gratefully acknowledged for his participation in conducting the experimental process in the class for which he was responsible.

I would like to thank Mrs. Renée Warnock for her careful typing and proofing of the final copy.

For many hours of encouragement, carrying out many errands, moral and physical support, I would like to thank Eugenia Young, Tom and Peggy Fite, Terry Stinson, and my many other friends and fellow students. For making it financially possible to continue my education, fond appreciation is due my parents, Mr. and Mrs. Orville Cunningham.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

THE RESEARCH PROBLEM

Introduction

Consideration of student attitudes is a current influence in choosing teaching methods and grading procedures--two recurring problems facing all teachers, including those of collegiate consumer issues classes. Many methods manuals suggest the use of practical learning experiences to teach consumer issues and effective consumer living. The "learn-by-doing" method is considered effective in stimulating student interest and in promoting retention of learning. Furthermore, Blockus (1971) suggested that future trends of instruction in general business, consumer problems, economics, and business law are moving from a mass approach toward greater individualization with the teacher serving as an instructional designer. The panel presentation used as a teaching procedure in this study provided learning-by-doing experiences and, at the same time, allowed for some degree of individualized learning instruction.

Large sections of consumer issues classes at Oklahoma State University have made difficult the choice of effective projects to benefit the class as a whole. The panel seemed to be a practical, life-like method of presenting the results of a group project. By using the panel presentations as a summative project, problem-solving techniques, decision-making skills, and consumer action were unified in a real-life activity that also fit the time frame of the course schedule.

A problem with any group project is that of selecting a method of evaluation that is satisfactory to the students as well as to the instructor. This concern for student satisfaction with both the learning experience and the evaluation method led to another question on which this study was based. Since maximum student involvement seemed desirable, the students in the experimental group were asked to participate in the evaluation of the panel presentation.

Because the students had little or no experience with evaluation procedures, they needed guidance concerning the criteria for determining acceptable performance. To promote a uniform means of grading the panels, a form was adapted from a paper presented by Luebke (1978) at the Oklahoma State University faculty development institute. He developed criteria for students to use in evaluating term papers. Luebke and others cited in Chapter II, the literature chapter, felt that definite criteria which have proved satisfactory to users over a period of time should be employed. Since Luebke's criteria were appropriate for the consumer issues class and were developed over a period of six years, they seemed acceptable for this study.

Many educators have projected that there will be continued interest in student attitudes and student involvement in the teaching-learning process. Consumer education is an excellent subject in which to continue research of techniques to involve students in teaching methods, evaluation methods, and attitude measurement.

Statement of the Problem

The purposes of this study were (1) to determine changes in student attitudes after using the panel presentation method measured by a semantic

differential survey pretest and post-test; (2) to compare student attitudes regarding two methods of grading the panel presentation, one group graded by the instructor only and one group graded by the instructor and the peers, also measured by a semantic differential survey administered at the end of the semester; and (3) to determine changes in student attitudes in the experimental group (graded by the instructor and peers) after using this grading procedure, measured by a semantic differential survey pretest and post-test.

Statement of Null Hypotheses

(1) There will be no significant change at the .05 level of significance in student attitudes after using panel presentations as a teaching-learning method in collegiate consumer issues classes.

(2) There will be no significant difference at the .05 level of significance in student attitudes between the group graded by the instructor only and the group graded by the instructor and the peers regarding the grading methods of the panel presentation.

(3) There will be no significant change at the .05 level of significance in student attitudes in the experimental group after using the instructor and peer grading procedure.

Importance of the Study

This study has several uses. First, the results of student feelings regarding the use of panels in collegiate consumer issues classes may aid teachers in choosing similar projects for similar courses. Second, the grading criteria used for this project may be effectively adapted to other written and oral projects. Third, the results of the attitude

survey may aid in determining the amount of student input to use in grading projects in similar situations. Finally, the approach used in this study may serve to stimulate further research.

Limitations

The study was limited to two sections of Consumer Issues in American Society (GENAD 3413) taught by the same instructor during the fall semester 1978 at Oklahoma State University. The analysis of data was limited to those participants who completed all of the pretests and post-tests. Further, the analysis of student involvement in the evaluation process was limited to its effects on student attitudes as measured by a semantic differential survey developed and validated by Hartman (1974) and Terry (1976). The study was limited to the groups with voluntary topic choice and voluntary group choice. The form used for grading the panel presentations was evolved from six years of use and revision by Luebke (1978).

Basic Assumptions

The basic assumptions of the study are:

(1) The findings of a similar study including a larger sample would yield results comparable to the findings of this study.

(2) The students enrolled in the Consumer Issues in American Society courses at Oklahoma State University during the fall semester of 1978 are representative of students who will enroll in Consumer Issues in American Society classes at Oklahoma State University and other similar universities in the future.

(3) The findings of this study may be generalized to similar courses in similar universities.

Definition of Terms

Consumer education is education designed to (1) aid the consumer in using his/her income wisely, (2) develop responsible consumers in an effort to establish a consumer democracy, and (3) analyze the role of government in the area of consumption (Good, 1973).

Attitude is the predisposition or tendency to react specifically toward an object, situation, or value; it is usually accompanied by feelings and emotions (Good, 1973).

The semantic differential is a technique for measuring connotative meaning of words by using a scale of bipolar adjectives to rate a given concept (Osgood, Suci, and Tannenbaum, 1957).

Concept I of the semantic differential attitude survey is "The Use of Panels in GENAD 3413" (Appendix D).

Concept II of the semantic differential attitude survey is "The Method of Evaluation of Panels in GENAD 3413" (Appendix D).

The project method is a technique of teaching in which students individually or in groups accept an assignment to gather and integrate data relative to some problem and are then free to fulfill the requirements independently of the teacher, who furnishes help only when necessary (Good, 1973).

A panel is a group of three to six persons having a purposeful conversation on an assigned topic with or without active participation by the audience; the panel is usually seated at a table in full view of the audience (Good, 1973).

Peer evaluation is the appraisal of the status of an individual or a group by a member or members of the class (Good, 1973).

Teacher evaluation is the appraisal of the status of an individual

or a group by the teacher (Good, 1973).

Summary

The use of the panel presentations and the use of a grading form with specific criteria in collegiate consumer issues classes allows maximum student involvement in the learning process. As teachers tend to give more consideration to student attitudes in educational planning, specific criteria for grading and for measuring attitude changes are needed. The form used in this study can provide a relatively simple system of attitude comparison and can allow clearer and more definite student involvement in the educational process.

CHAPTER II

REVIEW OF SELECTED LITERATURE

Introduction

As education has moved toward greater accountability and teachers have been held responsible for the results of their efforts in the classroom, more collaborative techniques, more student-centered approaches, and more student attitudes about teaching-learning methods and evaluation techniques influence the selection of those methods and techniques. A shared responsibility in the teaching-learning process seems to be the reaction to or a possible solution to the accountability movement. Another result of that trend has been toward more practical learning experiences. Learning-by-doing has become a popular teaching method in spite of the increase in the work load for the teacher in preparation of activities and resources.

The Group Project Panel as a Teaching-Learning Method

Many group projects are available and appropriate for consumer issues classes. All group projects are based on the concept of student participation in classroom activities. Cox (1977) observed the end result of student participation--"Students are drawn into the learning and become more enthused in the class and more enthused in obtaining the desired learning" (p. 13). He described types of activities easily adapted

for use in basic business or consumer issues classes: projects such as bulletin boards or notebooks; committees, teams, or groups which would present an oral or written report; field trips and guest speakers, either live or filmed; sociodrama including role-playing, skits, and plays followed by discussion; improvisations of conversations based on a given situation, gaming and brainstorming; and debates on current topics by individuals or groups.

According to much of the research related to selecting interesting teaching-learning methods, student participation-type activities were preferred over the traditional lecture method. This preference was based on a written or verbal expression of satisfaction rather than on statistical evidence in most cases. With regard to consumer classes, Jackson (1977) expressed some guidelines for choosing effective activities.

1. Activities should focus on the interrelationship of learner behaviors.
2. Activities should capitalize on the diversity of the student body.
3. Activities should challenge students to clarify their values.
4. Activities should require active student participation.
5. Activities should focus on the development of concepts and processes which will be of value to students in real-life situations.
6. Activities should focus on the environment within which students will be functioning (p. 25).

She challenged consumer educators to take advantage of the opportunity for the collegiate consumer education program to provide training for leadership. The activity used in this study does train for leadership in a social and economic setting within which students will live.

Another trend in student-centered education is toward some form of "collaborative" learning. In an article by Bruffee (1973), collaborative learning was supported as a natural action in our society, such as in one example given of city planners involving residents in community planning.

However, the use of such techniques has been complicated. ". . . students do not as a rule learn collaboratively in our classrooms. We do not ordinarily recognize collaboration as a valid kind of learning" (p. 636). For most teachers, varied ability in class organization has led to various levels of satisfaction for the teacher, according to their verbal or written expression.

One of the most specific references to the use of projects at the collegiate level was a book by Adderly, Ashwin, Bradbury, Freman, Goodlad, Greene, Jenkins, Rae, and Uren (1975, p. 1), which was written as a broad "introductory conspectus." Several characteristics of the project are summarized. A project involves:

a. The solution of a problem often set by the student.
b. Initiative by the student or group of students, and necessitates a variety of educational activities.
c. An end product (thesis, dissertation, report, dossier, design plans, computer program, model, or oral report).
d. A considerable length of time though the time span may range from a single afternoon to three years.
e. The teaching staff acting in an advisory, rather than an authoritarian role at any or all of the stages--initiation, conduct, and conclusion (p. 1).

