A STUDY OF STUDENT ACHIEVEMENT AND ATTITUDE UTILIZING TWO METHODS OF TEACHING THE AMERICAN GOVERNMENT COURSE IN A METROPOLITAN JUNIOR COLLEGE

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By

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

STATEMENT OF THE PROBLEM

One of the most perplexing problems which confronts the college instructor of American government is how to make the voluminous course of study relevant to the individual student's immediate needs, and ultimately, to benefit him in his vocation or profession. This problem is particularly acute in the metropolitan junior colleges, where many students terminate their formal education after two years. Thus, faced with the dual responsibility of preparing the terminal student for immediate employment, and also providing the transfer student with a solid foundation for advanced work in the social sciences, the instructional mandate is paradoxically clear but complex. That is, the instructor must design his course so that the terminal student can see the relevance of the political process to his short-range goals, and, at the same time, the transfer student is given a theoretical perspective for advanced work in a four-year institution.

Statement of the Problem

The problem under consideration was a study of student achievement and attitude by utilizing two methods of teaching

the American government course in a metropolitan junior college.

Purposes of the Study

In order to effectively study this problem, the following purposes were formulated. First, this study was conducted to determine by specific, testable criterion measures, the value of employing a problem-oriented, multi-media course of study in American government, in contrast to the traditional, lecture and textbook-centered method. Second, this study was conducted to determine student attitude toward American government as a college course by comparing two methods of teaching the sophomore government course. Third, this study was conducted to determine student ability to think critically and reflectively by comparing two methods of teaching the sophomore government course. Fourth, this study was conducted to determine subject matter retention in sophomore American government students by comparing two methods of teaching the sophomore government course.

Hypotheses

This study was designed to test the following hypotheses:

1. Students taught by a problem-oriented, multi-sensory method will score significantly higher on the Sare-Sanders American Government Test than students taught by a lecture method.

2. Students taught by a problem-oriented, multi-sensory method of teaching will score significantly higher on the Hand Scale of Attitudes Toward American Government as a College Course than students taught by a lecture method.

3. Students taught by a problem-oriented, multi-sensory method will score significantly higher on the Watson-Glaser Critical Thinking Appraisal than students taught by a lecture method.

4. Students taught by a problem-oriented, multi-sensory method of teaching will make significantly higher grades in Government 201 than students taught by a lecture method.

5. The effects of a problem-oriented, multi-sensory method of teaching on achievement, as measured by the Sare-Sanders American Government Test, will not be dependent upon student ability.

6. The effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on attitude, as measured by the Hand Scale of Attitudes Toward American Government as a College Course, will not be dependent upon student ability.

7. The effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on critical thinking, as measured by the Watson-Glaser Critical Thinking Appraisal, will not be dependent upon student ability.

8. The effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on achievement, as measured by the student's grade in the course, will not be dependent upon student ability.

Background and Significance of the Study

This study had its genesis in the writings of authorities in junior college education, learning theory, and educational innovation. Sanford sounded the keynote for integrating subject matter with the development of students' personalities, when he concluded that the junior colleges' major concern was with the kind of learning that could bring about "a developmental change in the personality structure."[1] Moreover, Blocker, Plummer, and Richardson went to the crux of the problem of requiring American government by noting that an "institution must define the requirements and level of difficulty for various curricula in terms which are realistic for the ability level of the student attracted."[2]

With respect to what should be the topics of study in an American government class, which is problem-oriented,

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[1]Nevitt Sanford, editor, The American College: A Psychological and Social Interpretation of Higher Learning (New York, 1962), p. 425.

[2]Clyde E. Blocker, Robert H. Plummer and Richard C. Richardson, The Two-Year College: A Social Synthesis (Englewood Cliffs, 1965), p. 203.

Wilcox identified one hundred American Government topics for group study.[3] Plummer and Blocker narrowed the Wilcox study to thirty topics, which they concluded were more relevant to contemporary problems.[4]

Several investigators have attacked the traditional methods of teaching American Government. Tyler has emphasized that traditional methods may not be effective because many students are not equipped with the linguistic, quantitative, and conceptual skills required for advanced work.[5] Cole and Lewis concluded that "there must be a shift in emphasis from the tactics of teaching to the logistics of learning."[6] Finally, even though the junior colleges are theoretically committed to instructional change, in reality, the traditional methods remain intact. Johnson found from a survey of the instructional practices in ninety-five representative junior colleges that experimentation was negligible.[7]

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[3]Edward T. Wilcox, "The New Curriculum," Junior College Journal, XXXIII (February 1963), 16-18.

[4]Robert H. Plummer and Clyde E. Blocker, "A Unit on Metropolitan Problems," Social Education, XXXVII (May, 1963), 257-258.

[5]Ralph W. Tyler, "The Teaching Obligation," Junior College Journal, XXX (May, 1960), 525-533.

[6]Charles C. Cole and Lanora G. Lewis, Flexibility in the Undergraduate Curriculum: New Dimensions in Higher Education (Bloomington, 1961), p. 55.

[7]B. Lamar Johnson, Islands of Innovation, A Report of the UCLA Junior College Leadership Program (Los Angeles, 1964), p. 12.

Relative to the qualitative results of reflective thinking through group processes, the following investigators have provided an impetus for additional research. Bayles has carried out several reflective teaching experiments in social science methodology.[8] Massialas' studies have dealt with methodological theory, which supports reflective thinking in group dynamics.[9]

In the teaching of history, Elsmere proposed that the prime goal for history classes be defined in terms of the thinking citizen, and that reflective thinking be identified as the preferred method of inquiry, decision, and judgment for the citizen.[10] Such a goal would certainly be applicable to an American Government class.

Finally, Bloomfield applied the analysis of variance to the decisions made about school problems by discussion groups in thirteen classes of junior college government students. The analysis showed that potentially cohesive groups shifted their opinions more easily toward "yes" or "no" decisions.

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[8]Ernest E. Bayles, "Experiments with Reflective Teaching," Kansas Studies in Education, VI (April, 1956), 25-30.

[9]Byron G. Massialas, editor, "The Indiana Experiments in Inquiry: The Social Sciences," Bulletin of the School of Education, XXXIX (May, 1963), 45-55.

[10]Robert T. Elsmere, "An Experimental Study Utilizing the Problem-Solving Approach in Teaching United States History," unpublished doctoral dissertation, School of Education, Indiana University, Bloomington, Indiana, 1961, p. 13.

He concluded that "friendship groups will yield more polar decisions on problems."[11] The implications of this study for the present problem are twofold. First, groups ought to be organized for group study in a random manner. Second, the more heterogeneous the groups are, the smaller will be the probable distortion by the chance factors, and the greater likelihood that the findings would apply to similar groups.

Thus, other investigators have provided a theoretical, as well as practical background for further innovation in the teaching of the social sciences on the junior college level. The significance of this study emanated, however, from a broader socio-educational context than from merely formal educational research. From a teaching perspective, the explosive emergence of the two-year college into the educational milieu has precipitated, if not necessitated, innovative, imaginative, and creative teaching.

The overriding sociological and political characteristic of American life is one of non-involvement. This apathetic attitude, which is no respecter of any single race, color, or creed, is a tragic socio-political phenomenon for many obvious reasons. But, when political indifference is collectivized in the forms of non-voting,

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[11]Jack S. Bloomfield, "The Effects of Discussion Grouping Upon Shifts of Student Opinion: A Study To Determine the Effects of Discussion Grouping Upon the Shifts of Student Opinion on Selected Problems Posed to Junior College Students," unpublished doctoral dissertation, School of Education, New York University, New York, 1961, p. 130.

people who are misinformed or uninformed on the key political issues of the day, provincial attitudes, and naive, elementary conceptions of the intricacies of American Government, then the challenge of political education is imperative.

Specifically, a few revealing statistics substantiate the preceding indictment of non-involvement. In a recently conducted poll of junior college students, these cogent results placed the problem under consideration in clear focus.[12] First, of the two hundred students polled, which represented a cross-section of government, history, and sociology classes, seventy-seven people within this group were thirty years of age or older. These figures and others indicated that junior college students represent a wide range of ages, as well as socio-economic backgrounds and interests. Second, when asked the question, "How much interest do you have in government and politics?" one hundred and seventy-seven students responded with either a "fair amount" or "no interest." Third, one hundred and seventy-six students indicated that they would not be willing to contribute five dollars to the political party of their choice.

In short, the instructor of political science is faced with a widespread apathy, which is caused not only by this chronic problem of non-involvement, but by the legal fact

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[12]Unpublished poll, El Centro College of the Dallas County Junior College District, Dallas, Texas, May, 1968.

that, in Texas, American Government (six hours) is a required course for students pursuing the baccalaureate degree from an institution which receives state aid.[13]

Therefore, the Texas college student of sophomore government is a "captive student." This forced "captivity" gave additional impetus to design an experimental course that would produce a positive, constructive attitude toward government at all levels, recognizing that the student's initial reaction to the course is too often a negative one.

Thus, from a combined educational and social rationale, this study was committed to the improvement of the college teaching of American Government. By utilizing four sections of sophomore American Government in the experiment, this study sought to provide information concerning the value of using a problem-oriented, multi-media method of teaching. It was hoped that such information would be particularly beneficial to the instructor of the sophomore government course in both the two-year college and the university.

Definition of Terms

1. Problem-oriented method of teaching. A problem-oriented method of teaching is a method in which the classes are divided into groups, each of which probes a problem area,

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[13] Vernon's Annotated Revised Civil Statutes of Texas, Article 2636-1, Section 2, 1961, pp. 521-522.

and verbalizes his observations and conclusions at the end of the semester. This method of teaching is not to be confused with the case method, which is used in some government courses. The case method relies on case studies in political science, which are historical in nature, whereas the problem-oriented method of teaching relies on more contemporary issues in American government.

2. Multi-sensory (media) method of teaching. The multi-sensory (media) method of teaching involves the utilization of audio-visual materials such as films, filmstrips, tape recordings, and transparencies.

3. Dialogue method of teaching. The dialogue method of teaching involves student-teacher interaction through question and answer sessions.

4. Problem-media-dialogue method of teaching. This method of teaching is an integration of the three preceding methods for the purposes of this study.

5. Lecture method of teaching. As used in this study, a lecture method of teaching is an approach in which units of study are presented in an organized, structured manner by the instructor, with no visual or instructional aids other than the textbooks and a few governmental organization charts.

6. Government 201. This is the sophomore level course at El Centro College, an introduction to the study of political science and carries three semester hours credit.

The course focuses on four principal units of study: American Constitutions and federalizm, civil liberties and rights, political parties and voting behavior, and Texas Constitutions and political parties.

7. Level I ability (high). This level of ability includes those students who are in the first quarter of the distribution of available American College Testing scores at El Centro College during the fall semester of the 1968-1969 school year. Composite ACT scores of twenty or above constitute Level I ability.

8. Level II ability (medium). This level of ability includes those students who are in the second and third quarter of the distribution of available American College Testing scores at El Centro College during the fall semester of the 1968-1969 school year. Composite ACT scores of fifteen through nineteen constitute Level II ability.

9. Level III ability (low). This level of ability includes those students who are in the fourth quarter of the distribution of available American College Testing scores at El Centro College during the fall semester of the 1968-1969 school year. Composite ACT scores of fourteen or below constitute Level III ability.

Limitations of the Study

1. This study was limited to students enrolled in four sections of Government 201 at El Centro College of the Dallas County Junior College District during the fall semester of the 1968-1969 school year.

2. This study investigated the effectiveness of only one of several problem-media-dialogue methods of teaching.

3. This study was limited to the effects of two teaching methods on student achievement and attitude.

Basic Assumption

It was assumed that the four sections of Government 201 used in this study were representative of all sections of Government 201 taught at El Centro College of the Dallas County Junior College District.

Procedures for Collecting Data

In order to test the hypotheses and meet the educational need developed in the preceding discussion, students in four sections of Government 201 of El Centro College of the Dallas County Junior College District were used as subjects. Two sections were taught at 10:00 a. m., and two sections were taught at 1:00 p. m. Two sections, one of which was taught at 10:00 a. m. and another at 1:00 p. m., were designated the experimental group, and were taught by the problem-media-dialogue method. Two sections, one of which was taught at

10:00 a. m. and another at 1:00 p. m., were designated the control group, and were taught by the lecture method. Each class contained approximately thirty-five students, and used the same textbooks.

Two instructors, who were both familiar with the problem-media-dialogue and lecture methods, were involved in the study. The investigator and a fellow instructor taught one experimental and one control section respectively.

During registration, students were randomly assigned to the treatment groups. The ability of each subject was determined by the composite score of the American College Testing Program. The experimental and control groups studied the same course of study. The study was conducted during the entire fall semester, 1968.

During the final week of the fall semester, the Sare-Sanders American Government Test, the Watson-Glaser Critical Thinking Appraisal, and the Hand Scale of Attitudes Toward American Government as a College Course were administered to the control and experimental sections.

Procedures for Treating Data

All data were treated by a standard two-factor analysis of variance with treatment by levels. Three levels of ability were considered. Composite scores from the American College Testing Program were used to establish ability levels.

Hypotheses one, two, three, and four were tested by utilization of the F test of the significance of the main effects of the two major treatment variables. Hypotheses five, six, seven, and eight were treated by considering the significance of interaction effects occurring between the two major treatment variables, the problem-media-dialogue method of teaching, and high, medium, and low levels of ability.

For each test administered, scores from both classes taught by the problem-media-dialogue method were combined to form one group of scores. Similarly, scores from both classes taught by the lecture method were combined to form one group of scores. These two groups of scores were used to test the appropriate hypotheses.

Summary

The purpose of this chapter was to clearly state the problem and present the educational background and significance. The methodological framework for studying the problem was then revealed on the basis of certain purposes, hypotheses, limitations, and assumptions.

Chapter Two is a comprehensive survey of related research literature relevant to the problem under consideration.

CHAPTER II

SURVEY OF RELATED RESEARCH LITERATURE

Introduction

The purpose of this chapter is to present a comprehensive summary of research literature related to the problem-media-dialogue method of teaching in the social science field. Since the integrated problem-media-dialogue method is unique to this study, this chapter is also an attempt to provide a reference for any future research which might evolve from the present study.

