AN INVESTIGATION OF THE OUTCOMES OF INTRODUCTORY PSYCHOLOGY.

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IN A STUDY OF THE EFFECTS OF CERTAIN VARIABLES ON THE OUTCOMES OF A COURSE IN INTRODUCTORY PSYCHOLOGY, PRETESTS AND POSTTESTS WERE ADMINISTERED TO 180 STUDENTS IN FOUR PSYCHOLOGY CLASSES AND TO 50 OTHERS. VARIABLES WERE CLASS SIZE, INSTRUCTOR, AND LECTURE VS. DISCUSSION METHOD, AND THE TESTS WERE MEASURES OF CHANGES IN STUDENTS' SELF-CONCEPT, SELF-ACCEPTANCE, CONCEPT OF IDEAL SELF, DEGREE OF PERSONAL ADJUSTMENT, AND KNOWLEDGE ABOUT PSYCHOLOGY. DATA INDICATED THAT THE INTRODUCTORY PSYCHOLOGY CLASS IS INSTRUMENTAL IN INFLUENCING PERSONAL ADJUSTMENT AND THAT AUTHORITARIAN ATTITUDES CAN BE MODIFIED IN A PERIOD OF LESS THAN A SEMESTER, WHILE THE STUDENTS IN THE CONTROL GROUP DID NOT CHANGE IN THESE RESPECTS. IN GENERAL, HOWEVER, METHOD OF INSTRUCTION, CLASS SIZE, AND DIFFERENCES AMONG INSTRUCTORS DID NOT APPEAR TO BE IMPORTANT VARIABLES IN PRODUCING AFFECTIVE CHANGES, NOR DID ACADEMIC MASTERY OF THE SUBJECT MATTER OF PSYCHOLOGY APPEAR RELATED TO THESE VARIABLES. (AL)
SUMMARY OF RESEARCH PROJECT ON INTRODUCTORY PSYCHOLOGY

1. Title: An Investigation of the Outcomes of Introductory Psychology

2. Purposes

The central purpose of this investigation was to determine the effects of Introductory Psychology upon students' self-concept, acceptance of self, concept of ideal self, degree of personal adjustment, and attitudes toward self, others, and toward topics in psychology. The difference between the lecture and discussion method, the difference between small groups and large groups, and the difference between instructors, with respect to producing differential outcomes were of primary interest. Secondary purposes of this study were to determine if either class size or method of instruction would produce differences in learning of the subject-matter of general psychology; and to assess and evaluate student reactions to Introductory Psychology.

3. Method

This study involved 230 students at Rio Hondo Junior College in Whittier, California, and was conducted during the fall semester of 1966. Five basic comparison groups were formed as a part of the experimental design. Group I (small-group discussion) was composed of students selected randomly from several large sections of the Introductory Psychology course. This group was composed of three separate small groups, with a total of 40 students. Group II (small-group lecture) consisted of two separate sections, which were also selected randomly from various Introductory Psychology classes. The total number of students for this group was 26. Group III involved large-group lecture classes taught by the investigator. There were 64 students selected from two large classes to form this group. Group IV, also a large-group lecture class in Introductory Psychology, consisted of 50 students from two classes, but was taught by a different instructor. Group V, with 50 students, consisted of students who were enrolled in various courses at the college, but who were not taking or had taken a college course in psychology.

During the first week of class, all groups were given a battery of test instruments, including: (1) The School and College Abilities Test was administered to all groups for the purpose of obtaining a measure of academic learning ability of the members involved in the study. (2) The Bills' Index of Adjustment and Values served as a measure of self-adjustment and feelings about one's self. (3) The California F scale measured attitudes associated with the "authoritarian personality". (4) The Knowledge about Psychology Test was administered to the psychology groups for the purpose of measuring gains in psychological knowledge. (5) The Semantic Differential Technique was employed for the purpose of measuring specific attitudes that the student had toward himself, toward others, and toward topics in psychology. This instrument was given to the psychology groups only. (6) Instructor-made
CONTENT TESTS AND EXAMINATIONS WERE GIVEN TO THE STUDENTS IN THE INVESTIGATOR'S GROUPS FOR THE PURPOSE OF EVALUATING THE COGNITIVE OUTCOMES OF THE COURSE. (7) THE INVESTIGATOR'S GROUPS COMPLETED A FIFTY-ITEM MULTIPLE-CHOICE STUDENT EVALUATION OF COURSE QUESTIONNAIRE AT THE END OF THE EXPERIMENTAL PERIOD TO ASSESS THEIR REACTIONS TO THE COURSE AND TO THE TEACHER.