To support their belief that the project was a valid teaching-learning method, several advantages were that it tended:

a. To encourage students to make their own choice of a subject of study and thus encourage a sense of commitment and personal responsibility for the task.
b. To give students practice in learning to learn by undertaking a piece of personal research involving activities such as: planning the work, hunting out sources, collecting material, selecting from it, and deciding on presentation.
c. To enable students to experience the satisfaction of working on a complex task over a period of time with the responsibility of producing a result of permanent value and interest to themselves and others.
d. To provide scope for a degree of cooperation among students in an atmosphere of emulation.
e. To provide opportunities for the practice of communication skills in a framework where language is used

> in a number of ways for real communication: seeking information, oral and written reporting, discussing, synthesizing, revising and editing (pp. 14-15).

Recognizing that the project could not be perfect for all situations, the authors reviewed two general objections to its use: (1) some might express doubts about whether projects help the student achieve the "proper" aims of higher education, if considered different from and superior to mere vocational training; and (2) projects would not work if used to pursue aims for which they are ill-adapted, particularly if they are distorted toward producing an item for tidy assessment rather than being used to maximize the learning which might be achieved (Adderly et. al., p. 25).

To effectively use a group presentation in a consumer class, or any class, the teacher must have a thorough understanding of the dynamics and techniques involved, six of which were listed by Fessenden, Johnson, Larson, and Good (1968):

1. The panel is a form of cooperative thinking and discussion.
2. The presentation is for the class.
3. The discussion should lead the thinking of the audience rather than try to give the audience answers.
4. Conclusions that are reached in the process of the discussion should grow out of what has been said.
5. No person makes a good panel member if he enters the discussion with his mind made up.
6. Courtesy, force, and clearness are key words in the art of panel discussion (pp. 268-269).

The authors defined the panel as "a limited form of discussion before an audience" (p. 266). The section devoted to panels described the panel further as having a membership of four or five, as examining a specific topic under the guidance of a chairperson, and as being located at the front of the room for presentation. Two characteristics of a panel were also given: (1) cooperative activity in sharing and exploring and (2) cooperative effort in problem solving (p. 267).

The group discussion method is closely related to the group project panel since group discussion is often used with panel presentations. Weinreis (1967) reported her observations of the discussion method, which also apply to any of the group activities used, as follows:

> Discussion is an interesting variant method of teaching. But it is no snap method. It requires thoughtful preparation. Given this thoughtful preparation, it can be very useful, especially in the humanities and social sciences (p. 155).

An important aspect in the use of any student-centered project is the proper amount and kind of guidance given by the teacher. An article by Singleton, Hurst, and Weiss (1977) outlined the teacher's responsibility in role playing in consumer classes, which also applied to the teacher's role in the panel group presentation. They stated that the teacher should establish the climate, select the issue to be used, observe and focus behaviors and discussion, and direct debriefing and evaluation (pp. 203-205). The teacher served an advisory or guide role instead of an authoritarian role.

Ward (1955) compared the group study and lecture-demonstration method in physical science instruction for general education college students. In one group, the lecture-demonstration method was used. Two objectives were given for all students: (1) recall-recognition of facts, principles, and symbols and (2) more understanding of them. The teacher in the lecture-demonstration method carried out the traditional responsibilities from preparation of lectures and demonstration through grading the written exams. In the group method used, the students had the responsibility to formulate their own objectives, activities, and grading procedures. The same exam was given to both groups. Generally, five results or conclusions were recognized:

1. The lecture-demonstration method produced better <u>immediate</u>

results with respect to more understanding of facts, principles, and symbols than did the group method in the cases of those students who achieved below the upper quarter of the tests, both methods being of equal value for the upper quarter achievers on the tests.

2. The group method produced longer-retained results with respect to the more-understanding items than did the lecture-demonstration method in the cases of those students who achieved in the middle one-half of the tests, both methods being of equal value for both the upper and lower quarter achievers on the tests.

3. The group method resulted in greater expression of individual differences on the more-understanding items than did the lecture-demonstration method in the cases of the most capable students, while the lecture-demonstration method did so in the cases of the least capable students.

4. The lecture demonstration method resulted in greater expression of individual differences on the recall-recognition items than did the group method in the cases of the less capable students, both methods being of equal value for the best students.

5. The presence of tension regarding grades during a test did not result in more understanding by any sample of students under either method.

Ward felt that the two methods seemed to balance in terms of the advantages and disadvantages of either method for both levels of students.

As a result of his research, Evans (1966) outlined the dynamics of group teaching-learning methods: groups originate spontaneously or as assigned; tasks are self-chosen or assigned; leadership originates inside (evolves) or outside (is appointed by) the group. Evans concluded that those in the student-centered courses found them more interesting, believed they had learned more, and felt the learning was of more practical use. However, the amount learned by the group method versus other methods was not significantly different.

One example of the use of a task group model seemed closely related to the panel group used in this study. The topic dealt with teaching

about conflict and its resolution. During a summer workshop in curriculum writing at St. Mary's College in Morago, California, the course coordinator and the author, Daniels (1971), used a procedure somewhat similar to the one in this study. The class as a whole defined the issue, topic, or problem under consideration. The class was divided into sub-groups of approximately five students who had a limited period of time to solve the task at hand. The task groups proceeded through a bi-phasic process of problem solving: idea expansion phase and idea contraction phase. The teacher guided the reporting phase comparing the similarities and differences among the various sub-groups attempting to build a preliminary composite of all the key ideas. A written composite was prepared by each sub-group for distribution. The author felt that there were four merits to the task group model used.

> (1) Students learned to work together as task groups; (2) students participated in concept and idea development; (3) conflict development and resolution often was demonstrated during the task group process itself; and (4) students frequently became highly motivated through the competitive element and involvement inherent to sub-grouping.

The major differences between the Daniels study and this study regarded the selection of issues or problems and the amount of time allowed to solve the task.

DuBois (1971) used group presentations in an undergraduate course in group relations. Basically, the procedures consisted of four stages: (1) presenting the general objectives to the class; (2) grouping class members into unit topic teams; (3) meeting in groups to research over a three-week period during which some coaching was given regarding group process, learning theory, and adult education methodology; and (4) presenting the results. The author's experience paralleled a previous trend he had observed in a graduate class: "The first presentations were

modeled after the time-worn lecture . . . As the class continued, more creative presentations began to emerge" (p. 16). DuBois concluded that student reaction was very positive and that undergraduates appeared to be ready and capable of participating and taking responsibility for design and instructional implementation in the teaching-learning team situation.

Sampson (1973) conducted a study in which he applied peer group instructional methods to an undergraduate course in Group Discussion. He found no statistically significant differences between peer taught and conventionally taught classes. However, he found trends which indicated that conventional instruction may be more effective in improving reflective thinking ability and decreasing dogmatism and that peer group instruction may be more effective in building social responsibility. The social responsibility training was an area of prime concern in the consumer issues classes.

Laudicina and Laudicina (1974) reviewed the team learning concept introduced by Rothaus and Davis that was used in several social and political issues courses, which were observed by the authors. In these courses, a group project was used which constituted 50 percent of the course grade. The project grade consisted of equal evaluation of the individual student effort and the group effort. Some interesting results were noted:

> Students talked with each other more, became more aware of what they knew and did not know about particular issues, worked at the library more often, and had the unique opportunity to be both student and teacher at the same time. One class decided to meet informally throughout the second semester, although the course was formally over. Students generally felt that they had learned a great deal in relation to the subject matter of the course, but also had acquired considerable understanding of themselves and important insights into dealing effectively with other people (p. 178).

The conclusion based on the concept of team learning was future oriented.

> Given the need for students to develop interpersonal skills and the ability to adapt to a rapidly changing and increasingly anxious society, developing personal strength must now become a primary focus of our education system (p. 178).

Shagory (1976) used teamwork in management decision-making situational case study exercises. His definition of teamwork coincided very closely to the characteristics of a group project panel:

> Teamwork may be defined as work performed by a group of people associated to accomplish a particular task with greater efficiency than would be possible without the collaborative effort. Each member of the team does a part of the task and subordinates himself to the requirements of the situation in order to derive personal gain for himself by collaborating with others (p. 162).

Shagory recognized three benefits to the student from the teamwork experience: students came to understand the dynamics of effective teamwork; students participated in goal setting, interpersonal communication and persuasion, conflict resolution, performance evaluation, decision making, and directing actions of others; and students gained valuable experience in working together. He also noted some difficulties students encountered in the teamwork exercises. Students found a lack of unanimity among group members regarding what needed to be done and why. They also found some team members who did not carry out their agreed upon duties.

In summary, the group project panel technique used in this study seemed to accomplish the goals of allowing collaborative and student-centered learning techniques. Several observations and recommendations contained in the studies were adapted to this study.

Grading Methods for Group Project Panels

One difficulty with using group project panels in any class is in finding a system of evaluation satisfactory to both students and instructor. As a general rule, clarity and complete information are preferred

by students regardless of the grading system used. As stated by Becker, Geer, and Hughes (1968),

> Students prefer professors to give unambiguous instruction about what will be required and clear indications of what materials they will be held responsible for knowing if they are getting a good grade (p. 111).

A survey of evaluation techniques used in the speech communication area by Cheathan and Erickson (1975) found that combined grading systems including peer evaluation, self-evaluation, and teacher evaluations were used more often than a single system.