The studies which are surveyed in this chapter represent formal institutional or dissertation investigations, and are not the personal biases or opinions of the investigators. This review of the literature is organized according to the following subdivisions: studies conducted in the junior and senior high school history classroom, studies conducted in the junior and senior high school government classroom, studies conducted in reflective thinking at the secondary school level, and studies conducted in the problem-oriented, multi-media, and dialogue methods of teaching at the college level.

Studies Conducted in the Junior and Senior High School History Classroom

Although many studies have been conducted on various aspects of the teaching of history at the secondary school level, the studies which are presented in this section represent cogent research on the improvement of the teaching of history.

Cottle[1] compared two classes of tenth grade world history students by teaching one class with a lecture method and an experimental class with a multi-media method. The students were tested for achievement, critical thinking, and attitude. These tests were used as pretests and posttests. The results were analyzed through the use of analysis of covariance. The multi-media method produced significantly greater gains in attitude and critical thinking, while the lecture method produced greater gains in achievement.

In four eighth grade social studies classes, Cousins[2] and a fellow instructor each taught one class through a method utilizing inquiry and reflection. Two additional

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[1]Eugene Cottle, "An Experiment Using World History Films with Selected Tenth Grade Pupils: Implications for the Improvement of Teaching with Motion Picture Films," unpublished doctoral dissertation, Southern Illinois University, 1960.

[2]Jack Edward Cousins, "The Development of Reflective Thinking in an Eighth Grade Social Studies Class," unpublished doctoral dissertation, Indiana University, 1962.

classes were taught by stressing factual information. In a posttest for achievement, the classes taught by a factual approach scored significantly lower than the classes taught by a reflective method. Thus, it was demonstrated that pupils can be taught to think reflectively without jeopardizing the accumulation of factual information.

King[3] surveyed experimental doctoral research in teaching secondary school social studies from 1941 through 1957. His survey showed that the problems approach to the teaching of the social studies can achieve subject matter objectives as well as or better than traditional methods. Furthermore, other goals such as critical thinking and attitudinal change may more readily be obtained through the problems approach.

The following studies were concerned with the inquiry method of teaching American History at the secondary school level. Cox[4] compared two classes of high school American History by teaching one class with a reflective method and another class with a lecture method. By means of a pretest and posttest, he found that the class taught by the reflective

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[3]James Howard King, "A Critical Analysis of Experimental Doctoral Research in Teaching Secondary School Social Studies, 1941-1957," unpublished doctoral dissertation, Indiana University, 1962.

[4]Charles Bernard Cox, "A Description and Appraisal of a Reflective Method of Teaching United States History," unpublished doctoral dissertation, Indiana University, 1961.

method scored significantly higher on achievement than students taught by the lecture method. Furthermore, he discovered that the environmental and substantive change produced by the reflective method was conducive to reflective thinking.

While the objective of developing the skills of reflective thinking is often found in lesson plans, the objective is less frequently found being pursued in practice. Fitch[5] attempted to put into practice reflective thinking in an experiment conducted at a high school in Bloomington, Indiana. By utilizing eight classes in the experiment, Fitch and a fellow instructor each taught four classes by the reflective or inquiry method and four classes by the lecture method. The results of the experiment showed that the four experimental classes scored significantly higher on a posttest for achievement than the four control classes. Moreover, he found that carefully selected source readings in American History would motivate slower students to think reflectively.

Glidden[6] probed the factors that influence achievement in senior high school American History. The purpose of his

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[5]Robert Marshall Fitch, "An Experiment in the Use of Source Readings from American History to Develop Selected Reflective Thinking Skills," unpublished doctoral dissertation, University of Iowa, 1966.

[6]George Walton Glidden, "Factors That Influence Achievement in Senior High School American History," unpublished doctoral dissertation, University of Nebraska, 1964.

study was to determine if differences in achievement in American History by selected school students are related to the individual characteristics of intelligence, critical thinking ability, reading level, reading speed, study habits and attitudes, socio-economic background, and self-concept discrepency.

At the end of the experiment, Glidden found that, for senior students, the variables of intelligence, critical thinking ability, reading speed, study habits, and attitudes had correlations with achievement in American History which were significant at the .01 level of confidence. His findings indicated that teachers can best assist students to improve their achievement in American History by greater emphasis upon a systematic and continuous development of reading skills, study habits, and attitudes.

The common practice of retaining traditional methods in teaching high school American History was studied by John[7]. By surveying a random selection of schools from a six county area in Texas, he found that there was a significant difference between the emphasis placed on the teaching practices by secondary teachers and the emphasis recommended for those same practices by national social

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[7]Douglas Odell John, "A Study of the Practices of American History Teachers in Selected Texas Secondary Schools," unpublished doctoral dissertation, North Texas State University, 1968.

studies specialists, college American History teachers, and college education teachers. His findings indicated that the secondary school American History teachers continue to emphasize the traditional or conventional practices.

In order to experiment with reflective and critical thinking through the problems approach in American History, Rothstein[8] utilized four classes of American History in a New York City high school. In a pretest and posttest of the Watson-Glaser Critical Thinking Appraisal, the students taught by a problems approach scored significantly higher than students taught by the traditional, lecture-discussion method. He found that students in the experimental classes were more prone to discuss the content of American History, thus revealing a higher degree of enthusiasm for the course.

Williamson[9] experimented with two methods of teaching the high school American History course in Arlington, Texas. Two teachers and one hundred and sixteen subjects were used in this study. Each teacher taught an experimental and a control class. Emphasis in the control group was upon as thorough a coverage of all periods and events in the history

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[8]Arnold Rothstein, "An Experiment in Developing Critical Thinking Through the Teaching of American History," unpublished doctoral dissertation, New York University, 1960.

[9]James Lonnie Williamson, "The Effectiveness of Two Approaches to the Teaching of High School American History," unpublished doctoral dissertation, North Texas State University, 1966.

of America as possible. The prime concern in the control group was to impart a body of factual knowledge relevant to American History as outlined by the textbook and the curriculum guide. This meant more time was spent on fewer topics in American History. The principal thrust of the materials in the experimental group was to provide teachers and students with enough material to pursue a topic in depth. The most significant conclusion of his study was

> When students are given the time to explore topics in depth, are allowed to form and test their own hypotheses about history, and are guided in arriving at their own generalizations about historical data, their attitudes toward the study of history become more positive.[10]

In an attempt to study how the history curriculum is related to society as a whole, Schecty[11] surveyed high school classes in American History in the state of Ohio. His principal finding was that those courses which utilized the problem-solving approach were doing a more effective job in engaging the students in the realities of the modern world. The primary contribution of this study to the field of social science teaching was that it added a sociological dimension to the psychological and philosophical framework which supports problem-solving approaches in high school

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[10] Ibid., p. 136.

[11] Phillips Carl Schecty, "High School History in a Mass Society," unpublished doctoral dissertation, Ohio State University, 1967.

history. In short, his findings supported the view that history can become a relevant, meaningful discipline to the student, if he is allowed to see its contribution to contemporary problems.

Studies Conducted in the Junior and Senior High School Government Classroom

Several incisive research studies have been conducted in the teaching-learning process in the government classroom at the secondary school level. The studies presented in this section give added impetus to even further research on how the teaching of government can be improved.

In an effort to involve students in the study and practice of American Government, some teachers utilize the student-centered approach. Elias[12] studied the merits of such an approach in an experiment conducted in ninth grade social studies. By comparing two classes, one of which was taught by a student-centered method and the other by a teacher-centered method, he arrived at the following findings, which are particularly useful in investigating the problem. Briefly stated, he found that neither the student-centered nor the teacher-centered method was more effective in enabling students to acquire subject matter or in developing

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[12]George Samuel Elias, "An Experimental Study of Teaching Methods in Ninth Grade Social Studies Classes (Civics)," unpublished doctoral dissertation, Boston University, 1958.

certain characteristics of democratic behavior, critical thinking, leadership, responsibility, and the ability to cooperate so that group goals may be achieved.

Several significant studies have dealt with the case study approach in the teaching of high school government. Estes[13] conducted a case study experiment in the study of the Bill of Rights at the high school level. His study involved three teachers and four hundred and twenty-four randomly enrolled twelfth-grade level students in a California senior high school. Teacher I, the researcher, utilized a version of the case-study method for a four-week unit on the Bill of Rights, featuring intense study and student reflection on actual Supreme Court cases. Teachers II and III utilized a "traditional" unit of study, featuring lectures and written assignments. It was found that the case-study method, as practiced by Teacher I, produced significantly higher tolerance scores and higher agreement with the Bill of Rights principles than did the "traditional" method practiced by Teachers II and III.

Holman[14] compared two classes of high school government by teaching one class with the case-study method and the

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[13]Jack Rogers Estes, "Friendship Patterns and Attitude Toward the United States Bill of Rights," unpublished doctoral dissertation, University of California at Los Angeles, 1966.

[14]Dorothy Jane Riggs Holman, "A Study and Analysis of the Case Method Approach of Teaching Government in the High School," unpublished doctoral dissertation, University of Kansas, 1966.

other class with the lecture approach. She found that the case-study method engaged the students' interest to a greater degree, as indicated by significantly higher scores on Remmers Attitude Scale, administered at the close of the semester.

In an effort to stimulate more interest in American Government at the eighth grade level, a study was conducted by Jones[15] in which two classes of eighth grade social studies were taught by the case-study method and two other classes were taught by the traditional, lecture-discussion method. He found from a questionnaire conducted at the conclusion of the semester, in which the experiment was conducted, that students indicated that the Bill of Rights has a practical significance when studied by the case method.

Keener[16] experimented with the problem of teaching students to think reflectively in a high school government class. By comparing four classes of the first semester course in American Government, two of which were taught by the dialogue method and two by the lecture method, he found that students taught by the dialogue method scored

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[15]William Earl Jones, "An Investigation of the Case Method of Instruction in Selected Eighth Grade Civics Classes," unpublished doctoral dissertation, University of California, 1965.

[16]Carol Hamilton Keener, "An Experiment in A Reflective Method of Teaching Government in High School," unpublished doctoral dissertation, University of Pennsylvania, 1965.

significantly higher on the Watson-Glaser Critical Thinking Appraisal administered at the close of the semester.

The problems approach to the teaching of high school government has received very little attention in formal research. Leinwand,[17] however, conducted an experimental problems class in high school government. He found that, by studying current problems in American government, students not only showed more interest in the course, but also demonstrated more anxiety about tests and course grades.

Public controversy which is timely and relevant to students' interest can be another technique for motivating students. Shiver and Oliver[18] conducted a pilot study for curriculum improvement in the civics courses of selected Detroit, Michigan, public high schools. They found that when students became involved through interviews and polling of participants in such controversies as urban renewal and civil rights, the students reflected more interest in American government as an academic discipline.

One of the inherent problems in teaching American government with a problems approach is the lack of suitable

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[17]Gerald Leinwand, "A Course in Problems of American Democracy," Social Education, XXVII (February, 1963), pp. 81-82.

[18]James P. Shiver and Donald W. Oliver, "Teaching Students to Analyze Public Controversy: A Curriculum Project Report," Social Education, XXVIII (April, 1964), pp. 191-195.

textbooks which combine problems with structured material. Smith[19] surveyed twenty leading textbooks in high school American government and found that the more recent textbooks emphasize the application of political science as a discipline to practical problems. This is an encouraging trend at the secondary level, but a survey of college textbooks revealed that the discipline of political science is emphasized over practical problems.[20]

When textbooks do not provide the appropriate material for experimentation in the teaching of government, an instructor is often forced to produce his own materials. Zinkel[21] devised materials and teaching strategy which emphasized the development and enhancement of skills necessary for reflective thinking, as well as skills necessary for the process of valuation. His experimental group involved second semester seniors who had registered for the one-semester course

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[19]Ronald Othaniel Smith, "An Evaluation of Secondary School Social Studies Textbooks in Problem Courses, Civics, and Government as to Their Treatment of the Modes of Inquiry Used for the Advancement of Knowledge in the Discipline of Political Science," unpublished doctoral dissertation, University of Oregon, 1966.

[20]Ibid.

[21]Calvin Douglas Zinkel, "The Development of an Experimental Course in Comparative Governments on the Secondary Level Emphasizing a Reflective Learning Approach and a Process of Valuation," unpublished doctoral dissertation, Colorado State College, 1968.

entitled "Comparative Governments." The class examined civil rights, social values, political attitudes, and beliefs. Emphasis was placed upon the process of reflective level learning and valuation as well as on course content. He found that reflective level learning does not guarantee instant success. Indeed, reflective learning created initial insecurity and perplexity within students because it was such a radical departure from the traditional classroom learning approach.

One of the more innovative techniques in the teaching of American government has been the utilization of television, whereby a larger audience can be reached. The educational soundness of such an approach, when evaluated from a student-oriented perspective, is often questioned. The principal thesis of Jantzen's[22] study was that television does not involve the students in the dynamics of American government. Furthermore, his study was designed to determine the effectiveness of television teaching of American government in high school, as compared to utilizing conventional instructional practices. The subjects were one hundred and sixty-five senior high school students

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[22]Victor Warren Jantzen, "The Effectiveness of Television Teaching of American Government Compared with Regular Classes in Wichita High School (South)," unpublished doctoral dissertation, University of Oklahoma, 1963.

regularly enrolled in American government during the spring semester of the 1961-1962 school year. Individual unit tests and posttests were administered to measure the overall gains in academic social studies achievement for the groups in the study, as well as specific achievement in American government.

Jantzen found that television teaching did not prove to be superior when the overall achievement was compared with that of the regular classes taught by conventional instructional procedures. He also concluded that television teaching did not prove to be superior when achievement was compared with that of the regular classes taught by conventional instructional procedures on any of the five individual units taught in American government. Finally, he found that the conventional classroom method proved to be superior in the teaching of two units on National and Local Government.