DURING THE PERIOD BETWEEN THE FIRST AND FOURTEENTH WEEK OF THE SEMESTER, EACH OF THE FIVE GROUPS WAS SUBJECTED TO DIFFERENTIAL TREATMENT. GROUP I EXPERIENCED THE INTRODUCTORY PSYCHOLOGY COURSE THROUGH A DISCUSSION APPROACH IN SMALL CLASSES. THEY WERE GIVEN FREEDOM TO TALK ABOUT ANY ASPECT OF THE TOPICS ON THE COURSE OUTLINE. NO LECTURES WERE GIVEN TO THIS GROUP. GROUP II, ALSO SMALL GROUPS, WERE DENIED ANY OPPORTUNITY FOR CLASS DISCUSSION. THEY EXPERIENCED THE COURSE STRICTLY THROUGH LECTURES DELIVERED BY THE INVESTIGATOR. ANY DISCUSSION WAS POLITELY, BUT FIRMLY, DISCOURAGED. GROUP III HEARD THE SAME LECTURES AS GROUP II, GIVEN BY THE SAME INSTRUCTOR. HOWEVER, THIS WAS A LARGE GROUP. THERE WAS A SECOND LARGE-GROUP LECTURE CLASS, WHICH WAS TAUGHT BY A PERSON OTHER THAN THE INVESTIGATOR. THIS WAS GROUP IV. IN GENERAL, THESE FOUR PSYCHOLOGY GROUPS WERE EXPOSED TO THE SAME COURSE CONTENT, WHICH INCLUDED A SAMPLING OF THE TRADITIONAL TOPICS INTRODUCED IN GENERAL PSYCHOLOGY SUCH AS: PSYCHOLOGY AS A SCIENCE AND A PROFESSION; HUMAN GROWTH AND DEVELOPMENT; EMOTION AND MOTIVATION; THE FUNDAMENTALS OF LEARNING; INDIVIDUAL DIFFERENCES IN INTELLIGENCE AND PERSONALITY; PSYCHOLOGICAL MEASUREMENT; THE DYNAMICS OF ADJUSTMENT AND MALADJUSTMENT; AND MENTAL HEALTH AND PSYCHOTHERAPY. THE COURSE WAS STRUCTURED AND TAUGHT IN A MANNER WHICH WAS MORE STUDENT-ORIENTED THAN IT WAS SCIENCE-ORIENTED. APPLICATIONS OF THE PRINCIPLES OF PSYCHOLOGY WERE APPLIED TO DAILY LIFE, AND AN ATTEMPT WAS MADE TO PRESENT A FUNCTIONAL AND APPLIED COURSE.


THE CHANGES MADE WITHIN EACH GROUP FROM THE PRETEST TO THE POSTTEST WERE STUDIED TO DETERMINE THE EFFECTS OF EACH INDEPENDENT VARIABLE. ALSO, GROUP I WAS COMPARED WITH GROUP II TO DETERMINE WHETHER THERE WOULD BE A DIFFERENCE ON THE OUTCOME VARIABLE BETWEEN THE LECTURE AND DISCUSSION APPROACH. GROUP II AND GROUP III WERE COMPARED TO DISCOVER WHETHER OR NOT CLASS SIZE WAS A RELEVANT VARIABLE IN PRODUCING DIFFERENCES WHEN THE LECTURE METHOD WAS USED. GROUPS III AND IV WERE POOLED AND COMPARED WITH GROUP V (THE NONPSYCHOLOGY GROUP) IN ORDER TO ASCERTAIN WHETHER OR NOT THE PSYCHOLOGY COURSE ITSELF WAS A SIGNIFICANT FACTOR ASSOCIATED WITH SELF-ADJUSTMENT AND ATTITUDE MODIFICATION.

IN THE NEXT SECTION, THE RESULTS OF THESE COMPARISONS ARE PRESENTED. THESE FINDINGS ARE LINKED TO THE HYPOTHESES WHICH WERE FORMULATED AT THE BEGINNING OF THE STUDY.

IV. RESULTS

1. THE FIRST SERIES OF RESULTS RELATED TO A WITHIN-GROUP COMPARISON OF INITIAL AND FINAL TEST MEASURES STATED THERE WOULD BE NO CHANGE FOR ANY OF THE VARIABLES MEASURED BY THE INSTRUMENTS. THE FINDINGS OF THE STUDY RELATING TO THIS HYPOTHESIS WERE AS FOLLOWS:
1.0 There was no change for the self-concept on the Index of Adjustment for any of the groups.