Adderly and associates (1975) listed several questions which arise in assessment of projects, summarized as follows: (1) What is to be evaluated? Most of the criteria used with project grading should be developed over a period of time. (2) At what point should the assessment be made? The most practical point for assessment as far as time and material evidence of work was felt to be at the final project report time. (3) What weight should be given to the project in the overall grade? In determining the grade weight, consideration must be given to credibility and validity of the project effort. (4) How should the assessment be standardized? Some suggestions were to give several independent assessments, to define as clearly as possible a system of marking, or to make sample projects from previous years available with marks awarded to the examiners. (5) How should the results and comments be returned to the participants? Feedback, knowledge of results, is a key factor in the learning process. The authors recommended that the answers to these questions should be revealed at the beginning of the project.

Panian and Hanson (1973) reported their experiences with evaluation of group projects in business subjects. In an attempt to avoid the fact that a group grade prevents recognition of individual effort, they

suggested that each group member evaluate all members of the group including himself or herself and the project as a whole. In addition, the teacher rated or evaluated the total group effort. These grades were then compared for the final group and individual assessment. Individuals received a separate grade with the group grade as a maximum possible grade for any individual. Interestingly, they had found that the student ratings were extremely reliable.

Jelley (1977) reported a method of internal group ranking for group project grading in consumer classes. He suggested using a form on which students ranked each other and the overall project. The combined rankings were used in the grade determination. He did not give any details on how those rankings were combined.

Fisher (1975) used a form for evaluating class participation in social studies classes. Following the first few weeks of class, she met with the students to informally compare the student self-evaluation and the teacher evaluation. There were infrequent cases of significant differences in ratings. Fisher then continued to use the form for the remainder of the semester to determine the participation grade. The form provided standardized mathematical treatment for participation credit. However, she also stated that "one form cannot give that much precision to a human judgment" (p. 161). During the six years Fisher has used this form, she found positive results with only occasional objections regarding specific grades in a particular category. "Both parents and students have had only favorable reactions to the basic concept. Both felt it contributed to understanding" (p. 161).

A research study by Miles (1971) attempted to isolate and validate criteria used by speech teachers in grading classroom speeches and to

determine if students improved in ability to grade speeches after being taught the criteria. He found that the accuracy of raters significantly improved and the variability of grades assigned significantly decreased when they were instructed in the criteria. Furthermore, he concluded that the instrument he devised was a valid guage of speech performance. The four criteria described for evaluation of the speeches included the topic choice, organization of material, development of the topic, and the language and delivery of the material. These criteria are similar to the ones used in this study.

Grading and feedback methods and their effect on peer teaching and learning were studied by Heaton (1974). The variables involved were: the peer teacher received an average score of his/her peer students' scores; the peer teacher received the feedback of those test scores received in the initial session; and the peer teacher received a summary of the behaviorally stated suggestions made by his/her peers regarding improvement of the instructional setting. The results of her study indicated that a combination of the variables noted above facilitated peer student learning.

In a production management class, Kaimann (1974) conducted a study to compare the variation between teacher and student ranking of case study team presentations. His evidence indicated "a statistically significant degree of agreement between the perception of the professor and peer group as to the student's ordinal rank within the class" (p. 153).

Several sources reviewed criteria and grading methods for written projects. There were many similarities to the grading of oral presentations in both techniques and results. In a study conducted in the Oklahoma State University English Department, Boyet (1956) compared the

effects of student editing during class time with the traditional teacher editing of themes on improvement of writing. A sample editing guide was provided. Several advantages were noted resulting from student editing: freedom of instructor for more individual contact, relief of instructor time from an excessive reading load, immediate feedback for the writer, and forcing students to make concrete decisions as to right and wrong. Some difficulties also arose concerning student morale, student error in editing, classroom confusion, and loss of time for the instructor to lecture in class and to learn students' writing problems. The conclusion reached by Boyet indicated that the improvement of writing measure favored the use of student editing for that specific population.

Self-evaluations or small group evaluations have been used as a popular form of student involvement in the learning process. Most studies have tended to favor using these self-evaluations or small group evaluations in combination with teacher evaluations. Filene (1969) developed a grading system for essay exams for undergraduate American history courses. After three weeks of class meetings, Filene explained to his classes that the lectures, discussions, optional attendance, and essay exams would continue as originally outlined. The exception was that the exams would be returned with extensive comments but without letter grades. Students would tell the instructor the course grade each felt he or she deserved. In his method, the instructor outlined his criteria of excellence--concentration on the issue, adequate evidence, coherence, inclusiveness, and originality--and suggested weights for various parts of the course. He proposed a standard of self-measurement as a final guide to the student: "Grade yourself (1) by what you put into the course, in terms of effort and interest, and (2) by what you got out of the course relative to what

was to be gotten" (p. 452). He kept a record of the grades he would have given for each item to compare to the grades students gave to themselves. He found that 3 percent graded themselves lower, 57 percent gave themselves the same grade, and 40 percent graded themselves one or two grades higher than his recorded grades (p. 454).

Nealey (1969) also studied the student-instructor agreement in scoring an essay exam. He divided the items to be rated and gave one item to three or four raters who discussed the applicable criteria provided and rated all the answers to that item. The instructor also graded all answers on all items. Nealey found a generally high level of agreement between student and instructor ratings. He felt that as a research tool, his method was promising because of the saving of instructor time and the immediacy of results.

Two papers presented the use of team evaluations of written papers by peer groups. A research study in an undergraduate elementary education class by Auger (1970) compared the peer evaluation of five papers to the instructor's evaluation. Generally, "a modest but statistically significant positive correlation was obtained between the peer-evaluated and the instructor-evaluated educational products." The following conclusions were expressed by Auger: (1) There was some evidence that good writers tend to be good evaluators of the same set of products; (2) There was some evidence that products written for peer evaluation would be of better quality than those written for course instructors; and (3) Students' attitudes toward peer-evaluated activities became less favorable as a function of their involvement in the techniques.

Luebke (1978) used peer-team grading of research papers for freshman philosophy classes. Teams of six or seven rated each others' papers

according to a specific criteria sheet. The teams met and discussed rankings and specific items within the papers. The final rankings were submitted to the instructor for a summation of grades and comments. The criteria used for grading were developed and used over a six-year period. The results Luebke observed were: students wrote clearer, better quality papers; most students felt the system was fair; there was less plagarism and vagueness of information; most students expressed a fear of the grading system before the experience but later felt it was an extremely valuable and interesting experience.

In this study many of the ideas and guidelines expressed in the literature were used. Research seemed to indicate sufficient support to the validity of peer evaluation. The additional question that was often mentioned in a commentary notation in the literature was that of student satisfaction with peer evaluation, and measuring this factor was one of the objectives of this study.

Attitude Measurement and the Semantic Differential

According to the literature, student attitudes increasingly influence various aspects of education, including the choices of teaching-learning methods and evaluation systems. Attitudes have been generally defined as learned predispositions to respond in an evaluative sense. Much effort has been expended to develop instruments sensitive enough to measure subtle attitude shifts. Bonnice (1975) observed that the purpose of attitude surveys or opinionaires is to "determine changes in student attitudes that have occurred as a result of an on-going learning experience" (p. 25). In consumer classes, student attitudes related to

current issues may be altered or confirmed by exploration of all viewpoints on a given issue.

An observation by Coakley (1968) contributed the idea that attitude questionnaires, scales, and interest questionnaires have been used to some degree in the evaluation of projects. An attitude scale survey was included in this study.

Hoover (1967) compared the results of small group problem solving with the results of discussion and debate activities in changing attitudes on selected issues. He illustrated that there were many complex variables associated with attitude change. Attitude change has continued to be a basic concern of teachers everywhere. He felt that small group research offered a fruitful avenue for intensive investigation by the classroom teacher. Hoover concluded that there was no significant difference between the two methods studied. Structuring of the groups did not produce the significant attitude shifts sought.

In a study conducted by Davis (1971), the effects of allowing student choice of learning outcomes on achievement and attitude measure were investigated. The results indicated that allowing students to choose their own learning outcomes increased their achievement and fostered a more positive attitude toward course content for the specific unit and that an interaction existed between the type of information from which the student worked and whether or not he or she had any choice in the assignment.

Many types of attitude measuring instruments have been developed for classroom use. Osgood, Suci, and Tannenbaum (1957) developed an instrument, the semantic differential survey, to measure attitudes using pairs of adjectives and a rating scale to indicate direction and intensity

of feeling. Usually, one concept or idea used several pairs of adjectives or scales to indicate a general level and direction of response. The total score for a group on the semantic differential allowed comparison of attitudes between groups and an indication of changes of attitudes within and between groups.

Maguire (1973) reviewed the procedures for semantic differential methodology in a research study. In general terms, Maguire suggested the use of two groups of subjects to judge two groups of concepts. The investigator sought to determine the degree of similarity between the two factor structures that resulted. In his final discussion, he recommended the semantic differential as a useful tool.

> It is clear that the use of semantic differential methods has direct implications for the measurement of feelings, values, and attitudes . . . A concept score for any person can be calculated by summing the ratings over the scales representing each factor. Such a procedure could be used for measuring changes in attitudes towards mathematics after a semester of instruction, for measuring feelings about oneself, or for measuring kinds of value seen in educational practices such as team teaching or open area schools (p. 304-305).

Maguire's ideas concerning semantic differential methods were applied in this study.

Many research studies have been conducted to validate and compare the semantic differential to other attitude measuring techniques. Several studies have exemplified some uses of the semantic differential which are somewhat related to the use in this study. A selected few of those studies were reviewed.

An experimental study by Young (1974) investigated the relationship between the Purdue Master Attitude Test and a previously designed semantic differential test. Young concluded that the two tests were equally effective in the measurement of attitude change.

Donlon (1974) reported general comparisons of four affective domain testing techniques: the Guttman, the Likert, the Thurstone, and the semantic differential. Regarding these techniques, Donlon stated:

> By far the most common approach to measuring affective characteristics is to offer the person some way of providing a self-report by choosing alternatives or endorsing responses in a printed form (p. 9).