The following studies demonstrate how the discipline of education and political science can complement each other in the teaching of American government. Bruner[23] maintains that the structure of the various intellectual disciplines

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[23]Jerome Bruner, The Process of Education (Cambridge, 1960).

should form the framework for the elementary and secondary school curriculum.

The Kirkpatricks gave support to the Bruner thesis when they argued that

> One of the most important responsibilities of the secondary school teacher is to inform students about the existence of a field of inquiry into government and politics and to give them some indication of the complexity and difficulty of many public problems . . .[24]

Moreover, long declared that education in the social studies has a threefold objective: "acquainting students with factual knowledge and a means of ordering it, imparting an understanding of the methods of inquiry, and imparting an appreciation of values."[25]

In the final analysis, however, the preceding research studies on the innovative practices in the teaching of government support the conclusion of Cleary and Riddle:

> The main ideas of the political science discipline might form the framework for study, but the overall purpose of social studies education is not to acquaint young people with the existence of various disciplines such as political science. Rather, within the framework of a cultivation of the intellect, the purpose of political studies is to acquaint young people with an understanding of the nature of government and its method of operation.[26]

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[24]Byron M. and Jeane J. Kirkpatrick, High School Social Studies Perspectives (Boston, 1962), p. 122.

[25]Norton E. Long, "Political Science," The Social Studies and the Social Sciences (New York, 1962), p. 97.

[26]Robert E. Cleary and Donald H. Riddle, "Political Science in the Social Studies," Political Science in the Social Studies, Thirty-sixth yearbook of the National Council for the Social Studies (Washington, 1966), p. 10.

This preceding conclusion should not be interpreted to the extent that the methodology of the political scientist should be ignored in the government classroom of the secondary school. As an example, Casteel[27] has successfully utilized such political science methods as the generic, descriptive, analytical, case-study, and survey in high school government classes.

Studies Conducted in Reflective Thinking at the Secondary School Level

The reflective method of teaching the social studies at the secondary school level had its genesis in the writings of Dewey,[28] who advocated the reflective method at all grade levels. Modern writers, such as Hullfish and Smith,[29] have argued that reflective thinking is the most effective method for developing not only new knowledge, but also for shaping attitudes, habits, and learning skills.

Perhaps one of the most comprehensive and significant studies concerning reflective inquiry for the social studies instructor was conducted by Griffin.[30] His study addressed

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[27]Doyle Casteel, "Using the Methods of the Political Scientist in the Social Studies Classroom," Peabody Journal of Education, XL (January, 1963), pp. 219-227.

[28]John Dewey, How We Think (Boston, 1933), p. 5.

[29]H. G. Hullfish and P. Smith, Reflective Thinking: The Method of Education (New York, 1961), p. 10.

[30]A. F. Griffin, "A Philosophical Approach to the Subject-Matter Preparation of Teachers of History," unpublished doctoral dissertation, Ohio State University, 1942.

itself to the analysis of student beliefs and how new concepts are learned. By teaching with the reflective method, he found that students became more conscious of their attitudes, what they mean, and their interrelationships.

Because Griffin's study is concerned with concepts and how they are taught and learned, it is significant to note subsequent studies which have supported his findings. Bruner[31] has emphasized that concept formation and attainment are the basis for all thinking and cognition. Furthermore, Smith[32] has found that whether the instructor is teaching an understanding, appreciation, skill, attitude, explanation, description, interpretation, definition, or valuation, his task is largely conceptual in nature.

Bayles[33] has indicated in his theoretical writings a grasp of the reflective method. He reported on six studies completed during the period of 1940 to 1953 which were intended to test the effects of reflection. Of these six studies, all master's theses written under Bayles' direction, three dealt with American History, one with American Government, one with fifth grade social studies, and one with sixth

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[31]Bruner, The Process of Education, p. 12.

[32]B. O. Smith, A Study of the Logic of Teaching (Urbana,

[33]Bayles, "Experiments with Reflective Teaching," Kansas Studies in Education, VI, p. 30.

grade social studies. In all the studies reported by Bayles, the students in experimentally taught classes scored higher on achievement tests than the students around the nation who were presumably taught by less reflective methods.

Another empirical investigation of a reflective method of teaching social studies on the secondary level was the Stanford Social Education Study conducted by Quillen and Hanna.[34] Three approaches to teaching American History were compared--the chronological, topical, and problem-solving methods. According to Quillen and Hanna, there are two essential characteristics of a problem, which are, "First it is an area of concern producing tensions which can be resolved only by solution of the problem, and second, it involves the choice of a course of action from among two or more possible solutions."[35]

The Stanford Study found that the problem approach, although not clearly superior to the chronological approach, was better than the topical approach in fostering such outcomes as critical thinking, good study habits, work skills, knowledge and understanding of the subject, knowledge of contemporary affairs, and consistency of attitudes.

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[34] I. J. Quillen and Lavone Hanna, Education for Social Competence (Chicago, 1948), p. 55.

[35] Ibid., p. 126.

Kight and Mickelson[36] studied twenty-four teachers and their one thousand four hundred and fifteen students in English composition, English literature, science, and social studies classes. Their study investigated the differing effects of problem-solving and subject-centered instruction upon the learning of factual information, and the connecting of specific facts with their corresponding rules of action. They found that students learned more factual information in problem-centered units.

Studies Conducted in the Problem, Media, and Dialogue Methods at the College Level

When compared to the formal research in social studies teaching at the secondary school level, there is a paucity of information on the improvement of the college teaching of the social sciences. Several studies, however, have been completed on various aspects of the problem-oriented, multi-media, and dialogue methods in college teaching. Within the discipline of political science, Connery's[37] study on the merits of the case-study method in the introductory American Government course is one of the more innovative approaches offered by a political scientist.

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[36]S. S. Kight and J. M. Mickelson, "Problem vs. Subject," Clearing House, XXIV (July, 1949), pp. 3-7.

[37]Robert H. Connery, Teaching Political Science (Durham, 1963).

Garrison[38] studied the type of students attracted to the survey course in American government, as compared to those students enrolled in an Introduction to Political Science course. The purpose of his study was to determine the impact of the political science course on the development of knowledge, values, and feelings of the students toward the political system. He found that the basic political science course did not seem to be a threat to innovation or conflict with other sources of political socialization. However, the general survey course in American government, which was devoted to a description of the American political process, attracted a lower middle class student who had a spectator orientation toward the course.

Some significant studies have been conducted in improving the introductory social science course on the freshmen and sophomore level. Chausow[39] developed an experimental social science course at the Chicago Junior College in which students were organized into groups for problem study and

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[38]Charles Lloyd Garrison, "The Introductory Political Science Course as an Agent of Political Socialization," unpublished doctoral dissertation, University of Oregon, 1966.

[39]Hymen Chausow, "The Organization of Learning Experiences to Achieve More Effective the Objective of Critical Thinking in the General Social Science Course at the Junior College Level," unpublished doctoral dissertation, University of Chicago, 1955.

subsequently exposed to multi-media presentations. He found significant gains on pretests and posttests of the Watson-Glaser Critical Thinking Appraisal in the experimental group as compared to a control group taught by the traditional, lecture-discussion method.

Dowd[40] conducted an experimental summer course in economics, which was presented to fifty-three freshmen students at Cornell University. The six-week course entailed lectures and discussions. Once a week the entire class was broken into small groups that would meet with a section instructor or lecturer to discuss a specific reading. At least once a week, a film relevant to the course was presented and discussed. The students and staff examined one question in depth, in opposition to the traditional method of presenting material in an introductory course. Instructors from disciplines other than economics delivered lectures that attempted to tie their own disciplines to the special question of the course, which was "Why are there poor people in a rich society like the United States?" The program proved quite successful, as evidenced in the forms of essays prepared by the students and recorded statements of the students made at the beginning and at the end of the course.

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[40]Douglas Franklin Dowd and staff, Development of a New Approach to Teaching Introductory Social Science in College (Ithaca, 1966).

In each of the three quarters of the 1960-1961 school year at the University of Minnesota, McGarry[41] experimented in the teaching of the introductory social science course. The experimental group was taught exclusively with the dialogue, multi-media method. When compared to the control group, which was taught by the lecture method, the experimental group consistently demonstrated greater gains in achievement and critical thinking than did the control group.

One of the principal concerns of college teaching lies in the overuse of the lecture method of instruction. The habitual use of the lecture may cause students to lose interest in the course, as Williams[42] found in a longitudinal study of selected students in government and history at the University of Chicago. By comparing students' letter grades and scores on attitudinal scales, he found that those students who were taught in classes where the instructional methods were varied, scored significantly higher than students taught in teacher-centered, lecture-oriented classes of the same courses in American government and history.

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[41]Eugene Lawrence McGarry, "An Experiment in the Teaching of Reflective Thinking in the Social Studies," unpublished doctoral dissertation, University of Iowa, 1961.

[42]Jay Coler Williams, Jr., "Diversity in Method and Principle in the Social Sciences as a Factor in the Course Study in the Social Sciences at the Collegiate Level," unpublished doctoral dissertation, University of Chicago, 1956.

Numerous studies have been conducted by comparing the lecture method with the discussion method of teaching on the college level. Barnard[43] compared the effectiveness of a lecture-demonstration teaching method with that of a problem-solving developmental discussion in a college science course. In this experiment, the lecture-demonstration method proved superior on a test of specific information, but the discussion method proved to be superior on measures of problem-solving and scientific attitude.

Dawson[44] also found problem-solving recitation and lecture-demonstration methods to be equally effective in a course in elementary soil science, as measured by a test of recall of specific information, but the problem-solving method was significantly superior, as measured by tests of problem-solving abilities. In addition, Elliot[45] found that students in his discussion groups in elementary psychology became more interested in electing additional courses in psychology than did students in a large lecture class.

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[43] J. D. Barnard, "The Lecture-Demonstration Versus the Problem-Solving Method of Teaching a College Science Course," Science Education, XXVI (July, 1942), pp. 121-132.

[44] M. D. Dawson, "Lectures Versus Problem-Solving in Teaching Elementary Soil Sections," Science Education, XL (August, 1956), pp. 395-404.

[45] P. N. Elliot, "Characteristics and Relationships of Various Criteria of College and University Teaching," Purdue University Studies in Higher Education, LXX (Fall, 1950), pp. 5-61.

DiVesta's[46] study of a human relations course tended to favor a discussion method over the lecture method in improving scores on a leadership test. Weaver and Casey[47] also found no significant differences in knowledge of content between two psychology classes, one of which was taught by a lecture method and another by small-group discussions. However, superior attitudes, as measured by the Minnesota Teacher Attitude Inventory, were found for the class taught by the small-group discussion method.

In an attempt to teach critical thinking in a freshman psychology course, Lyle[48] compared a problem-oriented method to a conventional, lecture method. He found that the conventional group was superior to the problem-oriented group in achievement. Gains in critical thinking were not greater in the problem-centered classes. When students were asked to write a question for the final examination, the conventional group wrote "factual" questions and the problem-centered group wrote "thought" questions.

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[46]F. J. DiVesta, "Instructor-Centered and Student-Centered Approaches in Teaching a Human Relations Course," Journal of Applied Psychology, XXXVIII (August, 1954), pp. 329-335.

[47]B. E. Weaver and J. E. Casey, "An Evaluation of Lecture Method and Small Group Method of Teaching in Terms of Knowledge of Content, Teacher Attitude, and Social Status," Journal of the Colorado-Wyoming Academy of Science, IV (June, 1956), pp. 54-71.

[48]Ernest Lyle, "An Exploration in the Teaching of Critical Thinking in General Psychology," Journal of Educational Research, LII (January, 1958), pp. 129-133.

At the University of Chicago, Bloom[49] used recordings of classes to stimulate students to recall their thoughts during class. As predicted, he found that discussion did stimulate more active thinking than did lecture classes. Ruja,[50] however, found that the lecture was superior to discussion as measured by a test of subject matter mastery in a general psychology course. McKeachie and Hiller's[51] experiment in the problem-solving method versus the lecture method supported Ruja's findings. Similarly, in comparing a "teamwork" class using group incentives with a lecture class, Smith[52] found no differences in achievement in general psychology in classes taught by group discussion as compared to the lecture method.

Some significant research studies on the utilization of multi-media aids are relevant to the problem under consideration. Vandermeer[53] found that students can learn

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[49]B. S. Bloom, "Thought Processes in Lectures and Discussions," Journal of General Education, VII (May, 1953), pp. 160-169.

[50]H. Ruja, "Outcomes of Lecture and Discussion Procedures in Three College Courses," Journal of Experimental Education, XXII (November, 1954), pp. 385-394.

[51]W. J. McKeachie and Warren Hiller, "The Problem-Oriented Approach to Teaching Psychology," Journal of Educational Research, XVL (September, 1954), pp. 224-232.

[52]H. C. Smith, "Team Work in the College Class," Journal of Educational Psychology, XVIL (December, 1955), pp. 274-286.

[53]A. W. Vandermeer, "Relative Effectiveness of Instruction by Films Exclusively, Films Plus Study Guides, and Standard Lecture Methods," Report of the Pennsylvania State University Instructional Film Program, No. SDC 269-7-13 (Port Washington, New York, 1950).

from films and usually do learn at least as much as from a poor teacher. Further, Hoban and VanOrmer[54] emphasized that such learning is not confined to details, but may include concepts and attitudes.

May and Lumsdaine[55] found that films were superior in stimulating new concepts. Moreover, Kopstein and Roshal[56] concluded that audio-visual devices were more effective in learning a foreign language. Finally, Hovland, Lumsdaine, and Sheffield[57] found that learning from films increases motivation in students.

Summary

The purpose of this chapter was to present a comprehensive summary of research related to problem-oriented, multi-media, and dialogue methods of teaching. The studies which were presented were organized according to grade levels and subject matter orientation.

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[54]C. F. Hoban, Jr., and E. B. VanOrmer, "Instructional Film Research, 1918-1950," Report of the Pennsylvania State University Instructional Film Research Program, No. SDC 269-7-19 (Port Washington, New York, 1950).

[55]M. A. May and A. A. Lumsdaine, Learning from Films (New Haven, 1958).