1.1 With the exception of one group, there was no change in self-acceptance on the Index of Adjustment. Group IV changed in the direction of becoming more self-accepting.

1.2 There was no change for the ideal self-concept on the Index of Adjustment and values for any of the five groups.

1.3 There was change for each of the psychology groups on the discrepancy scale in the direction of a decrease in the discrepancy between self and ideal self-concepts indicating improved personal adjustment. For the non-psychology group (Group V), there was no change on this variable.

1.4 There was change for each of the three psychology groups taught by the investigator on the California F Scale in the direction of a decrease in authoritarian and antidemocratic attitudes. There was no change for the psychology groups taught by another instructor or for the non-psychology groups.

1.5 There was a gain in the students' knowledge about psychology as a science and a profession as measured by the Knowledge about Psychology Test for both large lecture groups, but there was no such gain for the small groups (either lecture or discussion) as taught by the investigator.

1.6 There was a change in the direction of perceiving psychologists as persons in less stereotyped ways as measured by the Knowledge about Psychology Test for all of the groups who were administered the instrument.

1.7 For the seventeen concepts on the Semantic Differential which measured attitudes toward self, others, and toward topics in psychology, the following findings were observed for each group:

A. For Group I, four attitudes were modified in a positive direction and 13 attitudes showed no change.

B. For Group II, 4 attitudes were modified in a positive direction and 13 attitudes were unchanged.

C. For Group III, 2 attitudes were modified in a positive direction and 13 attitudes did not change.

D. For Group IV, 4 attitudes were modified in a positive direction and 13 showed no change.

2. The second series of statistical hypotheses were based upon a between-group comparison of pretest and posttest measures stating that there would be no differences in mean gains between the groups for any of the criterion measures. The comparison of mean gain measures between groups included:

A. Group I with Group II to determine the effect of method on the outcome measures.

B. Group II with Group III to determine the effect of class size upon the outcome measures.

C. Group III with Group IV to determine the effect of teacher difference on the outcome measures.
D. Group III and Group IV with Group V to determine the effects of the psychology course itself upon the outcome measures.

When these between-group comparisons were made the following findings were noted:

2.0 There were no differences between any groups on the variables of self-concept change as measured by the Index of Adjustment and Values.

2.1 There were no differences between groups (with one exception) on the variable of acceptance of self as measured by the Index of Adjustment and Values. Group IV showed greater mean gains in self-concept change than did Group III.

2.2 There were no differences between any group on the variable of ideal self-concept change as measured by the Index of Adjustment and Values.

2.3 There were no differences between groups (with one exception) on the variable of personal adjustment as measured by the Index of Adjustment and Values. The psychology groups (Groups III and IV) showed greater decrease in the discrepancy between self and ideal-self (which was indicative of improved personal adjustment) when compared with non-psychology groups (Group V).

2.4 There were no differences between any of the groups on changes in authoritarian attitudes as measured by the California F scale.

2.5 There were no differences between any of the groups on gains in knowledge about the scientific and professional characteristics of psychology as measured by the Knowledge about Psychology Test.

2.6 There were no differences between any of the groups on changes in stereotyped ways of perceiving psychologists as people as measured by the Knowledge about Psychology Test.

2.7 For the seventeen concepts on the Semantic Differential which measured attitudes toward self, toward others, and toward topics in psychology, the following findings were observed:

A. Group I with II. Two concepts showed differences, both of which favored Group II, and fifteen concepts showed no differences between groups.

B. Group II with III. Three concepts demonstrated differences, all of which favored Group II, and fourteen concepts showed no differences between groups.

C. Group III with IV. One concept showed a difference in favor of Group IV, and sixteen concepts showed no differences.

3. The third hypothesis related to academic mastery of psychology as measured by four content tests and a final examination. It was predicted that there would be no difference on any of the tests, the final examination, or the total number of points earned, between the groups taught by the investigator. This hypothesis was partially accepted and partially rejected. There were no differences between the groups on the first three tests. There was a difference on test four, in that the lecture sections earned higher scores than did the discussion groups. The final examination, and the total number of points earned on all tests, revealed a difference between groups, in that lecture groups were superior to discussion groups.
4. **The Fourth Hypothesis Pertained to the Students' Evaluation of the Course, the Instructor, and the Class Itself.** It was predicted that there would be no difference on any of the 50 items on this questionnaire between the groups taught by the investigator. The findings revealed that there was a difference between groups of 12 items, and there was no difference between the groups on 38 items.