He indicated that many formats of attitude testing were similar to cognitive multiple-choice exams with the exception that there is no correct answer. He felt the semantic differential to be particularly useful to institutional research.

> A Semantic Differential is easy to construct, and most respondents find it intuitively easy to understand what is wanted. An interesting feature of this approach is that the respondents will often tolerate quite unusual scales, make meaningful responses, and the responses to those scales can offer useful information (p. 19).

Another reported desirable feature of the semantic differential was its verbal efficiency which allowed the use of words or brief phrases to satisfy the requirements for a scale of opposites. Other advantages for the semantic differential were noted: the individual stimuli or statements are often worthy of review; a total score with its abstract label is more reliable and probably more valid than individual components; and measure of attitudes are often of greatest interest as indicators of groups rather than individual. A difficulty he indicated was in the tendency to overmanipulate the data because of the complex and multidimensional nature of the affective domain.

Terranova (1976) used the semantic differential to confirm whether desirable changes had occurred in student attitudes and to check the direction of those changes following a summer freshman orientation conference. The results indicated three areas of attitude change: (1) the

intellectual level was stimulating, serious, and not beyond reach; (2) there was greater permissiveness and fluidity; and (3) these changes were in the right direction. Two conclusions reached were directed specifically toward the semantic differential instrument used. She found that attitudinal goals could be transformed into a rather sensitive measuring instrument such as the semantic differential. Generally, she felt that the study showed that the measurement of attitude change was a practical, uncomplicated, and productive enterprise.

Mauri (1971) used the semantic differential to investigate the effect of instructor-centered versus student-centered teaching methodology on achievements and attitude in an undergraduate psychology course. He found the following results: there was no significant difference between groups at the knowledge level or higher cognitive levels; the small difference reported favored the instructor-centered group in achievement on the knowledge level but favored the student-centered group when measured on higher cognitive levels; on three of the eight concepts evaluated, the student-centered group showed more significant change in attitude than the instructor-centered group.

Two similar research studies reviewed the use of the semantic differential measuring student attitudes toward business communications courses. The semantic differential instrument was developed in a study by Hartman (1973) and later used by Terry (1976). Hartman researched student attitudes about the use of individually prescribed treatments in written communication courses. He concluded that there was a significant difference in attitude between the experimental and control groups, but that the attitude change had little or no influence on effective writing or English knowledge performance. Terry studied the effects of

training in listening skills on achievement and attitudes toward college business communications. In contrast to the Hartman study, she did not find a significant difference in attitudes toward the business communications course between groups. The semantic differential scales used in those studies were adapted for use in this study.

The semantic differential has been used in several studies to measure student attitudes related to teaching-learning methods and evaluating methods. Its bipolar scales have proved to be useful measures of direction and intensity of attitudes. It is considered a reliable measurement technique. For educational purposes, the semantic differential is relatively easy and inexpensive to use. In this study the recommendations of several of the researchers were observed and applied by giving a pre-test and post-test regarding student attitudes of the use of the panel as a teaching-learning technique and regarding student attitudes of the use of two different grading techniques for the panels.

Summary

Student participation in all phases of the learning process is shown to be preferred by many of the researchers cited. Awareness of the dynamics of group operation and the dynamics of group project procedures are essential for effective use of student participation. Traditional teaching-learning methods are still appropriate in many situations, but most research and observational studies indicate greater benefits from the student-centered approaches. Student involvement in the evaluation process is a popular means of using student participation. The grades resulting from student evaluations are usually very similar to the grades the instructor would have given. Most research and observational studies

indicate that the overall cooperation and satisfaction regarding the grades received is greater when students are involved in the grading process. Attitude studies have increased as researchers have become more concerned about participants' feelings. The semantic differential survey is considered a reliable and useful measurement technique. In Chapter III, the procedures used in this study for student participation in a group process, student involvement in evaluation, and measurement of student attitudes are outlined.

CHAPTER III

METHOD AND PROCEDURE

Development of the Problem

Students enrolled in all sections (2) of the Consumer Issues in American Society (GENAD 3413) at Oklahoma State University during the fall semester 1978 and who completed the pretests and post-tests served as the population for this study (Appendix D). There were thirty-five students who completed the tests in one section and thirty-four who completed the tests in the other section.

During the first class meeting of Week 3, copies of the instructions for the panel presentations were distributed to both groups of students (Appendix A).

During the second class meeting of Week 3, the following procedures were carried out:

(1) The instructions for the panel presentations were discussed and explained including panel group formation, presentation format, and evaluation methods.

(2) Each student was asked to choose three current consumer topics in order of preference. If no topic preference was indicated, students were asked to choose four other people with whom he or she preferred to work. A list of topic ideas was available to aid students with selections. Students completed index cards showing preferences, and these were collected.

(3) The Student Evaluation Form (Appendix B) and Instructor Evaluation Form (Appendix C) were introduced. A transparency of each form was used to aid explanations of the scoring of the six criteria. A "1" to "4" point scoring range was used with "1" representing "poor" and "4" representing "excellent." The six criteria and the explanation provided were as follows: (a) Composition, organization, and grammar--Was the panel carefully prepared, exhibiting good grammar, organization, and unity? (b) Presentation interesting and significant--Did the panel present in an interesting and understandable manner on an issue of significance? (c) Sufficient knowledge of the relevant information--Did the panel exhibit a sufficient knowledge of relevant information on the issue? (d) Sufficient effort to use information sources--Did the panel evidence a sufficient effort on the part of the individual panelists to discover, consult, and credit appropriate sources of information and opinion? (e) Panel's understanding of the issue--Did the panel seem to understand the issue discussed? (f) Panel's evaluations and analyses sound--Were the panel's evaluations and analyses appropriate, logically consistent, and thoughtful?

(4) Section 1, designated the control group, was informed that the student forms would be used only for the panel feedback data. Section 2, designated the experimental group, was told that both student and instructor forms would be used in grade determination and for feedback data.

(5) A time was allowed for initial questions from the students.

(6) A semantic differential attitude survey for both Concepts I and II was also administered (Appendix D).

During the research phase for the panel groups, the instructor and the author of this study were available for individual and group conferences

related to subject matter, research sources, presentation format, and group operations. Groups were allowed one week to solidify topic and group choices. Adjustments were allowed in either topic selection or group membership as needed until one week prior to the beginning of presentations. Students were allowed to choose topics and groups as far as feasible. The instructor assisted in finalizing groups by assigning topics and groups as closely as possible to the choices indicated on the index cards.

One week before the first panel presentation date, the following procedures were carried out. (1) The student evaluation form criteria and instructor evaluation form criteria were reviewed. (2) Grade determination procedures were outlined as described in "The Control Group" and "The Experimental Group" (pp. 37-38). (3) Last-minute questions were discussed. (4) Thirty minutes of class time were allotted for group meetings and group or individual questions.

Within six weeks following the group formations, the panel presentations began. Each group turned in a written outline or manuscript with a source list one week before its presentation. The instructor checked the written material to encourage variety of presentation format. Presentations could be report, debate, or dramatic format.

Data Compilation

One panel presentation per class meeting was scheduled. Following the presentation, criteria evaluation/comment forms were completed by the instructor, the student audience, and the panel members. Student evaluators remained anonymous.

Grades were compiled for each panel as a group, rather than individually, according to the outline given in "The Control Group" and "The

Experimental Group" below. Panels were allowed to request their grade at any time following the presentations.

At the end of all the panel presentations in each class, a summative meeting was held: (1) Students met with their respective panel groups to discuss their grade results and the summary of comments compiled by the instructor from the student evaluation forms (Appendix E). The group grade was also recorded. This procedure provided an opportunity for questions regarding grades to be discussed and questions related to comments to be explained. (2) Immediately following the group discussion, a semantic differential attitude survey post-test for Concepts I and II was completed.

The Control Group

Section 1 of the consumer issues classes, consisting of thirty-five participants, was assigned as the control group. The instructor evaluation form was completed by the instructor and was used for grade determination of the panel presentations. The students and panel members completed only the comment section of the student evaluation form. These comments were compiled for feedback purposes to be used at the summative meeting. The student evaluations were not used in determining grades.

The Experimental Group

Section 2 of the consumer issues classes, consisting of thirty-four participants, was assigned as the experimental group. The instructor's evaluation, including the criteria on the evaluation form and the instructor's evaluation of the written material (outline or manuscript with source list), determined 50 percent of the panel group's grade. The

The remaining 50 percent of the group grade was determined by averaging the grades given on the individual student evaluation forms. A summary of the comments and the group grade results (Appendix E) was distributed to the panelists during the summative meeting.

Statistical Techniques

Point values were assigned to each pair of adjectives as indicated in the key (Appendix D) and as used in Hartman's (1974) and Terry's (1976) studies. The poles of the bipolar scales considered most unfavorable were assigned the score "1" while the most favorable poles were assigned the score "7."

For each concept, a total of the point values for each pair of adjectives was obtained and comprised the attitude score for the concept. Each individual participant's pretest and post-test surveys for each concept were scored.

A t-test was applied to each concept (Concept I and Concept II) on the pretest to indicate the homogeneity of the groups (Bartz, 1976, pp. 248-254).

A split-half reliability corrected by the Spearman-Brown formula (Bartz, p. 334) and a Cronbach alpha internal consistency estimate of reliability (Cronbach, 1951) were used to obtain reliability estimates for the bipolar adjectives used with each concept. Cronbach's alpha was used to show the average of all possible split-halves.