[56]F. F. Kopstein and S. M. Roshal, "Learning Foreign Vocabulary from Pictures Versus Words," American Psychologist, IX (June, 1954), pp. 407-448.

[57]C. I. Hovland, A. A. Lumsdaine, and F. D. Sheffield, Experiments in Mass Communication (Princeton, 1949).

In the first section nine studies were presented which, although differing in subjects and experimental designs, were essentially unanimous in their calling for more inquiry-oriented teaching in the secondary history classroom. Even though experimentation in teaching methods often produces attitudinal changes, there is some question whether greater achievement in the subject matter takes place. A final study called for more experimentation in the teaching of secondary school history in order that a broader social dimension may be added to the study of the subject.

In the second section ten studies on innovation in the teaching of American Government at the secondary school level emphasized that more student involvement through case studies, problems, and multi-media presentations could produce a more positive attitude toward government as a process and dynamic system. However, one study indicated that television teaching of government was not the answer to greater achievement in the study of local or national government. Regardless of the method utilized, it was concluded that the discipline of political science should serve as a methodological guide, and not be emphasized at the expense of overlooking the civic education of secondary school students.

A group of five studies was presented in the section on the values of reflective teaching at the secondary school level. In each of the investigations surveyed, the reflective

method was found to be superior to the lecture method in obtaining better results in critical thinking and problem-solving.

Finally, in the fourth section nineteen studies were presented on various investigations of the problem-media-dialogue method at the college level. Even though the studies were not unanimous in an absolute endorsement of the problem-solving or multi-media approach, the general consensus was that diversity in college teaching methodology results in more active learning, as opposed to the passive teaching-learning process of the lecture method.

CHAPTER III

EXPERIMENTAL DESIGN AND PROCEDURES

Introduction

After reading the research literature relevant to the problem under consideration, it was evident that there still existed a need for more experimentation in the improvement of teaching the social sciences at the college level. In order to integrate the problem-solving, multimedia, and dialogue methods, and also to compare this fused method with the traditional lecture-discussion method, an experimental study was conducted. The purpose of this study was to ascertain the value, as determined by student achievement and attitude, of incorporating the problem-media-dialogue method in an American government course for transfer and terminal students at the junior college level.

The purpose of this chapter is to describe the experimental study which was conducted. This chapter is divided into the following subsections: the setting of the study, the experimental design used in the study, a comparison of the teaching methods, and the tests utilized to evaluate the relative effectiveness of the two teaching methods.

The Setting of the Study

The purpose of this section is to describe the school at which the experiment was conducted, the subjects used in the experiment, and the course of study in which the subjects were enrolled. This experimental study was conducted during the fall semester of the 1968-1969 school year at El Centro College of the Dallas County Junior College District, Dallas, Texas.

With a 1965 population of approximately 810,000, Dallas is the hub of a four county metropolitan population of 1,319,000.[1] Dallas has become the commercial and financial center of the Southwest. The city is first in bank debits and deposits and manufacturing employment, and second only to Los Angeles, California in number of employees in such industries as electronics and aerospace materials.[2]

With an ever-increasing demand to provide low cost education for the first two years of college, the Dallas County Junior College District was created by a referendum election of the qualified voters of the county in May, 1965. El Centro College, the first campus in a seven-campus district, opened its doors in September, 1966. The college is located in downtown Dallas and is accessible to students from all parts of Dallas County. With an open door policy

for high school graduates or people who have achieved the equivalent of a high school education, El Centro College has a current enrollment of seven thousand full time equivalent students.

The curricula of El Centro College are designed to serve, first, the needs of those who are seeking the first two years of academic study leading to a bachelor's degree, and second, the needs of those preparing for careers in vocational and technical fields. In addition, the college exists to serve those adults who need additional training for advancement in their present fields or retraining for employment in new fields. A community service program also offers a comprehensive list of courses in cultural and civic subjects.

The subjects for the study were students enrolled in four sections of Government 201 taught at El Centro College during the fall semester of the 1968-1969 school year. Government 201 is a required course for Texas college students who are pursuing a bachelor's degree from a state-supported institution. The course is designed to serve as an introduction to the study of American government, origin and development of the United States Constitution, federal-state and interstate relations, civil liberties and rights, and

the dynamics of politics. Special emphasis is also given to Texas Constitutions, political parties, and local government in Texas.

The Experimental Design

The purpose of this section is to present the design of the experiment and to explain the procedure utilized in testing the hypotheses presented in Chapter I. This experiment was designed to conform to a three by two factorial model. The two independent variables were method of teaching and level of ability. The dependent variables were student achievement, critical thinking, and attitude.

In order to analyze the data of this experiment, three levels of ability were considered. The level of ability was determined by the composite score made by the individual student on the American College Testing Program. On the basis of four hundred and ninety available ACT scores, it was determined by the registrar of El Centro College that those students whose scores were twenty or above were in the first quarter of the distribution. Those students whose scores were fifteen through nineteen were in the second and third quarter, and those students whose scores were fourteen or below were in the fourth quarter of the distribution. As a result, Level I consisted of all subjects with a composite score on the American College Testing Program of twenty or

above. Level II consisted of all subjects with a composite score of nineteen through fifteen and Level III consisted of all subjects with a composite score of fourteen and below. In the final analysis of data only the criterion scores of those students enrolled in the four sections of Government 201 utilized in the study and for whom scores on the American College Testing Program were available were used.

For statistical purposes it was necessary to divide the students enrolled in the four sections of Government 201 through a random process. This grouping procedure was accomplished during the registration procedure at the start of the fall semester of the 1968-1969 school year. The names of five hundred and fifty students who met the prerequisite of sophomore standing, and had indicated on preregistration forms their desire to enroll in Government 201 were collected into one group. This total group was then subdivided into, first, those students who had indicated a preference for the 10:00 a. m. sections, second, those students who had indicated a preference for a 1:00 p. m. section, and third, those students who selected other time periods. The names of the instructors were not listed in the class schedules. Hence, the students were not choosing a section because of the instructor who had been assigned to that section. On the basis of the total number of students who preferred the 10:00 a. m. sections and the total number

of students who preferred the 1:00 p. m. sections, the two instructors divided the students into the four sections, two at 10:00 a. m. and two at 1:00 p. m.

This grouping process was implemented as follows: (1) Instructor I drew a name from a box which contained the names of those students who wanted a 10:00 a. m. section, and placed this name in the 10:00 a. m. problem-media-dialogue (experimental) section; (2) Instructor II then drew a name from the 10:00 a. m. box and placed that student in the 10:00 a. m. lecture (control) section; (3) after alternately filling the two 10:00 a. m. sections, the same procedure was applied to the 1:00 p. m. sections with Instructor I drawing a name from a box which contained the 1:00 p. m. students, and placing that student in the 1:00 p. m. lecture (control) section; (4) Instructor II then drew a name from the 1:00 p. m. box and placed that student in the 1:00 p. m. problem-media-dialogue (experimental) section. This process resulted in a distribution of subjects as indicated in Table I.

TABLE 1

DISTRIBUTION OF SUBJECTS AT THE BEGINNING OF THE EXPERIMENT (N = 149)

ACT	Subject Distribution by Time Period	
Composite Score	10:00 a. m.	1:00 p. m.
20 and Above	34	27
15 through 19	24	27
14 and Below	12	12
No score	7	6
Total	77	72

In the final analysis of data, seventeen students were dropped from the rolls of the four sections of Government 201 and composite ACT scores were not available for thirteen of the students. Both of these factors caused a reduction in the total number of subjects at the conclusion of the experiment, as represented in Table II.

Two methods of teaching were utilized for the method of teaching variable. One method of teaching was referred to as the lecture method. The second method of teaching was the integrated problem-media-dialogue method. Of the four sections of Government 201 utilized in the study, two

TABLE II

DISTRIBUTION OF SUBJECTS USED IN THE EXPERIMENT (N = 119)

ACT Composite Score	Number of Subjects in Each Section	
	10:00 a. m. Instructor I Experimental	10:00 a. m. Instructor II Control
20 and Above	21	9
15 through 19	12	11
14 and Below	2	5
Total	35	25
	1:00 p. m. Instructor I Control	1:00 p. m. Instructor II Experimental
20 and Above	16	11
15 through 19	11	15
14 and Below	3	3
Total	30	29

sections were taught by the lecture method and two were taught by the problem-media-dialogue method. A lecture method class and a problem-media-dialogue method class were taught from 10:00 a. m. to 10:50 a. m. on Monday,

Wednesday, and Friday during each week of the fall semester of the 1968-1969 school year. Similarly, a lecture method class and a problem-media-dialogue method class were taught from 1:00 p. m. to 1:50 p. m. every Monday, Wednesday, and Friday for each week of the fall semester. In order to balance the effect of the instructor upon student achievement, critical thinking, and attitude, the two instructors who were involved in the experiment flipped a coin to determine which instructor would teach an experimental class at 10:00 a. m. and a control class at 1:00 p. m. As a result, Instructor I taught an experimental class at 10:00 a. m. and a control class at 1:00 p. m. Conversely, Instructor II taught a control class at 10:00 a. m. and an experimental class at 1:00 p. m.

The two instructors involved in teaching the four sections were full time government instructors of the Social Science Division of El Centro College. Furthermore, each instructor was the holder of a master's degree and had two years of college teaching experience.

In order to determine the relative effectiveness of the two teaching methods employed in this study, four criterion measures were used to treat the dependent variables of student achievement, critical thinking, and attitude. Student achievement was measured by two instruments. One was the Sare-Sanders

American Government Test, Form A, and was administered on January 13, 1969. The second was a composite of four teacher-made tests, which were administered on October 11, 1968, November 1, 1968, November 27, 1968, and January 17, 1969, respectively. Student attitude was measured by Hand's Scale of Attitudes Toward American Government as a College Course and was administered on January 13, 1969. Critical thinking was measured by the Watson-Glaser Critical Thinking Appraisal, Form YM, which was administered on January 15, 1969. These instruments are described in more detail in a later section of this chapter.

The Teaching Methods

Introduction

The two teaching methods utilized in this study were in some respects similar, but differed in classroom techniques and manner of presentation. There were two basic similarities in the teaching methods. First, the same subject matter was presented on the same days to both the control and experimental classes. Second, the behavioral objectives of the course were the same in the control and experimental sections. That is, both instructors involved in the study utilized the same course syllabi and content outlines, which were designed to reach the same objectives. Aside from teacher personality

differences, the students in the four sections of Government 201 received the same course of study. The students in both the control and experimental sections studied the same textbooks.

The basic difference in the two teaching methods was that the problem-media-dialogue method relied on an inductive learning process, while the lecture method was oriented toward deductive learning. Students in the experimental sections were inductively led to the concepts and principles of government by one of three techniques: a dialogue session, a multi-media presentation, and through a small-group study of a problem in American government.

The Problem-Media-Dialogue Method of Teaching

The problem-media-dialogue method of teaching was based on the premise that students must be interested in American government and the political process in order to be effectively educated in the basic principles of American government. Since Government 201 is a required course, the common finding is that a majority of students exhibit apathy toward the subject. Thus, the first step in the problem-media-dialogue method was to stimulate interest in American government by discussing current topics and problems of government which were relevant to the students' needs and interests. Four

current and relevant problems were screened from a random list which the students in the two experimental sections of Government 201 and the two instructors discussed as possible topics for study during the semester. The four problem areas are presented in Appendix A and described in more detain in Appendix B.

In order that students could become personally involved with each other and the American political process, the experimental classes were divided into four groups for the purpose of studying the problem areas throughout the semester. A chairman and recorder were selected for each group. During the final two weeks of the semester, the four groups discussed their problem areas in the form of panel presentations. The group panels, which were moderated by the chairmen, presented their material before the entire class. This procedure allowed the panels to communicate and articulate ideas on the basis of a peer relationship. Grades were not assigned for the panel presentations, in an attempt to allow the groups to function in an environment which was free of the psychological threat of failure.

After the student became involved in the problems of American Government, then the instructor attempted to perpetuate this involvement through multi-media presentations and dialogue sessions. The multi-media presentations, as

utilized in this study, were in three forms. First, two classifications of sixteen-millimeter films were shown. Documentary films constituted the first classification of film presentations. For example, in order to further stimulate interest in a topic such as the presidential election process, the documentary film of Theodore H. White's book, The Making of the President, 1960, was shown to the experimental sections. A second classification consisted of lecture films in which distinguished professors of political science demonstrated basic principles of American Government by the use of charts and graphs within their filmed lectures. As an example, Professor Alfred de Grazia, a noted authority on political parties and voting behavior, presented the basic organizational structure and functions of the two-party system in a film entitled Political Parties in Action.

Each film shown to the experimental classes was preceded by an introduction that included the salient points stressed in the film. After the film was shown, students were asked to verbalize the major ideas presented in the film. The students were also instructed to raise additional questions about unclear concepts which the film did not adequately explain.

Transparencies, which were projected onto mounted screens by the use of overhead projectors, were the second

kind of multi-media presentation for the experimental classes. The use of the overhead projector allowed the instructor to conduct a dialogue session with the class while the major ideas of the lesson were visually presented by means of the transparencies.

Finally, the third multi-media technique involved the utilization of audio-tutorial tapes. The tape presentations were live interviews with leading personalities in American political life who gave their views on various topics. As an example, when a class was studying the urban crisis, the students listened to a tape by the late Senator Robert F. Kennedy entitled Cities: Pressure Points in Our Society. The students were instructed to write down the major points of the taped presentations. These points were then discussed in class during dialogue sessions.

The dialogue portion of this integrated method emanated from case studies which were written by both scholars and practitioners of government. After a reading was assigned, the students were to come to class prepared to reflect on the major ideas presented by the author. This technique was intended to develop critical thinking by the students, as both instructor and student discussed the author's ideas, and either accepted or rejected his thesis on the basis of logical reasoning.

The Lecture Method of Teaching

The lecture method of teaching, which is established as the traditional approach to teaching at the college level, was utilized in the control sections. The lecture was oriented around a monologue delivered at each class session by the instructor. Questions were not elicited from the students during the lecture, but time was reserved at the end of each class session for students to raise questions on the lecture for that day.

