

# Design for an Experiment in Student-Centered Teaching

THEODORE LANDSMAN and KENNETH PETERSON

There are very few systematic investigations on record that deal with teaching methods on the college level. In this article Theodore Landsman, an instructor of clinical psychology at the University of Delaware, and Kenneth Peterson, chairman of Human Development Studies in Teacher Education at Syracuse University, make a preliminary report of a comprehensive study which seeks evidence of the value of a "student-centered" method of instruction in college classes. While this study was in progress Mr. Landsman was chairman of research in the teacher education program at Syracuse University.

THE DESIRABILITY of "student-centeredness" in teaching has been verbalized in professional writings for at least fifty years. One is struck with the fact that most of the educational literature advocates "student-centeredness" at the elementary and secondary school level. It is only in the past few years that attention is being given to study of "student-centeredness" at the college level. As a speaker a few months ago said, "The idea of 'teacher-centeredness' is so ingrained in college that the idea isn't even questioned. It is simply accepted as the best method of teaching at the college level; thus there is no problem."<sup>1</sup>

This is a preliminary report on a study which attempts to give some evidence as to how learning at the college level can be most effectively promoted.<sup>2</sup> The study was conducted in the second

semester of 1948-49. The majority of the students were juniors. The course in which the study was conducted is entitled "Human Development, Adjustment, and Learning." It is that portion of Syracuse's "Functional Program in Teacher Education" which emphasizes psychology for teachers.<sup>3</sup> The course content is that of the elementary psychology and educational psychology courses of the typical teacher education curriculum.

The study of teaching methods is part of a concerted effort to improve teacher education at Syracuse. The publication on Syracuse's program charted the course.<sup>4</sup> An examination of the present program in light of the eight-year-old publication indicates that the faculty has persistently held to the notion of putting into practice what they said they believed. The central overarching idea of the program is that "theory and practice shall go together." It is not surprising then that

<sup>1</sup> Glennon, V. J., in addressing a Beginning Teachers Conference at Syracuse University, May, 1949.

<sup>2</sup> The study was financed by the School of Education, Syracuse University. Cooperating consultants were M. C. Beyerl, A. W. Combs, V. J. Glennon, and Helen W. Hartley. Teachers were Verna White, Robert Gates, and Kenneth Peterson.

<sup>3</sup> American Council of Education, *Functional Program of Teacher Education*, Washington, D. C., 1941.

<sup>4</sup> *Ibid.*

a faculty committed to building a program in which theory and practice go together should sooner or later get around to examining the degree to which they, in their own teaching, put into practice the theories to which they were verbally committed. The war years interrupted the progress in self-examination. Very little has appeared in recent years about the program. This article is the first of a series of articles long over-due.

#### THE EXPERIMENTAL DESIGN

We are now ready to examine the effectiveness of our program. We want evidence on "how we are doing." The teaching staff sought evidence on which of two teaching methods is more effective in promoting learning. The staff as a whole is agreed that students should participate through planning and discussion. Thus the study is really not a study of "student-centered teaching" vs. "teacher-centered teaching" but is rather a study of "more student-centeredness" vs. "less student-centeredness." We named one method *Student-Centered*, and the other *Syllabus-Centered*.

Eight classes were used. Four were taught by the student-centered method and four by the syllabus-centered method. The same teacher taught one section using student-centered methods and another class using syllabus-centered methods. Tests were administered at the beginning of the semester and again at the end.

#### Questions Under Study

The hypothesis under investigation is: "There are significant differences in the effects of student-centered as con-

trasted with syllabus-centered classes."

The questions to which we seek answers are:

- Do students in the two types of classes finish the semester with significantly different gains in *personality development*?
- Do students in the two types of classes finish the semester with significantly different gains in *knowledge of facts and principles*?
- Do students in the two types of classes finish the semester with significantly different gains in *acceptance of self or others*?
- Do students in the two types of classes finish the semester with significantly different positive or negative feelings toward their class experience?

#### Defining the Types of Instruction

Describing the specific nature of the two types of instruction represented a crucial problem in the design. There is much ambiguity in describing both of our titles, student-centered and syllabus-centered courses. In student-centered classes all direction of activity, discussion, planning, etc., originates and is carried through or abandoned through the initiative of the students in the class. The objectives of the course as seen by the faculty are distributed to the students in the form of a syllabus. Thus the students are informed of the "content" of the course. The teacher respects the students' ability to read the faculty's outline and initiates no attempt to "put across" the specific material of the course. The instructor's role is to create an atmosphere of extreme freedom and permissiveness in the situation. He removes threats and blocks to the expression of individual needs.

In the syllabus-centered classes, in-

structors attempt to help the students learn a certain core of information considered important. These classes are planned to include the very best of educative devices known to the faculty, including group discussion, planned lectures, audio-visual aids, etc.

It will be seen that these two types of classes do not represent complete opposites on a scale. Rather, they are planned to be close to each other along a continuum of teacher-directedness to student-directedness. Both of the classes were planned to be toward the student-directed end of the scale, with one type of class more student-directed than the other type.