All data were tabulated and placed on keypunched cards. Additional data instruction cards were keypunched so that appropriate comparisons could be made. The data were then evaluated by the researcher to determine the results of the experiment, which are reported in Chapter IV.

Summary

The instructions and time sequence as outlined in this chapter were used by the instructor to administer this study. Use of the various instructions and evaluation form handouts, illustrated in the appendixes, greatly aided the information process and the smooth operation of the procedure. By having the researcher serve in an advisory capacity, the instructor and student had a non-evaluative resource for assistance in the various phases of the study. Chapter IV contains the results of the study.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

Chapter IV summarizes the findings of the study (1) by indicating the homogeneity of the two groups, (2) by indicating the estimation of reliability of the pretest and post-test semantic differential survey, and (3) by testing the hypotheses listed on page 3.

Findings of the study were based on the scores obtained on pre- and post-test semantic differential attitude surveys from sixty-nine of the Oklahoma State University students who were enrolled in one of two sections of the course GENAD 3413, Consumer Issues in American Society, during the fall semester 1978 and who completed the pretests and post-tests.

The purposes of this study were (1) to determine changes in student attitudes after using the panel presentation method measured by a semantic differential survey pretest and post-test; (2) to compare student attitudes regarding two methods of grading the panel presentation, one group graded by the instructor only and one group graded by the instructor and the peers, also measured by a semantic differential survey administered at the end of the semester; and (3) to determine changes in student attitudes in the experimental group (graded by the instructor and peers) after using this grading procedure, measured by a semantic differential survey pretest and post-test.

The semantic differential attitude survey scores data were analyzed by a t-test at the .05 significance level (Bartz, p. 248). A split-half reliability corrected by the Spearman-Brown correlation and the Cronbach alpha internal consistency estimate of reliability were also used.

Analysis of Pretest Scores

To determine that the statistical assumptions had been fulfilled, an analysis of the pretest scores for the semantic differential attitude survey was completed. A t-test at the .05 significance level was performed for both Concept I and Concept II, defined on page 6.

Table I illustrates the mean score relationships for Concept I.

TABLE I

SUMMARY AND ANALYSIS OF PRETEST SCORES SEMANTIC DIFFERENTIAL SURVEY, CONCEPT I: THE USE OF PANELS IN GENAD 3413

Treatment Group	Sample Size	Mean*	Standard Deviation	Minimum Value	Maximum Value	T Value
Experimental	34	73.9118	11.134	44	96	1.14
Control	35	70.7714	11.735			

Difference +3.1404 (Experimental Group Higher Mean Score)

*Mean of raw scores

A difference of +3.1404 existed in mean scores for Concept I pretest scores. To determine that the difference was not a significant or

influencing difference in the mean scores, the t-value for Concept I was compared to the table value for the .05 level. Since the actual value was greater than the table value, the difference was not considered significant, indicating that the two groups were homogeneous for Concept I.

Table II illustrates the mean scores on the pretest for the semantic differential attitude survey Concept II.

TABLE II

SUMMARY AND ANALYSIS OF PRETEST SCORES SEMANTIC DIFFERENTIAL SURVEY, CONCEPT II: THE METHOD OF EVALUATION OF PANEL PRESENTATIONS IN GENAD 3413

Treatment Group	Sample Size	Mean*	Standard Deviation	Minimum Value	Maximum Value	T Value
Experimental	34	75.0882	10.506	46	91	0.43
Control	35	74.0000	10.437			

Difference +1.0882 (Expermental Group Higher Mean Score)

*Mean of raw scores

A difference of +1.0882 existed in mean scores for Concept II pretest scores. To determine that the difference was not a significant or influencing difference in the mean scores, the t-value for Concept II was compared to the table value for the .05 level. Since the actual value was larger than the table value, the difference was not considered significant, indicating that the two groups were homogeneous for Concept II.

On each pretest concept, no significant difference existed among the means of the semantic differential attitude survey pretest scores. The population may be classified as a sample which came from a homogeneous sample population. The groups may be considered equally balanced for the analysis of the remaining data.

Analysis of Reliability of the Semantic Differential Attitude Survey

A split-half reliability corrected by the Spearman-Brown formula and the Cronbach alpha internal consistency estimate of reliability were used to obtain reliability checks for the semantic differential attitude survey. The Cronbach alpha was used to show the average of all the possible split halves (Cronbach, p. 297-334).

The fundamental assumption of the split-half reliability and the Cronbach alpha internal consistency estimate of reliability is that the two half-tests obtained by using the odd and even items are equivalent: they have the same means, standard deviations, and content. Another assumption is that the items are experimentally independent so that the group's performance on one item has no influence upon what it does to another item (Bartz, p. 334). To verify the internal consistency of the survey, the reliability estimates must be repeated for each administration of the survey (Bartz, p. 334).

The attitudinal measure developed by Hartman (1972) at Oklahoma State University and tested by Terry (1976) at Georgia State University was assigned two different concepts and administered to the sixty-nine students participating in the study and completing the semantic differential attitude survey pretests and post-tests.

In each test administration, for each concept, and for each pretest and post-test, the correlation was very high (Appendix F), indicating that the semantic differential attitude survey was consistent and was reliable.

Analysis of Null Hypothesis I

To test the hypothesis that no significant change occurred in the students' attitudes regarding the use of panel presentations as a teaching-learning method in collegiate consumer issues classes, a comparison was made of the mean scores as illustrated in Table III.

TABLE III

SUMMARY AND ANALYSIS OF SCORES SEMANTIC DIFFERENTIAL ATTITUDE SURVEY, CONCEPT I

Test	Treatment Group	Sample Size	Mean*	Difference in Means	T Values
Pretest	Experimental	34	73.9118		
Post-test	Experimental	34	74.2647	+0.3529	.432
Pretest	Control	35	70.7714		
Post-test	Control	35	72.8000	+2.0286	2.651
Pretest	Both	69	72.3190		
Post-test	Both	69	73.5220	+1.203	2.164

*Mean of raw scores

The actual t-values were compared to the table value. Since the actual values were larger than the table value, the amount of change from the pretest to the post-test was not considered statistically significant. Therefore, the null hypothesis was not rejected.

Analysis of Null Hypothesis II

To test the hypothesis that there is no significant difference between groups in student attitudes regarding the grading methods of the panel presentations, the post-test scores for Concept II were compared as illustrated in Table IV.

TABLE IV

SUMMARY AND ANALYSIS OF POST-TEST SCORES
SEMANTIC DIFFERENTIAL ATTITUDE SURVEY,
CONCEPT II

Treatment Group	Sample Size	Mean*	Standard Deviation	Minimum Value	Maximum Value	T Value
Experimental	34	77.5000	12.071	49	98	1.39
Control	35	73.8286	9.721			

Difference of +3.6714 (Experimental Group Higher Mean)

*Mean of raw scores

To determine if the difference of +3.6714 between the means of the two groups for Concept II was a result of chance or a result of the

experimental procedures, the t-value was compared to the table value at the .05 level. The t-test indicated no significant difference between the means. Therefore, the null hypothesis was not rejected.

Analysis of Null Hypothesis III

To test the hypothesis that there is no significant change in student attitudes in the experimental group after using the instructor and peer grading procedure, the pretest and post-test scores for Concept II were compared as illustrated in Table V.

TABLE V

SUMMARY AND ANALYSIS OF SCORES SEMANTIC DIFFERENTIAL ATTITUDE SURVEY, CONCEPT II

Treatment Group & Size	Test	Mean*	Difference in Means	T Value
Experimental	Pretest	75.0882		
34	Post-test	77.5000	+2.4118	2.91

Difference of +2.4118 (Post-test Higher Mean)

*Mean of raw scores

To determine if the difference of +2.4118 between the pretest and post-test means for the experimental group for Concept II indicated a significant change in attitude, the t-value was compared to the table value at the .05 level. The t-test indicated no significant difference

between the means. Therefore, the null hypothesis was not rejected.

Analysis of Observations

Even though there were no statistically significant differences in the mean scores, changes were observed in the scores from the pretest to the post-test for each group as illustrated in Table VI.

TABLE VI

SUMMARY OF MEAN SCORE DIFFERENCES

Concept	Group	Test	Mean*	Difference Between Means
Concept I	Experimental	Pretest	73.7118	
		Post-test	74.2647	+0.3529
	Control	Pretest	70.7714	
		Post-test	72.8000	+2.0286
Concept II	Experimental	Pretest	75.0882	
		Post-test	77.5000	+2.4118
	Control	Pretest	74.0000	
		Post-test	73.8288	-0.1712

*Mean of raw scores

The experimental group's mean increased slightly less than the

control group's mean for Concept I, regarding the use of the panel presentations. Table VI also shows that Concept II, regarding the grading methods of the panels, revealed an increase in the mean for the experimental group and a decrease in the mean for the control group.

Summary

The major findings of the study were that the null hypotheses were not rejected.

(1) There was no significant change in student attitudes regarding the use of panel presentations as a teaching-learning method in collegiate consumer issues classes as measured by a pretest and a post-test.

(2) There was no significant difference between groups in student attitudes regarding the grading methods of the panel presentation.

(3) There was no significant change in student attitudes in the experimental group after using the instructor and peer grading procedure.

The summary, conclusions, and recommendations for the data are presented in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter summarizes five areas: (1) the purpose of the experiment, (2) a description of the sample, (3) the findings of the study, (4) the resulting conclusions, and (5) the recommendations of the study.

Purpose of the Study

The purposes of this study were (1) to determine changes in student attitudes after using the panel presentation method measured by a semantic differential survey pretest and post-test; (2) to compare student attitudes regarding two methods of grading the panel presentation, one group graded by the instructor only and one group graded by the instructor and the peers, also measured by a semantic differential survey administered at the end of the semester; and (3) to determine changes in student attitudes in the experimental group (graded by the instructor and peers) after using this grading procedure, measured by a semantic differential survey pretest and post-test.