In essence, the lecture method involved, first, the writing of a brief topical outline of the lecture on the blackboard by the instructor. Second, the lecture followed the outline in the form of authoritative statements on the principles of American government. These statements were supported by references to authorities in the field of political science. In addition, verbal examples were furnished to support the principles of government.

For the purpose of coordinating the two teaching methods in this study, forty-three instructional lectures were prepared for the control classes. The lectures followed the preceding format. Appendices B and C attempt to contrast the problem-media-dialogue method with the lecture method on a daily lesson basis.

The Testing Program

In order to compare the relative effectiveness of the two teaching methods, a testing program was devised to measure student achievement, critical thinking ability, and attitude. Since the American College Testing Program (ACT) was used to establish ability levels, a brief description of the program is also included. The following sections explain the principal characteristics and purposes of the testing instruments.

The American College Testing Program

For the purpose of providing a predictor of college success for high school seniors and junior college students who intend to transfer to a four-year college, the American College Testing Examination was devised. The program is a two-part test battery, which is designed for completion in a three hour time period.

The first part is the Student Profile Section, which can be completed in twenty-five minutes. This part is not an examination, but merely asks for the kind of information colleges need to help the student make satisfactory plans. Such areas as academic and vocational fields of interest, extracurricular plans in college, and anticipated financial assistance in college are examples of areas covered.[3]

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[3]Handbook Manual: The American College Testing Program Examination (Iowa City, 1968), pp. 1-10.

The second part of the test battery consists of four tests, which are as follows: English, mathematics, social studies, and natural sciences. These tests average forty minutes in length, and are designed to measure the student's ability to perform the kinds of intellectual tasks required of college students. Predictive validity is claimed on the following basis. In developing new forms of the test, specifications for test items are developed. Writers are then employed to select and write test items which conform to these specifications. "Tryout" units are then administered to large representative samples of students. An item analysis is then conducted and the results of the new units are compared with the scores the students in the sample have achieved on the Iowa Tests of Educational Development. National percentile norms are then developed on the basis of this program of analysis. Furthermore, local norms and other data are provided for colleges that participate in the program. The split-half reliability coefficients of the four subtests are .90, .89, .86, and .83, for English, mathematics, social studies, and natural science, respectively.[4]

Test I: The Sare-Sanders American Government Test, Form A

The Sare-Sanders American Government Test, Form A, is an objective test which measures knowledge and understanding of

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[4]Oscar K. Buros, editor, The Sixth Mental Measurements Yearbook (Highland Park, 1965), p. 12.

American government. The test consists of one hundred and twenty-five multiple-choice questions, each of which contains five alternative answers. The test requires approximately forty minutes for completion. A raw score for each student was computed on an IBM 360 computer.

An important part of the test consists of practical problem situations for the correct interpretation of which the student must make application of knowledge of facts, principles, and customs. Content validity is claimed on the basis that persons well qualified to judge the relationships of test content to teaching objectives wrote the test items. The split-half reliability coefficients for forms A and B were found to be .86 and .84, respectively.[5]

Test II: The Hand Scale of Attitudes Toward American Government As A College Course

The Hand Scale of Attitudes Toward American Government as a College Course is a forty-five item scale developed by Dr. J. A. Hand. The subjects used for construction of the scale were five hundred and eighty-six junior college students. Validity of the scale was indicated by, first, the positive relation between attitude scores and effort in the course; second, close agreement between attitude scores and

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[5]Handbook Manual: Sare-Sanders American Government Test (Emporia, 1964), 1-5.

self-ratings of attitude; and third, the demonstrated ability of the scale to differentiate between group attitudes expected from different teaching methods. The author reports a split-half reliability coefficient of .92 based upon a sample of one hundred subjects.[6] The test requires approximately ten minutes for completion.

Test III: The Watson-Glaser Critical Thinking Appraisal

The Watson-Glaser Critical Thinking Appraisal is one of the most useful instruments in evaluating the relative effectiveness of different methods of instruction which attempt to develop the ability to think critically. Five subtests evaluate various aspects of critical thinking ability. Subtest I, which is designed to measure ability to discriminate among degrees of truth or falsity of inferences drawn from given data, is a twenty-item, multiple-choice test in which each item presents five alternatives. Subtest II, which is designed to measure ability to recognize unstated assumptions which are taken for granted in given statements, is a sixteen-item, multiple-choice test in which each item presents two choices. Subtest III, which is designed to measure ability to think deductively from given

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[6]Marvin E. Shaw and Jack M. Wright, Scales for the Measurement of Attitudes (New York, 1967), p. 313.

statements or premises, is a twenty-five item, multiple-choice test in which each item presents two alternative choices. Subtest IV, which samples ability to weigh evidence and to distinguish between generalizations, is a twenty-four item, multiple-choice test in which there are two choices for each item. Finally, Subtest V is a fifteen-item, multiple-choice test in which there are two choices for each item. This subtest is designed to measure ability to distinguish between arguments that are strong and relevant, and those which are weak or irrelevant to a particular question.

Among the two forms which are available of this test, Form YM was used in this study. The total time for working the test is fifty minutes. The standardization group for form YM consisted of 5,297 freshmen at fifteen four-year liberal arts colleges located in eleven different states. The authors do not claim content validity for the test because in the area of critical thinking there is no general agreement on the definable limits of the subject matter per se, nor is it possible to conceive of a clearly defined universe into which all aspects of critical thinking could be classified. However, judgments of qualified persons and results of research studies support the authors' belief that the items in the Critical Thinking Appraisal represent

an adequate sample of the ability to think critically and that the total score yielded by the test represents a valid estimate of the proficiency of individuals with respect to critical thinking. The reported split-half reliability coefficient was .85.[7] All tests were machine-scored on IBM 805 answer sheets by punching appropriate field holes in the IBM 805 scoring stencil. A composite raw score on all five subtests was computed for each student in the experimental study.

Test IV: Teacher-Made Tests

In order to test for specific course content retention of four units of study in Government 201, four teacher-made tests were administered during the course of the first semester. The four tests were jointly constructed by the two instructors involved in the study. A composite raw score of the four tests was recorded for each student. None of the four tests were comprehensive. All of the tests were objective examinations, which consisted of multiple-choice and true-false items.

The first teacher-made test was administered during the fourth week of school. The test consisted of seventy-five multiple-choice items with four or five alternatives for

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[7]Goodwin Watson and Edward M. Glaser, Manual: Watson-Glaser Critical Thinking Appraisal (New York, 1964).

each item. The test material covered lessons one through eleven. The unit of study evaluated on this test was "The Context of American Government, American Constitutions, and Federalism."

The second teacher-made test was administered during the ninth week of the semester and was designed to evaluate the content of lessons twelve through nineteen. The test consisted of fifty multiple-choice items with four or five alternative answers for each item. The units of study evaluated on this test were "Civil Liberties and Civil Rights."

During the fourteenth week of the semester, the third teacher-made test was administered. This fifty-item, multiple-choice test evaluated the unit entitled "Political Parties, Pressure Groups, and the Urban Crisis." There were four or five alternatives for each test item. Lessons twenty through twenty-nine were included on the third hour examination.

Finally, during the final examination week of the semester, the fourth examination was administered. This test consisted of two parts. The first part contained seventy-five multiple-choice questions which evaluated the unit on "Texas Constitutions, Political Parties, and Local Government." The second part consisted of seventy-five true-false items, which evaluated the problem areas studied, which were presented in panel presentations to the experimental classes and in lecture form to the control classes.

Summary

This chapter was designed to accomplish four purposes, which are as follows: first, to give a brief overview of the economic, geographical, and educational setting of the study; second, to present the experimental design of the study; third, to present a comparison of the problem-media-dialogue and lecture methods of teaching which were utilized in this study; and fourth, to describe the testing instruments employed to test the appropriate hypotheses.

A three by two factor analysis of variance was used to treat the data statistically in this experiment. The two independent variables were the two methods of teaching and levels of ability. The dependent variables were student achievement, attitude, and critical thinking. The hypotheses were accepted at the .05 level of significance. Chapter IV is a discussion of the results of the statistical treatment of the data.

CHAPTER IV

THE RESULTS OF THE EXPERIMENTAL STUDY

Introduction

This experimental study was conducted to determine the relative effectiveness of two methods of teaching the sophomore American Government course in a metropolitan junior college. One hundred and nineteen subjects in four sections of Government 201 taught at El Centro College of the Dallas County Junior College District during the fall semester of the 1968-1969 school year were involved in the study. Two full time government instructors were involved in the study. Instructor I taught a problem-media-dialogue section at 10:00 a. m. and a lecture section at 1:00 p. m. Instructor II taught a lecture section at 10:00 a. m. and a problem-media-dialogue section at 1:00 p. m. In order to balance the effects of time of day and differences between the two instructors, the raw scores on four criterion measures administered to the four sections were combined into the following two groups: (1) the combined scores of the problem-media-dialogue sections and (2) the combined scores of the lecture sections.

A three by two factor analysis of variance was developed to test the appropriate hypotheses. The computational

formulas were based upon Lindquist's[1] discussion of experimental designs in which three levels are treated by two methods of teaching. Three F-ratios were computed for the teaching method factor, ability level factor, and interaction between the teaching method factor and the ability level factor. A significant F-ratio for the interaction between the teaching method factor and the ability level factor would indicate that the effects of the two teaching methods on achievement, attitude, and critical thinking are dependent upon ability and that the effects of the two teaching methods may be different at each level of ability. An insignificant F-ratio for the interaction would indicate that the two teaching methods have similar effects on achievement at each level of ability. An insignificant F-ratio for the teaching method factor would indicate that both teaching methods are equally effective. Since it is assumed that achievement is based upon ability, the F-ratio for the ability level factor is of secondary interest. An F-ratio has to be at least one or greater to be significant, and at least 3.92 to be significant at the .05 level.

All of the F-ratios were computed on an IBM 360 computer. The .05 level of significance was used to determine

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[1]E. F. Lindquist, Design and Analysis of Experiments in Psychology and Education (Boston, 1956), pp. 121-123.

the significance of the effects of the various factors. The raw data used in the statistical analysis are given in Appendicies D and E. Test I refers to the Sare-Sanders American Government Test, Form A. Test II refers to the Hand Scale of Attitudes Toward American Government as a College Course. Test III refers to the Watson-Glaser Critical Thinking Appraisal, Form YM. Test IV refers to the composite raw score on four teacher made tests.

The Findings Related to Test I

The Sare-Sanders American Government Test, Form A was the first criterion test which was used to measure achievement. The test was administered to sixty-four students in the two problem-media-dialogue sections. This group of students had scores ranging from 42 to 113, with a mean of 72.84 and a standard deviation of 15.02. Test I was also administered to fifty-five students in the two lecture sections. This group of students had scores ranging from 45 to 100, with a mean of 74.56 and a standard deviation of 14.60.

In reference to this criterion measure, Hypothesis I predicted that students taught by a problem-oriented, multi-sensory method will score significantly higher on the Sare-Sanders American Government Test than students taught by a lecture method. As shown in Table III, the F-ratio for the

teaching method factor was greater than one. However, the F was not large enough to be significant at the .05 level. Therefore, Hypothesis I was rejected.

Furthermore, Hypothesis V predicted that the effects of a problem-oriented, multi-sensory method of teaching on achievement, as measured by the Sare-Sanders American Government Test, will not be dependent upon student ability. As indicated in Table III, the F-ratio for the interaction effects of the teaching method factor with the ability level factor was not large enough to indicate a significant effect at any level of significance. Therefore, Hypothesis V was accepted.

TABLE III

ANALYSIS OF VARIANCE FOR TEST I
(N = 119)

Source	Sum of Squares	df	Mean Squares	F
Method	196.566	1	196.566	1.175
Ability	6656.878	2	3328.439	19.889
Interaction	297.767	2	148.884	.900
Error	18910.637	113	167.351	
Total	26061.848	118		

The Findings Related to Test II

The Hand Scale of Attitudes Toward American Government as a College Course was the second criterion test which was used to measure attitude. The test was administered to sixty-four students in the two problem-media-dialogue sections. This group of students had scores ranging from 14 to 45, with a mean of 34.79 and a standard deviation of 8.03. Test II was also administered to fifty-five students in the two lecture sections. This group of students had scores ranging from 12 to 44, with a mean score of 32.28 and a standard deviation of 7.37.

In reference to this criterion measure, Hypothesis II predicted that students taught by a problem-oriented, multi-sensory method of teaching will score significantly higher on the Hand Scale of Attitudes Toward American Government as a College Course than students taught by a lecture method. As shown in Table IV, the F-ratio for the teaching method factor reached a level of significance that can be accepted at the .05 level. Therefore, Hypothesis II was accepted.

Furthermore, Hypothesis VI predicted that the effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on attitude, as measured by the Hand Scale of Attitudes Toward American Government as a College Course, will not be dependent upon student ability.

As indicated in Table IV, the F-ratio for the interaction between the teaching method factor and the ability level factor reached the .05 level of significance. Therefore, Hypothesis VI was rejected.

TABLE IV

ANALYSIS OF VARIANCE FOR TEST II
(N = 119)

Source	Sum of Squares	df	Mean Squares	F
Method	272.507	1	272.507	*5.381
Ability	76.148	2	38.074	.752
Interaction	408.130	2	204.207	*4.032
Error	5722.899	113	50.645	
Total	6479.684	118		

*F-ratio significant at the .05 level

The Findings Related to Test III

The Watson-Glaser Critical Thinking Appraisal, Form YM was the third criterion test which was used to measure critical thinking ability. The test was administered to sixty-four students in the two problem-media-dialogue dialogue sections. This group of students had scores ranging from 45 to 84, with a mean of 67.39 and a standard deviation of 10.01. Test III was also administered to fifty-five students in the two lecture sections. This group of students had

scores ranging from 45 to 87, with a mean of 68.47 and a standard deviation of 11.29.