In order to establish this difference, careful planning by the faculty was essential. A number of "checks and balances" were set up to make certain that there was a difference in the two approaches. A detailed guide to each type of teaching was prepared and discussed by the teachers involved. Learning sessions for the teachers in the experiment were held the semester prior to the experiment and were continued after the study was concluded. The teachers involved in the study met with

a number of consultants two hours weekly. The first hour of the meeting was conducted in such a way as to approximate the role of the teacher in the student-centered class. The second hour was conducted in the syllabus-centered method.

A number of the faculty involved in the study took a week-end trip to the University of Chicago to observe student-centered classes. All of the teachers in the study were already well grounded in the syllabus-centered methods of teaching.

### Evidence of Differences

How well did the teachers maintain the differences in classes? Three types of evidence were collected:

(1) *From the viewpoint of an impartial observer*—observers visited the classes regularly, taking notes about activities in the classes and making wire recordings of the classes. These recordings were analyzed by the observers for differences in teacher behavior in the classes. Unfortunately, many of our recordings were inaudible due to technical difficulties. However, it is expected that an adequate number



*Courtesy School of Education, Syracuse University*

will be available to demonstrate the differences.

(2) *From the viewpoint of the students*—this was considered the primary criterion. The students' perceptions of their class as student-centered or syllabus-centered were measured at the close of the semester with a Student Perceptions Scale. This consisted of eighteen scale items in which the student was to indicate whether he saw his class as being directed by the teacher or student. Preliminary analysis indicates a reliable difference between the two types of classes within each of the four pairs of classes.

(3) *From the viewpoint of the teacher*—the teacher was asked to state his attitude toward each class and also asked to fill out the Student Perceptions Scale for his own classes.

#### The Testing Program

Objective and projective tests were used. While objective tests are usually more amenable to standardization, the projective tests provide meaningful material frequently lost in short-answer items. Scores on the Ohio State Psychological Examination, a test of academic aptitude, were available. Prior to the start of the classes and at the close the following tests were administered: The Troyer-Horrocks standardized test of "Knowledge of Fact and Principle in Human Growth and Development," a case-history test devised by the staff, the Minnesota-Multiphasic Personality Inventory, and the Group Rorschach. In addition, a mid-semester examination prepared by the staff was administered and a sociometric scale was given about three weeks after the opening of classes and at the close of classes.

To secure additional projective material, students were asked to write an autobiography at the opening of the semester. At the close of the semester they wrote an additional chapter to the autobiography covering experiences of the past semester. The concluding piece of data is a reaction report by students discussing their feelings about the classes.

A meaningful breakdown of the data can be seen in the selection of the tests to answer the four questions proposed at the beginning of the discussion concerning design. The areas noted by the questions and the tests which will help us find some answers to the hypotheses are as follows:

*Facts and Principles:* Troyer-Horrocks tests of knowledge of Facts and Principles, Case History test, and Mid-semester exam.

*Personality Development:* Minnesota Multiphasic Personality Inventory, Group Rorschach, and End Chapter of Autobiography.

*Acceptance:* Sociometric Scale.

*Feelings Toward Course:* Final reaction paper evaluating course.

Two types of data represent unique techniques for evaluating the classes: the end chapter of the autobiography and the final class evaluation.

#### Current Status of the Study

At present the experimental work in the study has been completed and analysis of data is now progressing. It is anticipated that the complete report will be available at the close of this year. Analysis up to this point indicates that the students in the student-centered classes perceived their classes in a significantly different manner from the

way students in the syllabus-centered classes saw theirs. In other words, from the point of view of the students, the teachers adhered to different methods from class to class.

#### Significance of the Study

What does this study signify? What does it mean for the teaching of psychology in teacher education, teaching method at the college level, and learning theory?

In summary, we believe that the following points are significant:

- It is one of the most comprehensive studies on teaching methods reported at the college level
- It is the first reported study in which a group of university faculty members have permitted objective scrutiny of the success of their teaching methods
- The study will provide empirical evidence concerning the value of a student-centered method in the college curriculum
- The study will help investigate the changes in personality as well as acquisition of information which accompany certain classroom teaching methods.

In addition, the study has raised many questions in the minds of the people associated with it. Defining the nature of "student-centeredness" has been the foremost problem in carrying out the study. We have defined it rather carefully for our purposes, but this does not preclude the possibility of a "more student-centered" approach that may result in surprisingly different effects upon students. Sometimes we feel that we have just begun to tap the resources of our students. We suspect that our freeing of the student's energies is only partial, and our attempts at permissiveness and acceptance may someday appear clumsy.

Certainly, the relationship of the teacher's personality to the classroom atmosphere is a crucial issue. Can a teacher be trained to be "student centered" in his teaching? Is it possible that some teachers would feel constricted and uncomfortable if they taught in a student-centered manner? While we shall find answers to many of our questions in the analysis, conclusive answers to these latter questions are still before us.

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***THE 1950 ASCD YEARBOOK*** will be off the press February 1. This publication, dealing with problems of mental health, will be a most helpful and worthy addition to the distinguished series of ASCD Yearbooks. This volume is primarily concerned with the healthy mental development of what are often called "normal" children; it is only incidentally concerned with the deviates—the extremely disturbed boys and girls. The three major sections are: Factors Determining Development and Behavior, The Child's Motivation, and Knowing and Helping the Child.

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