A Description of the Sample

Participants in the study were collegiate sophomores, juniors, and seniors who enrolled in GENAD 3413, Consumer Issues in American Society, at Oklahoma State University during the fall semester of 1978 and who completed both the pretests and the post-tests. A total of sixty-nine

students were assigned to the experimental or the control group according to the course section.

The Findings of the Study

The results of the study concerning student attitudes regarding the panel method of learning and concerning the effects of student participation in grading the panel presentations on student attitudes were not conclusive.

Pretest scores, which revealed no significant difference in student attitudes regarding the use of panel presentations or in student attitudes regarding the method of evaluation of the panels, indicated that the two groups were homogeneous.

The projections of the researcher based on the stated purposes were: (1) a more positive feeling toward the use of panel presentations would result from the experience, and (2) a more positive feeling toward the student participation in grading would be indicated.

However, the statistical comparisons of the data indicated the following: (1) there were no statistically significant changes in student attitudes regarding the use of the panel presentations after the experience, (2) there was no statistically significant difference in student attitudes between the groups regarding the method of evaluation of the panel presentations, and (3) there was no statistically significant change in student attitudes in the experimental group regarding the grading methods of the panel presentation. While there were no statistically significant differences, it is recognized that unless there is a large number of participants available, a statistically significant change is difficult to obtain.

A visual inspection of the means of the scores indicated: (1) a slightly higher positive attitude toward the use of the panel presentations after their use in consumer issues classes for both groups; (2) a slightly higher positive attitude on the post-test scores for the experimental group regarding the method of grading the panel presentations; and (3) a slight decrease for the control group in the mean score on the post-test survey regarding the grading method.

The Conclusions of the Study

The findings of the study provided evidence for the following conclusions:

(1) The semantic differential attitude survey indicated that students' interest and attitude toward the use of panel presentations was slightly more positive following the experience of being involved in the panels.

(2) The semantic differential attitude survey also indicated that the student attitude and interest toward the grading method of panel presentations for the experimental group was slightly more positive after the experience.

(3) Lack of student participation in grading in the control group resulted in a slight decline on the attitude and interest scale toward the grading method of student panels.

(4) There was no change in attitudes regarding the use of panels after the use of the experimental procedures.

(5) The bipolar adjective scales used for the semantic differential attitude survey can be effectively adapted for use with other concepts and situations as indicated by the high positive reliability estimates

discussed in Chapter IV.

Recommendations of the Study

The recommendations are:

(1) Replication of this study should be done with larger samples, since use of a small number of participants requires a larger difference to be significant.

(2) Experiments should be conducted to replicate the application and validation of the grading criteria in other similar courses.

(3) A replication of this study should be conducted in a secondary level consumer issues class to compare the results to the college level class.

(4) Similar experiments should be conducted to compare the results of voluntary and involuntary grouping of panels.

Summary

The findings of the study indicated that no statistically significant differences or changes occurred between the experimental and control groups' attitudes toward the panels or toward the use of student participation in grading. Differences occurred within the control group and within the experimental group, but the degree of change was not statistically significant.

A SELECTED BIBLIOGRAPHY

Adderly, Kenneth, Clive Ashwin, Philip Bradbury, James Freeman, Sinclair Goodlad, Judith Greene, David Jenkins, John Rae, and Ormond Uren. Project Methods in Higher Education. London: Society for Research into Higher Education, Ltd., 1975.

Alpaugh, D. "Problem-Solving Panels Teach Economics." Business Education Forum, Vol. 26 (November, 1971), pp. 51-52.

Auger, Terrance John. "Some Effects of Peer Evaluation on the Performance of Elementary Education Students." Unpublished Ph.D. Dissertation, University of Illinois, Urbana-Champaign, 1970.

Babcock, C. Menton. The Harper Handbook of Communication Skills. New York: Harper and Ponthews, Publishers, 1957.

Baldwin, William A. From the Old to the New Education. Boston: New England Publishing Company, 1930.

Bartz, Albert E. Basic Statistical Concepts in Education and the Behavioral Sciences. Minneapolis: Burgess Publishing Company, 1976.

Becker, Howard S., Blanche Geer, and Everett C. Hughes. Making the Grade. New York: John Wiley and Sons, Inc., 1968.

Blockus, Wanda. "Basic Business Education in the Future." Delta Pi Epsilon Journal, Vol. 13, No. 4 (August, 1971), pp. 28-34.

Bonnice, Joseph G. "Measuring Student Attitude Modification." Business Education World, Vol. 55, No. 4 (March/April, 1975), p. 25.

Boyet, Aggie. "The Effect of Student Group Editing of Themes on the Improvement of Writing in Freshman Composition." Unpublished Ph.D. Dissertation, Oklahoma State University, 1956.

Branom, Mendel Everett. The Project Method in Education. Boston: Gorham Press, 1919.

Bruffee, Kenneth A. "Collaborative Learning: Some Practical Models." College English, Vol. 34, No. 5 (February, 1973), pp. 634-643.

Cassel, Russell N. "Development of a Semantic Differential to Assess the Attitude of Secondary School and College Students." The Journal of Experimental Education, Vol. 39, No. 2 (Winter, 1970), pp. 10-14.

Cheathan, Richard T. and Keith V. Erickson. Simulation Learning Experiences in Speech Communication. Paper presented at the annual meeting of International Communication Association, ED 113 768, April, 1975.

Coakley, Carroll B. "Use Appropriate Evaluation Techniques." Balance Sheet, Vol. 50 (November, 1978), pp. 109-111.

Cox, Jerry R. "Vary Classroom Activities for Basic Business Students." Business Education Forum, Vol. 31, No. 6 (March, 1977), pp. 13-14.

Cronbach, L. J. "Coefficient Alpha and the Internal Structure of Tests." Psychometrike, Vol. 16 (1951), pp. 297-334.

Daniels, David N. Curriculum on Conflict: Some Suggestions. Developmental draft written at a summer workshop in curriculum writing, ED 056 921, July 15, 1971.

Daughtery, Anne Scott. "Basic Business Education: Role, Problems, and Attacks." Delta Pi Epsilon Journal, Vol. 13, No. 4 (August, 1971), pp. 15-27.

Davis, Wayne Kay. "The Effects of Student Self-Selection of Learning Outcomes on Attitude and Achievement Measures." Unpublished Ph.D. Dissertation, University of Michigan, 1971.

Day, G. S. "Evaluating Models of Attitude Structure." Journal of Marketing Research, Vol. 9 (August, 1972), pp. 79-86.

Donlon, Thomas F. Testing in the Affective Domain. ERIC/TM Report No. 41, ED 103 493, December, 1974.

DuBois, Eugene E. "An Experiment with the Teacher-Learning Team: Group Self-Directed Learning in Undergraduate Education." Adult Leadership, Vol. 20, No. 1 (May, 1971), pp. 14-16.

Evans, K. M. "Group Methods." Educational Research, Vol. 9, No. 1 (November, 1966), pp. 44-50.

Everett, A. V. "Personality Assessment at the Individual Level Using the Semantic Differential." Educational and Psychological Measurement, Vol. 33, No. 4 (Winter, 1973), pp. 837-844.

Fessenden, Seth A., Roy Ivan Johnson, P. Merville Larson, and Kay M. Good. Speech for the Creative Teacher. Dubuque: Wm. C. Brown Company Publishers, 1968.

Filene, Peter G. "Self-Grading: An Experiment in Learning." Journal of Higher Education, Vol. 40, No. 6 (June, 1969), pp. 451-458.

Fisher, Darlene E. "Approach to Evaluating Class Participation." Educational Horizons, Vol. 53, No. 4 (Summer, 1975), pp. 161-163.

Flodin, William L. "A Comparative Analysis of the Performance of Beginning Finance Students in Classes Using Instructor-Centered, Student Centered, and Shared Responsibility Teaching-Learning Procedures." Business Education Forum, Vol. 25, No. 1 (October, 1970), pp. 32-33.

Galloway, Charles Gilbert. "An Experimental Study of the Relationship between Perceived Evaluation of Self by Others, Evaluation of Self, and of Others." Unpublished Ph.D. Dissertation, University of California-Berkley, 1966.

Gaston, Neil. "Evaluation in the Affective Domain." Journal of Business Education, Vol. 52, No. 3 (December, 1976), pp. 134-136.

Gibson, James William. "Direct and Indirect Attitude Scale Measurements of Positive and Negative Argumentative Communications." Unpublished Ph.D. Dissertation, Ohio State University, 1962.

Good, Carter V. (ed.). Dictionary of Education. New York: McGraw-Hill Book Company, 1973.

Hartman, Larry D. "An Experiment to Determine the Effects of Prescribed Learning Activities in Business Writing on the Achievement and Attitudes of Collegiate Students." Unpublished Ed.D. Dissertation, Oklahoma State University, 1974.

Heaton, Martha Elizabeth. "The Effect of Grade Contingency and Two Modes of Feedback on Achievement in Peer Teaching in the College Classroom." Unpublished Ed.D. Dissertation, University of Georgia, 1974.

Herligy, John G. and Myra T. Herligy. "Report from the Classroom." Social Education, Vol. 40, No. 7 (November/December, 1976), pp. 576-581.

Hoover, Kenneth H. "The Effect of Structured Small Groups upon Attitude Change." Educational Research, Vol. 9 (June, 1967), pp. 233-236.

Howard, R. Bill and Fred Schmett. "Participation Grading: A Way to Involve all Students." American Biology Teacher, Vol. 37 (November, 1975), pp. 473-474.