In reference to this criterion measure, Hypothesis III predicted that students taught by a problem-oriented, multi-sensory method will score significantly higher on the Watson-Glaser Critical Thinking Appraisal than students taught by a lecture method. As shown in Table V, the F-ratio for the teaching method factor was not significant at the .05 level. Therefore, Hypothesis III was rejected.

Furthermore, Hypothesis VII was predicted that the effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on critical thinking, as measured by the Watson-Glaser Critical Thinking Appraisal, will not be dependent upon student ability. The F-ratio for the interaction between the teaching method factor and the ability level factor was not significant at the .05 level. Therefore, Hypothesis VII was accepted.

The Findings Related to Test IV

Four unit tests were administered during the course of the semester in which this experimental study was conducted. A composite raw score of the four teacher made tests constituted the third criterion measure of achievement. The Sare-Sanders American Government Test, Form A and the Watson-Glaser Critical Thinking Appraisal, Form YM were the first and second

TABLE V

ANALYSIS OF VARIANCE FOR TEST III
(N = 119)

Source	Sum of Squares	df	Mean Squares	F
Method	34.636	1	34.636	.382
Ability	3402.197	2	1701.097	18.776
Interaction	77.091	2	38.545	.426
Error	10237.656	113	90.599	
Total	13751.580	118		

The four teacher-made tests were not comprehensive. That is, each test measured just one of the four units of study in Government 201. The maximum composite raw score for the four tests was three hundred twenty-five points. The student's total raw score was divided by three hundred twenty-five in order to determine his final percentage grade. The four teacher-made tests were administered to sixty-four students in the two problem-media-dialogue sections. This group of students had scores ranging from 163 to 299, with a mean of 233.68 and a standard deviation of 27.28. The four teacher-made tests were also administered to fifty-five students in the two lecture sections. This group of students had scores ranging from 141 to 296, with a mean of 235.47 and a standard deviation of 30.72.

In reference to this criterion measure, Hypothesis IV predicted that students taught by a problem-oriented, multi-sensory method of teaching will make significantly higher in Government 201 than students taught by a lecture method. As indicated in Table VI, the F-ratio for the teaching method factor did not reach the .05 level of significance. Therefore, Hypothesis IV was rejected.

Furthermore, Hypothesis VIII predicted that the effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on achievement, as measured by the student's grade in the course, will not be dependent upon student ability. Even though the F-ratio for the interaction effect between the teaching method factor and the ability level factor was greater than one, it was not great enough to indicate a significant effect at the .05 level. Therefore, Hypothesis VIII was accepted.

TABLE VI

ANALYSIS OF VARIANCE FOR TEST IV
(N = 119)

Source	Sum of Squares	df	Mean Square	F
Method	94.270	1	94.270	.147
Ability	28531.953	2	14265.977	22.188
Interaction	2083.359	2	1041.957	1.620
Error	72654.148	113		
Total	103363.730	118		

Summary

The purpose of this chapter was to present the results of four criterion measures administered to one hundred and nineteen subjects who were involved in this experimental study. A three by two factor analysis of variance was used to treat the data gathered from the four instruments. F-ratios were computed for the teaching method factor, the ability level factor, and the interaction between the teaching method factor and the ability level factor.

No significant F-ratios at the .05 level of confidence were found for the teaching method factor or the interaction between the teaching method factor and the ability level factor, when the criterion measures were the Sare-Sanders American Government Test, Form A, the Watson-Glaser Critical Thinking Appraisal, Form YM, and the composite raw score on four teacher-made tests. However, when student attitude was measured by the Hand Scale of Attitudes Toward American Government as a College Course, significant F-ratios were reached at the .05 level of confidence for both the teaching method factor and the interaction between the teaching method factor and the ability level factor.

Chapter V is a summary of the experiment, followed by conclusions and recommendations consistent with the findings of this study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this experimental study was to determine the relative effectiveness of two methods of teaching the sophomore American Government course at the junior college level. The two methods of teaching utilized in the study were the problem-media-dialogue method and the lecture method. A comprehensive survey of research literature related to these methods provided a theoretical as well as pratical impetus for further research on the improvement of college teaching in the social sciences.

Faced with the problem of teaching American Government to both terminal and transfer students, the problem under consideration in this study related to the necessity of experimenting with new methods. In order to implement this experimental study, one hundred and nineteen subjects in four sections of Government 201 taught during the fall semester of the 1968-1969 school year were used. Government 201 is part of the social science curriculum of El Centro College, the first college of the projected seven campuses in the Dallas County Junior College District. Under Texas law, students who expect to receive a

baccalaureate degree from a state supported institution, must pass six hours of American government, which includes a study of both national and Texas government. Two of the four sections of Government 201 were taught at 10:00 a. m. The other two sections were taught at 1:00 p. m. Two full time government instructors were involved in the study. Instructor I taught a problem-media-dialogue section at 10:00 a. m. and a lecture section at 1:00 p. m. Instructor II taught a lecture section at 10:00 a. m. and a problem-media-dialogue section at 1:00 p. m.

In order to determine the effectiveness of the two methods of teaching on ability, the subjects were divided into three levels of ability based upon their composite American College Testing scores. Level I (high) consisted of those subjects whose ACT scores were in the first quarter of the total distribution of available ACT scores for El Centro College students enrolled during the fall semester of the 1968-1969 school year. Level I subjects possessed ACT scores of twenty and above. Level II (medium) consisted of those subjects whose ACT scores were in the second and third quarter of the distribution. Level II subjects possessed ACT scores of fifteen through nineteen. Level III (low) consisted of those subjects whose ACT scores were in the fourth quarter of the distribution. Level III

subjects possessed ACT scores of fourteen and below. In order to group the subjects for statistical purposes, the following process was accomplished during registration before the start of the fall semester. The subjects who had indicated a preference for a 10:00 a. m. section on preregistration forms were placed into one group. Similarly, those subjects who had indicated a preference for a 1:00 p. m. section were placed into a second group. The two instructors then filled the two 10:00 a. m. sections and the two 1:00 p. m. sections by alternately drawing names from two boxes, one of which contained the names of those subjects who wanted a 10:00 a. m. section, and the other box contained the names of those subjects who wanted a 1:00 p. m. section. The two instructors flipped a coin as to which sections they would teach by the problem-media-dialogue method or the lecture method.

The two teaching methods utilized in this study were similar in objectives, but they differed in method of presentation. The problem-media-dialogue and lecture methods attempted to achieve identical behavioral objectives by following the same course of study with the same textbooks. The basic difference between the two methods was that the problem-media-dialogue method relied on an inductive learning process. By studying relevant problems of American government,

viewing multi-media presentations, and engaging in dialogue sessions, the experimental sections were inductively instructed in the dynamics of the political process. The lecture method of teaching relied on an instructor-dominated monologue. The lectures consisted of authoritative statements about American government with class discussion limited to questions from the students at the conclusion of each lecture. Forty-three lectures were prepared for the control sections. These lectures were designed to coincide with the same material presented in the problem-media-dialogue sections.

Four criterion measures were used to determine the relative effectiveness of the two teaching methods. The instruments included the Sare-Sanders American Government Test, Form A, the Hand Scale of Attitudes Toward American Government as a College Course, the Watson-Glaser Critical Thinking Appraisal, Form YM, and four teacher-made tests. A composite raw score for each student on the four teacher-made tests was used as the third criterion measure for achievement.

A standard three by two factor analysis of variance was used in the statistical treatment of the data. Three F-ratios were computed on an IBM 360 computer for the teaching method factor, the ability level factor, and the

interaction between the teaching method factor and the ability level factor for each of the four criterion measures. The .05 level of confidence was used to determine the significance of the F-ratios.

No significant F-ratios were found for the teaching method factor, when the criterion measures were the Sare-Sanders American Government Test, Form A, the Watson-Glaser Critical Thinking Appraisal, Form YM, and the composite raw score on four teacher made tests. Therefore, the following hypotheses were rejected:

Hypothesis I--Students taught by a problem-oriented, multi-sensory method of teaching will score significantly higher on the Sare-Sanders American Government Test than students taught by a lecture method.

Hypothesis III--Students taught by a problem-oriented, multi-sensory method of teaching will score significantly higher on the Watson-Glaser Critical Thinking Appraisal than students taught by a lecture method.

Hypothesis IV--Students taught by a problem-oriented, multi-sensory method of teaching will make significantly higher grades in Government 201 than students taught by a lecture method.

Furthermore, no significant F-ratios were found for the interaction effect between the teaching method factor

and the ability level factor, when the criterion measures were the Sare-Sanders American Government Test, Form A, the Watson-Glaser Critical Thinking Appraisal, Form YM, and the composite raw score on four teacher made tests. Therefore, the following hypotheses were accepted:

Hypothesis V--The effects of a problem-oriented, multi-sensory method of teaching on achievement, as measured by the Sare-Sanders American Government Test, will not be dependent upon student ability.

Hypothesis VII--The effects of a problem-oriented, multi-sensory method of teaching on critical thinking, as measured by the Watson-Glaser Critical Thinking Appraisal, will not be dependent upon student ability.

Hypothesis VIII--The effects of a problem-oriented, multi-sensory method of teaching and a lecture method of teaching on achievement, as measured by the student's grade in the course, will not be dependent upon student ability.

A significant F-ratio was found for the teaching method factor, when the criterion measure was the Hand Scale of Attitudes Toward American Government as a College Course. Therefore, the following hypothesis was accepted: Hypothesis II--Students taught by a problem-oriented, multi-sensory method of teaching will score significantly higher on the Hand Scale of Attitudes Toward American Government

as a College Course than students taught by a lecture method.

Furthermore, a significant F-ratio was found for the interaction effect between the teaching method factor and the ability level factor, when the criterion measure was the Hand Scale of Attitudes Toward American Government as a College Course. Therefore, the following hypothesis was rejected: Hypothesis VI--The effects of a problem-oriented, multi-sensory method of teaching on attitude, as measured by the Hand Scale of Attitudes Toward American Government as a College Course, will not be dependent upon student ability.

Conclusions

Consistent with the purposes and findings of this study, four conclusions evolve from this teaching experiment. First, when the criterion measure is some aspect of achievement in Government 201 for sophomore junior college students, the problem-media-dialogue and lecture methods are equally effective. Therefore, the value of employing a problem-oriented, multi-sensory course of study in American government, in contrast to the lecture and textbook-centered method, would appear to be based on some criterion other than achievement.

The criterion for employing a problem-media-dialogue method of teaching American government is found in a second

conclusion. When student attitude toward the American Government course is included in the rationale for offering the course, a problem-media-dialogue method elicits a more positive attitude from the student than a lecture method.

Third, when the criterion measure is critical thinking ability, the problem-media-dialogue and lecture methods are equally effective. It would appear, however, that if some class discussion were incorporated into the lecture method, critical thinking ability would have a better opportunity to develop than from a structured, teacher-dominated monologue.

Fourth, when the criterion measure is subject matter retention in sophomore American Government students, the problem-media-dialogue and lecture methods are equally effective. On the basis of the second conclusion, however, the retention of governmental facts and principles should be considered as just one, or possibly, a secondary aspect of the student's civic education.

Recommendations

Further research is recommended to study the following questions which this experiment left unanswered:

1. What is the relative effectiveness of teaching the sophomore American Government course exclusively with problems of government compared with the lecture method?

2. What is the relative effectiveness of teaching the sophomore American Government course exclusively with audio-visual presentations compared with the lecture method?

3. What is the relative effectiveness of teaching the sophomore American Government course exclusively with dialogue sessions compared with the lecture method?

4. What is the relative effectiveness of teaching students grouped together in a common ability level with some aspect of the problem-media-dialogue method compared with the lecture method?

5. On the basis of follow-up questionnaires and interviews, how would students taught by the problem-media-dialogue method compare with students taught by the lecture method in voting records and knowledge of political issues?

APPENDIX

APPENDIX A

A COURSE SYLLABUS FOR GOVERNMENT 201

Introduction

The purpose of this syllabus is to give the student an overview of Government 201. Aside from the statutory requirement of six semester hours of American Government for Texas college students pursuing a baccalaureate degree from a state supported institution, there must be a broader and deeper rationale for including this course in the college curricula. The basic philosophy which underlies the teaching of American Government is that every American citizen has a personal stake in the democratic process. Everyone who pays taxes, casts a ballot, serves in the armed services, mails a letter, collects social security, pays a fine, or engages in any of the other many activities which involve the American Government, is a participant in his government.

Moreover, never before in American history, has American Government demanded a more enlightened and informed electorate in order to ensure the continued viability and strength of the democratic process. This course does not pretend to be a citizen's handbook or a government rule book. The success of democracy does not depend on such a simplified approach to

government. Rather, Government 201 is designed to give the beginning student of American Government a sharp insight into the basic principles of American Government, the conflicting processes, and personalities who govern the United States of America. Success in the course must be more than a personal matter. To be sure, the eyes of future generations are cast upon today's college student who devotes serious study time to the American political system, which is built upon a knowledgeable and active citizenry.

Objectives

The student will be expected to achieve the following objectives, in order to receive maximum value from the course.

1. The student will be able to identify the basic conditions for a democratic government.
2. The student will be able to compare the American democratic system with the Communist system.
3. The student will be able to identify the conflicting political ideologies at work in the United States.
4. The student will be able to compare the Articles of Confederation with the Constitution of 1798.
5. The student will be able to identify the three basic principles of American Government.
6. The student will be able to identify the leading civil liberties cases which emanate from the First Amendment.
7. The student will be able to identify the leading civil rights cases which emanate from the Fourteenth Amendment.

8. The student will be able to identify the functions and organizations of the two major political parties.

9. The student will be able to identify the roles of pressure groups in the democratic process.

10. The student will be able to identify the principal steps in the election of the President of the United States of America.

11. The student will be able to identify the causes of the urban crisis as the focal point of the "new federalism."

12. The student will be able to identify the principal features of Texas' Constitutions.

13. The student will be able to identify reasons why a new Constitution is needed in Texas.

14. The student will be able to identify the principal characteristics of Texas' political parties and election process.

15. The student will be able to identify and distinguish the roles and characteristics of Texas' municipal and county governments.