V. **Conclusions**

Based upon this study, several conclusions seem evident. These conclusions are related to the current investigation, and the generalizability of these conclusions are limited. Further studies are needed before these conclusions can be applied to other populations.

1. In general, a three-month period is not long enough time to have an effect on the variables of self-concept, self-acceptance, and ideal self-concept.

2. **Introductory Psychology is instrumental in influencing the students' personal adjustment as evidenced by the improvement made by each psychology group.**

3. Maturation and attendance alone, over a three-month period, are not sufficient to influence the self-adjustment of students, as evidenced by the failure of the non-psychology groups to change when compared with the psychology groups.

4. **Introductory Psychology does not have a negative effect on the students enrolled in the course. There was no evidence that students developed negative attitudes, or that they became any less adjusted as a result of the course.**

5. **Authoritarian attitudes are capable of being modified during a period of less than one semester.**

6. In general, students enrolled in a psychology class gain in knowledge about psychology as a science and a profession.

7. **Introductory Psychology is instrumental in reducing stereotyped perceptions of psychologists as persons.**

8. Some attitudes toward self, others, and topics in psychology are able to be modified in a positive direction within a period of one semester.

9. In general, over a three-month period neither method of instruction, class size, nor teacher difference, are important variables in producing differential outcomes with respect to feelings about self, self-adjustment, or various attitudes.

10. **Academic mastery of the subject-matter of psychology is not influenced by either class size, or the method of instruction.**

11. In general, students perceive the course and the teacher essentially the same, in spite of differences in teaching methodology or class size.

12. No clearly demonstrated superiority of discussion over lecture methods was shown, and no clear advantages of small classes over large classes was evident. With respect to learning the content of general psychology, changing attitudes toward self, and others, gaining in knowledge about psychology,
OR IMPROVING PERSONAL ADJUSTMENT, NO DIFFERENCES WERE FOUND BETWEEN LECTURE AND DISCUSSION GROUPS, OR BETWEEN LARGE AND SMALL CLASSES. WHILE STUDENTS SUBJECTIVELY FELT AND COMMENTED UPON THE VALUE OF THE DISCUSSION METHOD AND THE ADVANTAGES OF SMALL CLASSES, NO OBJECTIVE EVIDENCE WAS FOUND WHICH SUPPORTED THESE CONTENTIONS.

Investigator: Gerald F. Corey
SUMMARY OF RESEARCH PROJECT WITH INTRODUCTORY PSYCHOLOGY

INVESTIGATOR: GERALD F. COREY

1. TITLE

An Investigation of the Outcomes of an Introductory Psychology Course using the Small-Group Discussion Approach.

II. PURPOSE OF THE STUDY

The primary purpose of this study is to evaluate the effectiveness of the attainment of the objectives of the Introductory Psychology course as it is offered currently at Rio Hondo Junior College. We are concerned with measuring the outcomes of the course. More specifically, we are investigating attitudinal changes, adjustment changes and value changes of the students enrolled in Introductory Psychology. We are also interested in evaluating the cognitive outcomes of the course, studying the gains in knowledge about psychology, and assessing students' reactions to the course.

In the investigation of the problem, an attempt will be made to answer the following questions:

1. Can a one-semester course in which grades are given, a textbook required, content examinations given, required papers written, and attendance mandatory, provide the type of environment in which the individual may change his self-concept and self-adjustment?

2. In terms of content mastery, will there be any difference between a lecture class and a discussion class?

3. In terms of attitudinal changes, value changes, and adjustment changes, will there be any differences between a lecture and a discussion approach?

4. Does intellectual understanding, as evidenced by grades of examinations, necessarily evoke better self-understanding or personal adjustment?

5. If changes in attitudes, values, and adjustment do occur, can it be attributed to the effect of the course, or is it due simply to time, maturation, and attendance at college?

6. How will student reactions differ toward the Introductory Psychology course as a result of being in a lecture class or a discussion class?
III. BASIC HYPOTHESES

The assumption underlying this study is that the way to effect desirable changes in attitudes, values, and adjustment is through a small-group discussion approach, not through the traditional lecture method. It is assumed that a small group of not more than fifteen students in which the teacher encourages a discussion approach and strives to create an informal, warm, and relaxed atmosphere, will allow for the type of interaction that is necessary to produce attitudinal change. This study will compare the outcomes of an Introductory Psychology course taught in two different manners — the traditional lecture method versus the small-group discussion method. Based upon these assumptions, the following specific hypotheses will be tested:

1. Students exposed to an Introductory Psychology course taught by the small-group method will show an improvement in their personal adjustment as defined by a greater congruence of self-concept with ideal self-concept on the Bills' Index of Adjustment and Values.