Hulbert, James. "Information Processing Capacity and Attitude Measurement." Journal of Marketing Research, Vol. 12 (February, 1975), pp. 104-106.

Hunt, Robert A. "Student Grades as a Feedback System: The Case for a Confidential Multiple Grade." Measurement and Evaluation in Guidance, Vol. 5, No. 2 (July, 1972), pp. 345-359.

Jackson, Barbara. "Consumer Education at the College Level." Business Education Forum, Vol. 32, No. 1 (October, 1977), pp. 22 and 25.

Jelley, Herbert M. (ed.). "Evaluating Group Projects." Forum, Vol. 8, No. 1 (Winter, 1977), p. 2 and 4.

Johnson, Raymond L. and Donald D. Wall. "Cluster Analysis of Semantic Differential Data." Educational and Psychological Measurement, Vol. 29 (Winter, 1969), pp. 769-780.

Kaimann, Richard A. "The Coincidence of Student Evaluation by Professor and Peer Group Using Rank Correlation." The Journal of Educational Research, Vol. 68, No. 4 (December, 1974), pp. 152-153.

Kilpatrick, William Heard. The Project Method. New York: Columbia University, 1918.

Laudicina, Robert A. and Eleanor Vigilia Laudicina. "Challenging Student Potential: A Team Learning Approach." Improving University and College Teaching, Vol. 22, No. 3 (Summer, 1974), pp. 177-178.

Lawson, E. D., George H. Golden, Jr., and Kathy Jelonek Chmura. "Computer Programs for the Semantic Differential." Educational and Psychological Measurement, Vol. 32, No. 3 (Autumn, 1972), pp. 779-784.

Luebke, Neil R. "Making Term Papers Interesting and Educational: A System of Peer Evaluation." Paper presented at annual Oklahoma State University Faculty Institute, February, 1978.

Lusk, Edward J. "Bipolar Adjective Screening Methodology." Journal of Marketing Research, Vol. 10 (May, 1973), pp. 202-203.

MacManaway, Lancelot A. "Teaching Methods in Higher Education: Innovation and Research." Universities Quarterly, Vol. 24, No. 3 (Summer, 1970), pp. 321-329.

Maddox, H. "University Teaching Methods: A Review." Universities Quarterly, Vol. 24, No. 2 (Spring, 1970), pp. 157-165.

Maguire, Thomas O. "Semantic Differential Methodology for the Structuring of Attitudes." American Educational Research Journal, Vol. 10, No. 4 (Fall, 1973), pp. 295-306.

Mauri, Joseph John. "The Effects of Student-Centered Group Activity on Levels of Achievement and Attitude Change in an Undergraduate General Psychology Course." Unpublished Ph.D. Dissertation, University of Toledo, 1971.

McKeachie, W. J. "Research on Teaching at the College and University Level." Handbook of Research on Teaching, Chicago: Rand McNally & Company, 1963.

Miles, Paul L. "An Experimental Study Consisting of the Isolation and Validation of Criteria for Speech Evaluation and the Determination of Their Effect Upon Student Grading." Unpublished Ed.D. Dissertation, University of Idaho, 1971.

Nealey, Stanley M. "Student-Instructor Agreement in Scoring an Essay Examination." The Journal of Educational Research, Vol. 63, No. 3 (November, 1969), pp. 111-115.

Nie, Norman H., C. Hadlai Hull, Jean G. Jenkins, Karen Steinbrenner, and Dale H. Brent. Statistical Package for the Social Sciences. New York: McGraw-Hill Book Company, 1975.

Nicosia, Francesco M. "Consumer Research: Problems and Perspectives." Journal of Consumer Affairs, Vol. 3 (Summer, 1969), pp. 9-25.

Osgood, Charles E., George J. Suci, and Percy H. Tannenbaum. The Measurement of Meaning. Urbana: University of Illinois Press, 1957.

Panian, Robert C. and Robert N. Hanson. "Individualize the Evaluation of Your Group Projects." Balance Sheet, Vol. 55, No. 1 (September, 1973), pp. 22-23.

Pollock, Carl H., Jr. "Classroom Research, Identification, Classification, and Rankers of Problems Encountered by Teachers of General Business." Delta Pi Epsilon Journal, Vol. 10, No. 2 (February, 1968), pp. 30-32.

Sampson, William Robert, Jr. "An Experimental Investigation of the Application of Peer Group Instructional Methods to the Undergraduate Course in Group Discussion." Unpublished Ph.D. Dissertation, Wayne State University, 1973.

Shagory, George E. "Teaching Students Teamwork." Improving College and University Teaching, Vol. 24, No. 23 (Summer, 1976), pp. 162-163.

Sharpe, Louis K. and W. Thomas Anderson, Jr. "Concept Scale Interaction in the Semantic Differential." Journal of Marketing Research, Vol. 9 (November, 1972), pp. 432-434.

Singleton, H. Wells, Joe B. Hurse, and Steven J. Weiss. "Role Playing in Consumer Economic Education." Social Studies, Vol. 68 (September/October, 1977), pp. 202-207.

Snider, James G. and Charles E. Osgood (eds.). Semantic Differential Technique. Chicago: Aldine Publishing Company, 1969.

Starkey, Johnie Dow. "A Comparison of Different Formats for Measuring the Teaching-Learning Process Analysis Inventory, a Measure to Assess Attitudes Regarding the Uses of Newer Educational Media, and an Educational Checklist." Unpublished Ed.D. Dissertation, University of Northern Colorado, 1964.

Terranova, Carmelo. "The Effectiveness of a Summer Freshman Orientation Conference." Measurement and Evaluation in Guidance, Vol. 9, No. 2 (July, 1976), pp. 70-74.

Terry, Mollie Brown. "An Experimental Study to Determine the Effects of Training in Listening Skills on Achievement in, and Attitudes Toward, a College Business Communications Course." Unpublished Ph.D. Dissertation, Georgia State University, 1976.

Tonne, Herbert A., Estelle L. Popham, and M. Herbert Freeman. Methods of Teaching Business Subjects. New York: Gregg Division McGraw-Hill Book Company, 1965.

Tracy, Diana. "A Comparison of the Effectiveness of Teacher-Directed Study and Learner-Directed Study." Unpublished Ed.D. Dissertation, Lehigh University, 1968.

Weinreis, Anne Marie. "Group Discussions." Education, Vol. 88, No. 2 (November/December, 1967), pp. 153-155.

Young, Darrell D. "Semantic Differential: Application as an Affective Measure." The Journal of Experimental Education, Vol. 42, No. 4 (Summer, 1974), pp. 86-91.

APPENDIXES

APPENDIX A

PANEL PRESENTATION PROJECT

PANEL PRESENTATION PROJECT

Pick a group of approximately five people. Choose a current consumer issue (you may refer to the list following the explanation or consult with the instructor).

A notecard will be provided for you to record the topic, chairperson, committee members, and type of format. First and second choices of dates for panel performance need to be listed.

Presentation may be in the form of a committee report, a debate, or a dramatization. A written script or outline needs to be turned in one week before the panel performance (include a bibliography).

Plan to present your information, sides of a case, or dramatization of a situation in 20-30 minutes (approximately 5 minutes per person). A 5-10 minute question-and-answer session should follow. You may wish to bring some questions to "plant" in the audience to insure discussion.

Evaluation will be based on participation of all panel members, evidence and credit to research sources, organization of effort, unity of effort, and the discussion session. Written evaluation of panels will be done by all classmates, panelists, and the instructor. (Written script or outline will be included in evaluation.)

Date options:

Topic ideas:

Life insurance myths
New social security legislation and implications
Tax reforms and implications for the consumer
Nuclear energy for the consumer
Environmental protection--facts and fallacies
Consumer credit--regional sources for students and/or consumers (discriminations, regulations, etc.)
Consumer education efforts--public schools and private efforts (age levels and types of efforts)
Inflation--current trends and efforts to control
Investments--consumer level description and definitions of various types of investments, etc.
Personal buying--buying tips and revealing seller "tricks" of goods (food, clothes, appliances, furntiture, etc.)
Fringe benefits--consumer and employer viewpoints, union efforts, private efforts
Product labeling and warranties--problems, regulations, violations, controls, etc.
Parliamentary procedure for consumer
Consumer agencies--areas and efforts of regulation
Advertising propaganda
Current cases in fraudulent business practices
Business ethics (related to your field)

Banking services
Savings management and "safe" investments
Diet--fads and your food dollar
Housing--renting
Housing--buying
Auto insurance and the law
Medical insurance
Social security and retirement planning
Consumer action groups, areas of work, and means of operation
Ecology and the consumer
Personal legal needs
Family council: budgeting, goals, values for various types or ages of family planning (early or pre-marriage, young family with children, middle age with teenagers, near retirement, etc.)
Values: historical look of values in America and comparison with values in other countries today
Working wives and mothers--psychology and economic impact
Contributions of unions and professional organizations to consumer interests
Physical fitness--fads and trends; benefits or damages to consumers
Financial problem cases--present real or hypothetical cases with solutions

APPENDIX B

STUDENT EVALUATION FORM FOR PANELS

STUDENT EVALUATION FORM FOR PANELS

Instructions:

1. Listen to the panel to form a general impression of it.
2. In each of the six criterion spaces score as follows:
   4 = Excellent
   3 = Good
   2 = Fair
   1 = Poor
   a. Presentation:
      (1) Has the panel been carefully prepared, exhibiting good grammar, organization, etc.
      (2) Is the panel presented in an interesting and understandable manner on an issue of significance?
   b. Information:
      (3) Does the panel exhibit a sufficient knowledge of relevant information on the issue?
      (4) Does the panel evidence a sufficient effort on the part of the individual panelists to discover, consult, and credit appropriate sources of information and opinion?
   c. Thought:
      (5) Does the panel seem to understand the issue discussed?
      (6) Are the panel's evaluations and analyses appropriate, logically consistent, and thoughtful?
3. Add the six numbers in the criteria spaces and write the sum in the space beside "Total Criteria Score." (Maximum score: 24)
4. Write a grade (A, A-, B+, B, etc.) in the space beside "Grade on Panel."
5. Do an honest and serious job of evaluating. Your opinions will be considered.