16. The student will be able to identify and analyze four problem areas of American Government.

Textbooks

The following textbooks are required of Government 201 students in order to help the student achieve the preceding objectives.

American Government

1. Ervin Levine and Elmer Cornwell, An Introduction to American Government, First Edition, The Macmillan Company, 1967.

2. Andrew Scott and Jack Wallace, editors, Politics, U. S. A., First Edition, The Macmillan Company, 1966.

Texas Government

3. Fred Gantt, Jr., Irving Dawson, and Luther Hagard, Jr., editors, Governing Texas, First Edition, Thomas O. Crowell and Company, 1966.

4. Stuart MacCorkle and Dick Smith, Texas Government, Eighth Edition, McGraw-Hill, 1968.

Course Outline

I. The context of American Government, American Constitutions, and Federalism

A. Conditions for a democratic government
B. The democratic system versus communism
C. The political spectrum--the "radical right" versus the "radical left"
D. The American political culture
E. The Constitutional basis of American Government
   1. The Articles of Confederation
   2. The Constitution of 1789
F. Constitutional principles
   1. Separation of powers
   2. Judicial review
   3. Federalism

Required reading:
1. Levine and Cornwell, pp. 1-32, 135-145
2. Scott and Wallace, pp. 1-42, 83-106

First Hour Examination

II. Civil Liberties and Civil Rights

A. The Bill of Rights
B. First Amendment and freedom of religion
C. First Amendment and freedom of speech
D. Civil rights and due process of law
E. Civil rights movement--the Southern view

F. Civil rights movement--the Northern view
G. Civil rights movement--Supreme Court cases
   1. Dred Scott v. Sanford
   2. Plessy v. Ferguson
   3. Brown v. Board of Education of Topeka, Kansas
H. Civil rights movement--federal legislation
   1. Civil Rights Act of 1957
   2. Civil Rights Act of 1960
   3. Civil Rights Act of 1964
   4. Voting Rights Act of 1965
   5. Civil Rights Act of 1968

Required reading:
1. Levine and Cornwell, pp. 32-34, 145-152.
2. Scott and Wallace, pp. 123-155
3. Class handouts of federal legislation

Second Hour Examination

III. The Presidential Election Process, Political Parties, Pressure Groups, and The Urban Crisis

A. The national political conventions
B. The roles of pressure groups
C. The functions and organization of political parties
D. The Electoral College
E. The Presidential elections of 1960 and 1968
   1. Campaigns
   2. Issues
   3. Personalities
F. The role of the press in politics
G. The urban crisis as the focal point of the political process
   1. Governmental needs of the city
   2. Urban renewal--panacea or illness?
   3. Megalopolis--the challenge for American Government in the future

Required reading:
1. Levine and Cornwell, pp. 35-68
2. Scott and Wallace, pp. 163-182, 253-275, 310-322, 106-11

Third Hour Examination

IV. Texas Constitutions, Political Parties, and Local Government

A. The context of Texas Government
B. Texas Constitutions
C. Texas political parties and the election process
D. Texas local government
   1. Municipal
   2. County
   3. Metropolitan areas

Required reading: 1. Gantt and others, pp. 1-20, 31-64, 71-93, 252-288
2. MacCorkle and Smith, pp. 1-63, 261-278, 295-329

V. Problem Areas--A Review and Application of Government 201

A. How can the provisions of the Constitution actually be applied to society?
B. Why has Government fialed to establish equal justice for all in the United States?
C. How as the President elected in 1968?
D. How can Texas solve her urban crisis within the framework of her constitutional and party structure?

Required reading: A review of the class notes taken on the four units of study

Fourth and Final Examination

Multi-Media Aids[1]

I. The Context of American Government, American Constitutions and Federalism

A. Films
   1. The Challenge of Ideas--McGraw-Hill--30 minutes--black and white
   2. What's New on The Left?--Indiana--30 minutes--black and white
   3. Voices From The Right--Indiana--30 minutes--black and white
   4. The United States Constitution--EBF--20 minutes--color

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[1]This list of multi-media aids was not given to the lecture (control) sections of Government 201 in this study.

B. Transparencies
   1. "Objectives of Government 201"
   2. "Conditions for A Democratic Government"
   3. "The Political Spectrum"
   4. "Context of American Government"
   5. "Provisions of The Articles of Confederation"
   6. "Judicial Review and Separation of Power"
   7. "Creative versus Dual Federalism"

II. Civil Liberties and Civil Rights

A. Films
   1. Feiner v. New York--EBF--30 minutes--color
   2. Civil Rights Movement: The Southern View--EBF--30 minutes--color
   3. Civil Rights Movement: The Northern View--EBF--30 minutes--color
   4. The Other Face of Dixie, Parts I and II--Indiana--60 minutes--black and white

B. Transparencies
   1. "The Bill of Rights"
   2. "Feiner v. New York"
   3. "Engel v. Vitale"
   4. "Dred Scott v. Sanford"
   5. "Plessy v. Ferguson"
   6. "Brown v. Board of Education"

III. The Presidential Election Process, Political Parties, Pressure Groups, and The Urban Crisis

A. Sound filmstrip--The National Political Conventions, 1968, Parts I and II--Harcourt Brace and World--20 minutes--color

B. Films
   1. Pressure Groups in Action--Modern Learning Aids--20 minutes--black and white
   2. How Our Two Party System Operates--Modern Learning Aids--20 minutes--black and white
   3. Making of The President, 1960, Parts I and II--Indiana--80 minutes--black and white
   4. The Living City--EBF--26 minutes--color
   5. The Challenge of Urban Renewal--EBF--28 minutes--color
   6. Megalopolis: Cradle of The Future--EBF--30 minutes--color

C. Tapes
   1. Electoral College Reform--Washington Tapes--20 minutes--Senator Birch Bayh (Dem.) of Indiana
   2. How Independent Is The Press?--Washington Tapes--20 minutes--James Haggerty, former News Secretary to President Dwight D. Eisenhower
   3. The Two Party System In America--Washington Tapes--20 minutes--Senator Everett M. Dirksen (Rep.) of Illinois
   4. Cities: Pressure Points In Our Society--Washington Tapes--20 minutes--Senator Robert F. Kennedy (Dem.) of New York

IV. Texas Constitutions, Political Parties, and Local Government

A. Films (no films on the Texas Constitution, revision attempts, political parties, or local government had been produced when this study was conducted)

B. Transparencies
   1. "Constitutional Development in Texas"
   2. "Movement for Constitutional Revision"
   3. "Structure of City Government"
   4. "Structure of County Government"
   5. "Metropolitan Areas of Texas"

APPENDIX B

DAILY LESSONS USING THE PROBLEM-MEDIA-DIALOGUE METHOD OF TEACHING

The following forty-three lessons constitute the experimental course of study which was oriented around a problem-media-dialogue method of teaching.

Lesson 1

A. Topic: "Objectives of Government 201"
B. Method: Dialogue and transparency

Lesson 2

A. Topic: "Conditions for A Democratic Government"
B. Method: Dialogue and transparency
C. Reading: Politics, U. S. A., pp. 1-20

Lesson 3

A. Topic: "A Comparison of The Communist System with The Democratic System"
B. Method: Film, The Challenge of Ideas
C. Reading: Politics, U. S. A., pp. 33-41

Lesson 4

A. Topic: "The Political Spectrum"
B. Method: Dialogue and transparency
C. Reading: Politics, U. S. A., pp. 20-33

Lesson 5

A. Topic: "The New Left"
B. Method: Film, What's New on The Left?
C. Reading: Politics, U. S. A., pp. 20-33

Lesson 6

A. Topic: "The Radical Right"
B. Method: Film, Voices From The Right
C. Reading: Politics, U. S. A., pp. 20-33

Lesson 7

A. Topic: "The American Political Culture"
B. Method: Transparency and dialogue
C. Reading: Levine and Cornwell, pp. 1-13

Lesson 8

A. Topic: "The Articles of Confederation"
B. Method: Transparency and dialogue
C. Reading: Levine and Cornwell, pp. 14-16

Lesson 9

A. Topic: "The Constitutional Convention and The Plans Presented for A New Constitution"
B. Method: Film, The U. S. Constitution
C. Reading: Levine and Cornwell, Chapter I

Lesson 10

A. Topic: "Constitutional Principles: Judicial Review and Separation of Power"
B. Method: Transparencies and dialogue
C. Reading: Levine and Cornwell, pp. 14-32

Lesson 11

A. Topic: "Creative versus Dual Federalism"
B. Method: Transparency and dialogue
C. Reading: Levine and Cornwell, PP. 14-27
Politics, U. S. A., pp. 83-91

Lesson 12

A. Topic: "The Bill of Rights--Civil Liberties"
B. Method: Transparency and dialogue
C. Reading: Levine and Cornwell, pp. 32-34

Lesson 13

A. Topic: "The First Amendment and Freedom of Religion"
B. Method: Transparency and dialogue
C. Reading: Levine and Cornwell, pp. 145-146

Lesson 14

A. Topic: "The First Amendment and Freedom of Speech"
B. Method: Film, Feiner v. New York
C. Reading: Levine and Cornwell, pp. 145-146

Lesson 15

A. Topic: "The Civil Rights Movement--The Mississippi Tragedy and Due Process"
B. Method: Transparency and dialogue
C. Reading: Politics, U. S. A., pp. 111-123

Lesson 16

A. Topic: "The Civil Rights Movement--Southern View"
B. Method: Film, The Civil Rights Movement, The Southern View
C. Reading: Politics, U. S. A., pp. 145-155

Lesson 17

A. Topic: "The Civil Rights Movement--Northern View"
B. Method: Film, The Civil Rights Movement, The North
C. Reading: Politics, U. S. A., pp. 123-145

Lesson 18

A. Topic: "The Civil Rights Movement--Supreme Court Cases"
B. Method: Film, The Other Face of Dixie, Part I
C. Reading: Handouts of:
   1. Dred Scott v. Sanford
   2. Plessy v. Ferguson
   3. Brown v. Board of Education

Lesson 19

A. Topic: "The Civil Rights Movement--Federal Legislation"
B. Method: Film, The Other Face of Dixie, Part II
C. Reading: Handouts of:
   1. Civil Rights Act of 1957
   2. Civil Rights Act of 1960
   3. Civil Rights Act of 1964
   4. Voting Rights Act of 1965
   5. Civil Rights Act of 1968

Lesson 20

A. Topic: "The National Political Conventions--1968"
B. Method: Sound filmstrip, The National Political Conventions, Part I and II
C. Reading: Levine and Cornwell, pp. 54-56

Lesson 21

A. Topic: "The Role of Pressure Groups in the Political Process"
B. Method: Film, Pressure Groups in Action
C. Reading: Levine and Cornwell, pp. 35-53

Lesson 22

A. Topic: "How the Two Party System Operates"
B. Method: Film, How Our Two Party System Operates
C. Reading: Levine and Cornwell, pp. 54-69
D. Tape: The Two Party System in America

Lesson 23

A. Topic: "The Presidential Campaign of 1960 in Contrast to the Presidential Campaign of 1968"
B. Method: Film, The Making of the President, 1960, Part I
C. Reading: Politics, U. S. A., pp. 310-322

Lesson 24

A. Topic: "The Presidential Election of 1960 Compared to the Presidential Election of 1968"
B. Method: Film, The Making of the President, 1960, Part II

C. Reading: Handout, "Electoral College Reform"
D. Tape: Electoral College Reform

Lesson 25

A. Topic: "The Role of the Press in the Political Process"
B. Method: Dialogue
C. Reading: Politics, U. S. A., PP. 163-182
D. Tape: How Independent is the Press?

Lesson 26

A. Topic: "The Urban Crisis"
B. Method: Film, The Living City
C. Reading: Handout, Robert Moses, "What Must Our Big Cities Do To Stay Alive?"

Lesson 27

A. Topic: "The Urban Renewal Issue"
B. Method: Film, The Challenge of Urban Renewal
C. Reading: Notes taken from interview with Senator Robert F. Kennedy
D. Tape: Cities: Pressure Points in Our System

Lesson 28

A. Topic: "The Federal Government's Relationship with the Cities"
B. Method: Dialogue
C. Reading: Politics, U. S. A., pp. 107-111

Lesson 29

A. Topic: "Megalopolis"
B. Method: Film, Megalopolis, Cradle of the Future
C. Reading: Handout, interview with Robert C. Weaver, former Secretary of Housing and Urban Development

Lesson 30

A. Topic: "The Context of Texas Government"
B. Method: Dialogue
C. Reading: Gantt and others, pp. 1-12
MacCorkle and Smith, pp. 1-12

Lesson 31

A. Topic: "Constitutional Development in Texas"
B. Method: Dialogue
C. Reading: Gantt and others, pp. 34-49
MacCorkle and Smith, pp. 13-36

Lesson 32

A. Topic: "Constitutional Revision in Texas"
B. Method: Transparency and dialogue
C. Reading: Gantt and others, pp. 49-64
MacCorkle and Smith, pp. 26-29

Lesson 33

A. Topic: "Texas' Unique Brand of Politicians"
B. Method: Dialogue
C. Reading: Gantt and others, pp. 75-80
MacCorkle and Smith, pp. 47-50

Lesson 34

A. Topic: "Party Factionalism in Texas"
B. Method: Dialogue
C. Reading: Gantt and others, pp. 80-89
MacCorkle and Smith, pp. 32-46

Lesson 35

A. Topic: "The Democratic Party in Texas"
B. Method: Dialogue
C. Reading: Gantt and others, pp. 80-89
MacCorkle and Smith, pp. 50-53

Lesson 36

A. Topic: "The Republican Party in Texas"
B. Method: Dialogue
C. Reading: Gantt and others, pp. 89-93
MacCorkle and Smith, 54-63

Lesson 37

A. Topic: "City Government in Texas"
B. Method: Dialogue and transparency
C. Reading: Gantt and others, pp. 265-285
MacCorkle and Smith, pp. 295-317

Lesson 38

A. Topic: "County Government in Texas"
B. Method: Dialogue and transparency
C. Reading: Gantt and others, pp. 285-288
MacCorkle and Smith, pp. 261-278

Lesson 39

A. Topic: "Metropolitan Areas of Texas"
B. Method: Dialogue and transparency
C. Reading: Gantt and others, pp. 256-264
MacCorkle and Smith, pp. 318-329

Lesson 40

A. Topic: "Problem I--How Can the Provisions of the Constitution Actually Be Applied to Society?"
B. Method: Panel presentation
C. Reading: Review of notes taken on Lessons I through 11

Lesson 41

A. Topic: "Problem II--Why Has Government Failed to Provide Equal Justice for All in the United States?"
B. Method: Panel presentation
C. Reading: Review of notes taken on Lessons 12 through 19

Lesson 42

A. Topic: "Problem III--How Was the President Elected in 1968?"
B. Method: Panel presentation
C. Reading: Review of notes taken on Lessons 20 through 29

Lesson 43

A. Topic: "Problem IV--How Can Texas Solve Her Urban Crisis Within Her Constitutional and Party Structure?"
B. Method: Panel presentation
C. Reading: Review of notes taken on Lesson 30 through 40

APPENDIX C

DAILY LESSONS USING THE LECTURE METHOD OF TEACHING

The following forty-three lessons constitute the course of study for the lecture (control) sections. These lessons were based on the same reading assignments as the problem-media-dialogue (experimental) sections. The principal difference between the experimental and control lessons is found in the method of instruction.