2. Students exposed to the small-group discussion method will increase their self-concept in a positive direction as measured by the Bills' Index of Adjustment and Values.

3. Students exposed to the small-group discussion method will increase their degree of self-acceptance as measured by the Bills' Index of Adjustment and Values.

4. Members in the small-group discussion class of Introductory Psychology will show an increase in attitudes associated with openness, flexibility, and tolerance; and a decrease in attitudes associated with authoritarianism, rigidity, and prejudice as measured by the California F Scale.

5. A. Students in both lecture and discussion classes will decrease their stereotyped perceptions of psychologists as persons as measured by the Knowledge about Psychology Test.

   B. Students in both lecture and discussion classes of Introductory Psychology will show significant gains in their knowledge about the scientific and professional characteristics of psychology as measured by the Knowledge about Psychology Test.

6. There will be no difference in academic achievement of psychology between the lecture and discussion groups as measured by tests and the final examination based upon the textbooks.

7. In general, there will be no difference between the lecture group and the discussion group concerning their reaction to the course and instructor as reflected by the end-of-the-semester Student Reaction Form.

IV. EXPERIMENTAL DESIGN

1. Time and Place of the Study.

The study will take place during the fall semester of 1966-1967 at Rio Hondo Junior College in Whittier, California. The study will involve all the students enrolled in Introductory Psychology during the regular day school.
2. The Population.

A. Experimental Group. The experimental group will consist of three groups of students taken in a random fashion from the large sections of introductory psychology classes. Students will be told that other sections of the same course will be opened, but at different times. On the basis of the student's schedule, some were randomly assigned to a smaller group. Each of the three small groups are composed of 8 males and 7 females - a total of 15 students. These three experimental classes will be conducted in a discussion fashion. The students will not attend any lecture sessions, but will experience the course through discussion in groups led by the investigator.

B. Control Groups. In order to equalize the "Hawthorne Effect" all groups were tested at the beginning of the course, and all were told that they were involved in an experiment designed to study the outcomes of a psychology course. Four control groups were set up as follows:

Control Group I consists of 15 students (8 males and 7 females) and is taught by the investigator who also teaches the three small-group discussion classes. The purpose of this control group is to control for the variable of class size. This class is taught in the lecture manner.

Control Group II consists of 45 students, and it is taught by the investigator. This class is the traditional type of lecture class.

Control Group III consists of 45 students, but taught by another instructor. This is to control for any unconscious bias on the part of the investigator.

The above three control groups are lecture classes of introductory psychology. In order to control for the factors of time, maturation and attendance at college, a group of students who are not taking psychology, or have not taken psychology will be used in the study.

C. Comparison of Experimental and Control Groups. The control groups will be matched with the experimental groups on the following variables: age, sex, grade, general learning ability, marital status, employment status, and type of college program. The groups will not be matched in terms of race, creed, national background, etc. Both groups will be assumed to be equally heterogeneous with regard to these factors.

V. Procedure

A pre- and post-testing program is included in the design for the purpose of obtaining objective measures of change in certain personality variables, attitudes, values, and gains in knowledge about psychology. All groups will be given three basic instruments during the first week of the course: the Bills' Index of Adjustment and Values, the California F Scale, and the Semantic Differential. All groups will be given the SCAT verbal subtest to arrive at an index of learning ability. In addition, all groups (except Control Group IV) will be given the Knowledge about Psychology Tests. During the semester, teacher-made tests will be constructed to measure academic mastery of the course content. At the end of the course, all groups will be given the same battery of tests to determine the nature and degree of change, if any. The groups that are taught by the investigator will take the same end-of-the-semester Student Reaction Questionnaire to evaluate their perceptions of the course and the instructor.
The course content and the objectives of the course can be found by looking at the Course Outline for Introductory Psychology. In general, both the lecture and discussion groups will be exposed to the same course content, but the method will differ. The requirements, the assignments, the tests and examinations will be the same for both groups. This will allow us to investigate the effects of the method — lecture as compared with small-group discussion — with respect to the outcomes of the course.