Panel Topic _____ Date _____

(1) Composition, organization, grammar? _____

(2) Presentation interesting and significant? _____

(3) Sufficient knowledge of the relevant information? _____

(4) Sufficient effort to use information sources? _____

(5) Panel's understanding of the issue? _____

(6) Panel's evaluations and analyses sound? _____

Total Criteria Score (add 1-6) _____

Grade on Panel (A+, A, A-, B+, etc.) _____

Comments on panel:

APPENDIX C

INSTRUCTOR'S PANEL EVALUATION

INSTRUCTOR'S PANEL EVALUATION

GENAD 3413

Topic: _____ Date: _____

Panel Members: Name	Role	Time used
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Format: Debate _____ Informative _____ Dramatatic _____

Evaluation Criterion:

_____ (1) Composition, organization, grammar?

_____ (2) Presentation interesting and significant?

_____ (3) Sufficient knowledge of the relevant information?

_____ (4) Sufficient effort to use information sources?

_____ (5) Panel's understanding of the issue?

_____ (6) Panel's evaluations and analyses sound?

_____ Total Criteria Score (add 1-6)

_____ GRADE ON PANEL

_____ WRITTEN MATERIAL turned in?

Score criteria:
4 = Excellent
3 = Good
2 = Fair
1 = Poor

COMMENTS:

APPENDIX D

SEMANTIC DIFFERENTIAL ATTITUDE SURVEY AND KEY

EVALUATION OF PANEL PRESENTATIONS IN GENAD 3413 CONSUMER ISSUES IN AMERICAN SOCIETY

The purpose of this questionnaire is to measure your feelings about the use of and the evaluation methods of panel presentations in the designated courses. On the next page is a scale with numbered lines and words by each line. The words at the ends of the scales are opposite in meaning. Please rate the concept listed at the top of the page of the scale. There is no "right" or "wrong" answer. Please mark the concept according to the way you feel about it.

Here is how you are to use these scales:

(1) If you feel that the concept at the top of the page is very closely related to one or the other end of the scale, you should blacken or fill in your mark in one of the following ways:

Example: this ●, not this o.

fair ___●___ : _____ : _____ : _____ : _____ : _____ : _____ unfair
3 2 1 0 1 2 3

OR

fair _____ : _____ : _____ : _____ : _____ : _____ : ___●___ unfair
3 2 1 0 1 2 3

(2) If you feel that the concept is related to one or the other end of the scale (but not extremely), you should blacken or fill in your mark in one of the following ways:

strong _____ : ___●___ : _____ : _____ : _____ : _____ : _____ weak
3 2 1 0 1 2 3

OR

strong _____ : _____ : _____ : _____ : _____ : ___●___ : _____ weak
3 2 1 0 1 2 3

(3) If the concept seems slightly related to one side as opposed to the other side (but is not really neutral), then you should blacken or fill in your mark in one of the following ways:

active _____ : _____ : ___●___ : _____ : _____ : _____ : _____ passive
3 2 1 0 1 2 3

OR

active _____ : _____ : _____ : _____ : ___●___ : _____ : _____ passive
3 2 1 0 1 2 3

(4) If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should blacken or fill in your mark in the following way:

safe _____ : _____ : _____ : ___●___ : _____ : _____ : _____ dangerous
3 2 1 0 1 2 3

NAME _____ SOCIAL SECUIRITY NUMBER _____

GENAD 3413 Section _____ DATE _____

IMPORTANT:

(1) Be sure you check every scale--do not omit any.
(2) Never darken more than one circle on a single scale.

CONCEPT: THE USE OF PANELS IN GENAD 3413

commonplace	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	unique
difficult	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	easy
good	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	bad
haphazard	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	systematic
hazy	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	clear
interesting	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	dull
meaningful	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	meaningless
necessary	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	unnecessary
pleasant	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	unpleasant
simple	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	complex
uninformative	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	informative
unrewarding	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	rewarding
unscholarly	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	scholarly
vague	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	precise
worthless	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	valuable

CONCEPT: THE METHOD OF EVALUATION OF PANELS IN GENAD 3413

commonplace	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	unique
difficult	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	easy
good	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	bad
haphazard	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	systematic
hazy	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	clear
interesting	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	dull
meaningful	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	meaningless
necessary	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	unnecessary
pleasant	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	unpleasant
simple	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	complex
uninformative	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	informative
unrewarding	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	rewarding
unscholarly	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	scholarly
vague	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	precise
worthless	___ 3	___ 2	___ 1	___ 0	___ 1	___ 2	___ 3	valuable

KEY: BOTH CONCEPTS

commonplace	1/3	2/2	3/1	4/0	5/1	6/2	7/3	unique
difficult	7/3	6/2	5/1	4/0	3/1	2/2	1/3	easy
good	7/3	6/2	5/1	4/0	3/1	2/2	1/3	bad
haphazard	1/3	2/2	3/1	4/0	5/1	6/2	7/3	systematic
hazy	1/3	2/2	3/1	4/0	5/1	6/2	7/3	clear
interesting	7/3	6/2	5/1	4/0	3/1	2/2	1/3	dull
meaningful	7/3	6/2	5/1	4/0	3/1	2/2	1/3	meaningless
necessary	7/3	6/2	5/1	4/0	3/1	2/2	1/3	unnecessary
pleasant	7/3	6/2	5/1	4/0	3/1	2/2	1/3	unpleasant
simple	1/3	2/2	3/1	4/0	5/1	6/2	7/3	complex
uninformative	1/3	2/2	3/1	4/0	5/1	6/2	7/3	informative
unrewarding	1/3	2/2	3/1	4/0	5/1	6/2	7/3	rewarding
unscholarly	1/3	2/2	3/1	4/0	5/1	6/2	7/3	scholarly
vague	1/3	2/2	3/1	4/0	5/1	6/2	7/3	precise
worthless	1/3	2/2	3/1	4/0	5/1	6/2	7/3	valuable

APPENDIX E

PANEL SUMMARY SHEET

PANEL SUMMARY SHEET

TOPIC:

DATE:

GRADE:

SUMMARY OF COMMENTS:

APPENDIX F

STATISTICAL FORMULAS FOR RELIABILITY ESTIMATES

Split-Halves Reliability Estimate

The SPSS computer program computed scattergrams and R_{oe} values for each test.

Spearman-Brown Formula

$$R_S = \frac{2\, r_{oe}}{1 + r_{oe}}$$

r_{oe} = correlation between odd and even item scores for each test

Cronbach's Coefficient Alpha

$$C_a = \frac{k}{k - 1} \left(\frac{\sigma_x^2 - \sum_{j=1}^{k} \sigma_{y_j}^2}{\sigma_x^2} \right)$$

where k = number of items (15)

σ_x^2 = variance of test

$\sum_{j=1}^{k} \sigma_{y_j}^2$ = sum of item variance for that test

C_a was calculated four times, one for each of the pre- and post-tests.

TABLE VII

SUMMARY OF RELIABILITY ESTIMATES

Concept	Test	Cronbach Alpha	Spearman-Brown
I	Pretest	.8595852	.8673817
	Post-test	.7610640	.8993027
II	Pretest	.8249745	.7734501
	Post-test	.8415045	.7607197

Note: A perfect positive correlation is 1.0

A score of .6 or higher is considered highly reliable

VITA [2]

Karon Lynette Cunningham

Candidate for the Degree of

Doctor of Education

Thesis: STUDENT ATTITUDES REGARDING THE USE OF PANEL PRESENTATIONS AND TWO METHODS OF GRADING THEM IN COLLEGIATE CONSUMER ISSUES CLASSES

Major Field: Business Education Minor Field: Higher Education

Biographical:

Personal Data: Born in Tuscon, Arizona, March 24, 1950, the daughter of Mr. and Mrs. Orville W. Cunningham.

Education: Graduated from Cooper High School, Abilene, Texas, in May, 1968; received the Bachelor of Science degree in Business Education and English from Hardin-Simmons University in May, 1972; attended Western Washington State College in Bellingham, Washington, during the spring quarter of 1972; received the Master of Education degree in Business Education from Southwestern Oklahoma State University in Weatherford, Oklahoma, in December, 1976; attended Western Oklahoma State College in Altus, Oklahoma, during the 1974-1975 school year; completed the requirements for the Doctor of Education degree at Oklahoma State University in May, 1979.

Professional Experience: Secretarial Assistant, Dean of Students, Hardin-Simmons University, 1968-1972; secondary English and music teacher, Samnorwood Rural School District, 1972-1973; secondary English teacher, Mangum Public Schools, 1973-1976; Teaching Assistant, College of Education, Southwestern Oklahoma State University, 1976; Adjunct Instructor, Division of Business Education and Division of Adult Education, Southwestern Oklahoma State University, 1977; Graduate Teaching Assistant, School of Business, Oklahoma State University, 1977-1978; Assistant Professor of Business Education/Office Administration, West Texas State University, 1979.

Professional Organizations: National Business Education Association, Mountain-Plains Business Education Association, Phi Delta Kappa, Delta Pi Epsilon, Kappa Delta Pi, Business and Professional Women.