Lesson 1

A. Topic: "Objectives of Government 201"
B. Method: Lecture

Lesson 2

A. Topic: "Conditions for a Democartic Government"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 33-41

Lesson 3

A. Topic: "A Comparison of the Communist System with the Democratic System"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 33-41

Lesson 4

A. Topic: "The Political Spectrum"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 20-33

Lesson 5

A. Topic: "The New Left"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 20-33

Lesson 6

A. Topic: "The Radical Right"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 20-35

Lesson 7

A. Topic: "The American Political Culture"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 1-13

Lesson 8

A. Topic: "The Articles of Confederation"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 14-16

Lesson 9

A. Topic: "The Constitutional Convention and the Plans Presented for a New Constitution"
B. Method: Lecture
C. Reading: Levine and Cornwell, Chapter I

Lesson 10

A. Topic: "Constitutional Principles: Judicial Review and Separation of Power"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 14-32

Lesson 11

A. Topic: "Creative versus Dual Federalism"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 14-27
Politics, U. S. A., pp. 83-91

Lesson 12

A. Topic: "The Bill of Rights--Civil Liberties"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 32-34

Lesson 13

A. Topic: "The First Amendment and Freedom of Religion"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 145-146

Lesson 14

A. Topic: "The First Amendment and Freedom of Speech"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 145-146

Lesson 15

A. Topic: "The Civil Rights Movement--The Mississippi Tragedy and Due Process"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 111-123

Lesson 16

A. Topic: "The Civil Rights Movement--Southern View"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 145-155

Lesson 17

A. Topic: "The Civil Rights Movement--The Northern View"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 123-145

Lesson 18

A. Topic: "The Civil Rights Movement--Supreme Court Cases"
B. Method: Lecture
C. Reading: Handouts of:
   1. Dred Scott v. Sanford
   2. Plessy v. Ferguson
   3. Brown v. Board of Education

Lesson 19

A. Topic: "The Civil Reights Movement--Federal Legislation"
B. Method: Lecture
C. Reading: Handouts of:
   1. Civil Rights Act of 1957
   2. Civil Rights Act of 1960
   3. Civil Rights Act of 1964
   4. Voting Rights Act of 1965
   5. Civil Rights Act of 1968

Lesson 20

A. Topic: "The National Political Conventions--1968"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp.

Lesson 21

A. Topic: "The Role of Pressure Groups in the Political Process"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 35-53

Lesson 22

A. Topic: "How The Two Party System Operates"
B. Method: Lecture
C. Reading: Levine and Cornwell, pp. 54-69

Lesson 23

A. Topic: "The Presidential Campaign of 1960 in Contrast to the Presidential Campaign of 1968"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 310-322

Lesson 24

A. Topic: "The Presidential Election of 1960 Compared to the Presidential Election of 1968"
B. Method: Lecture
C. Reading: Handout, "Electoral College Reform"

Lesson 25

A. Topic: "The Role of the Press in the Political Process"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 163-182

Lesson 26

A. Topic: "The Urban Crisis"
B. Method: Lecture
C. Reading: Handout:
Robert Moses, "What Must Our Big Cities Do To Stay Alive?

Lesson 27

A. Topic: "The Urban Renewal Issue"
B. Method: Lecture
C. Reading: Handout:
Senator Robert F. Kennedy, "Cities: Pressure Points In Our Society"

Lesson 28

A. Topic "The Federal Government's Relationship with the Cities"
B. Method: Lecture
C. Reading: Politics, U. S. A., pp. 106-111

Lesson 29

A. Topic: "Megalopolis"
B. Method: Lecture
C. Reading: Handout:
Robert C. Weaver, former Secretary of Housing and Urban Development

Lesson 30

A. Topic: "The Context of Texas Government"
B. Method: Lecture
C. Reading: Gantt and others, pp. 1-12
MacCorkle and Smith, pp. 1-12

Lesson 31

A. Topic: "Constitutional Development in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 34-49
MacCorkle and Smith, pp. 13-36

Lesson 32

A. Topic: "Constitutional Revision in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 49-64
MacCorkle and Smith, pp. 26-29

Lesson 33

A. Topic: "Texas' Unique Brand of Politicians"
B. Method: Lecture
C. Reading: Gantt and others, pp. 75-80
MacCorkle and Smith, pp. 47-50

Lesson 34

A. Topic: "Party Factionalism in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 80-89
MacCorkle and Smith, pp. 32-46

Lesson 35

A. Topic: "The Democratic Party in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 80-89
MacCorkle and Smith, pp. 50-53

Lesson 36

A. Topic: "The Republican Party in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 89-93
MacCorkle and Smith, pp. 54-63

Lesson 37

A. Topic: "City Government in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 265-285
MacCorkle and Smith, pp. 295-317

Lesson 38

A. Topic: "County Government in Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 285-288
MacCorkle and Smith, pp. 261-278

Lesson 39

A. Topic: "Metropolitan Areas of Texas"
B. Method: Lecture
C. Reading: Gantt and others, pp. 256-264
MacCorkle and Smith, pp. 318-329

Lesson 40

A. Topic: "Problem--How Can The Provisions of the Constitution Actually Be Applied to Society"
B. Method: Lecture
C. Reading: Review of notes taken on Lessons I through II

Lesson 41

A. Topic: "Problem--Why Has Government Failed to Provide Equal Justice for All in the United States?"
B. Method: Lecture
C. Reading: Review of notes taken on Lessons 12 through 19

Lesson 42

A. Topic: "Problem--How Was The President Elected in 1968?"
B. Method: Lecture
C. Reading: Review of notes taken on Lessons 20 through 29

Lesson 43

A. Topic: "Problem--How Can Texas Solve Her Urban Crisis Within the Framework of the Present Constitution and Party Structure?"
B. Method: Lecture
C. Reading: Review of notes taken on Lessons 30

APPENDIX D

PROBLEM-MEDIA-DIALOGUE SECTIONS

THE RAW DATA

(N = 64)

Level of Ability (20 and Above)	ACT Score	Test I	Test II	Test III	Test IV
F237-66-7318I	21	92	29	84	269
F465-82-9368II	20	66	43	65	224
M459-84-8089I	21	90	34	66	247
F460-88-0373II	21	61	14	66	228
F458-44-9690II	21	96	43	81	255
F462-56-9050II	20	72	43	66	259
M451-84-7016I	23	97	26	85	263
M466-84-4998I	22	64	29	76	229
M463-72-7715I	21	92	42	62	225
M459-84-5987I	20	82	33	56	256
M442-42-4515II	20	74	42	50	265
F451-78-7834I	20	64	41	70	217
M461-92-0166I	20	113	41	78	238
M438-68-4043I	21	66	36	68	239
F452-92-7863I	23	61	32	82	267
M523-60-6913I	20	80	40	76	260
M463-78-0571I	21	80	40	78	232
M274-34-3328I	21	84	43	75	226
M459-74-3844I	23	86	27	73	281
M459-84-5917I	23	90	26	79	249
M455-78-4095I	21	74	42	80	267
M450-88-4446II	21	92	37	65	249
F455-74-7843I	26	81	43	71	256
M459-86-0866I	23	99	41	74	255
M465-56-1795I	20	93	29	75	248
F466084-8103II	23	73	44	75	265
F464-70-3282I	20	79	33	68	243
M459-84-5807II	23	49	28	60	237
M466-68-0854I	23	83	34	84	264
F465-80-9363II	21	68	39	62	192
F466-84-7064II	20	90	26	68	273
F462-76-6493II	21	42	44	68	299

Level of Ability (15 through 19)	ACT Score	Test I	Test II	Test III	Test IV
M451-78-9729I	19	46	38	74	222
M466084-0381I	19	64	29	63	168
M458-82-3272I	16	72	43	50	208
M457-80-2294II	19	83	26	59	230
M456-68-4285II	18	50	39	46	163
F461-56-5179II	17	86	28	69	267
F454-88-2782I	19	74	36	58	264
M451-84-6565I	16	48	24	53	215
F451-84-6667II	15	59	33	50	204
F451-78-2640II	16	57	45	50	228
M466-92-7203II	17	69	42	69	280
M452-82-8650I	19	71	43	72	215
F453-80-4796I	17	74	24	70	231
M459-84-9772II	19	71	41	72	233
M465-80-0431II	16	72	38	61	213
M450-88-2197I	18	62	44	78	261
M466-74-8147II	17	53	26	60	192
M450-88-4434I	18	74	33	61	206
M466-74-6492I	19	57	33	66	227
F462-76-8941II	18	65	37	83	197
F455-90-3939II	16	70	35	64	225
M460-72-3565II	18	68	42	75	209
M460-64-6431II	19	76	36	69	220
F455-74-6466I	19	59	21	67	221
M466-68-3294II	17	50	20	71	202
M451-84-1959II	19	63	32	78	193
M462-76-8611I	18	82	43	81	250
(14 and below)					
F451-78-6867II	11	60	41	50	193
M451-70-3642II	13	44	40	45	186
M465-80-5881I	14	74	37	61	216
M459-82-0763II	13	72	39	58	214
F460-88-4078I	13	84	44	54	226

Key

M = Male student
F = Female Student
Nine digit number following M or F = students identification number
I = Instructor I (10:00 a. m. section)
II = Instructor II (1:00 p. m. section)

Test I = Sare-Sanders American Government Test, Form A
Test II = Hand Scale of Attitudes Toward American Government as a College Course
Test III = Watson-Glaser Critical Thinking Appraisal, Form YM
Test IV = Composite score on four teacher made tests

APPENDIX E

LECTURE SECTIONS

THE RAW DATA

(N = 55)

Level of Ability (20 and above)	ACT Score	Test I	Test II	Test III	Test IV
M451-82-0942II	23	81	42	67	227
F449-90-8366I	24	100	12	86	284
M463-78-4938II	20	93	32	81	246
M462-76-8576I	20	62	41	66	272
M455-70-7450II	20	89	37	87	248
F461-92-6551I	20	78	37	80	269
M455-74-7052I	21	78	38	67	244
M332-34-7749I	21	97	33	76	273
F460-88-0999I	25	92	34	75	254
M450-10-8404II	20	87	42	70	258
M459-74-4170II	22	69	33	72	230
M462-76-0913I	21	68	39	81	233
F336-20-0537II	23	75	37	80	239
M459-84-3588I	21	80	34	60	237
M455-72-8291I	20	94	36	80	289
M466-84-4118I	20	75	37	58	255
M450-88-0009I	20	57	39	73	237
M450-88-8935II	23	80	28	82	244
F452-52-5527I	21	87	39	76	251
F456-88-3660I	21	98	12	87	277
M459-84-7618II	20	87	44	57	232
F450-78-3557II	20	67	37	64	256
M464-70-2380I	24	87	30	79	263
M463-78-2135I	20	95	24	81	278
(15 through 19)					
M440-40-0131I	19	76	31	81	240
M452-82-5889II	15	46	35	76	219
M462-78-8697II	18	68	35	67	215
M463-78-2227II	17	71	31	63	198
M455-80-3189I	15	82	19	79	233
M460-72-7581I	15	74	23	84	250
M460-68-6510I	16	57	29	52	231

Level of Ability (15 through 19)	ACT Score	Test I	Test II	Test III	Test IV
M506-68-3238I	17	66	34	53	222
M462-76-0105I	15	94	37	84	256
M451-78-5996I	15	87	24	61	249
M460-72-2053II	19	56	29	45	141
M466-74-9327II	15	74	39	72	195
M585-09-5153II	18	66	42	71	219
F456-80-1376I	15	72	37	57	267
F459-64-6970I	17	86	33	60	268
M457-76-0751I	15	45	36	64	209
M459-74-3255I	15	78	43	61	227
M091-36-7967II	16	96	33	74	207
F456-84-7498II	15	65	24	66	205
M466-84-2743II	17	87	32	58	229
M461-72-1519II	16	65	40	57	228
M522-56-2810II	15	71	32	62	214
(14 and below)					
F456-84-6585II	13	56	30	58	195
F450-48-1980I	14	50	25	45	203
M466-72-7012II	14	52	35	47	192
F462-76-5826I	14	64	30	76	250
M457-74-0016II	14	69	34	45	193
F459-84-7476I	13	77	21	68	245
F461-78-0460II	12	56	26	65	192
F456-84-8761II	11	52	19	55	167

Key

M = Male student
F = Female student
Nine digit number following M or F = student identification number
I = Instructor I (1:00 p. m. section)
II = Instructor II
Test I = Sare-Sanders American Government Test, Form A
Test II = Hand Scale of Attitudes Toward American Government as a College Course
Test III = Watson-Glaser Critical Thinking Appraisal, Form YM
Test IV = Composite score on four teacher made tests

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