

Teaching Notes

An Experiment in Individualized Instruction in Political Science

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To reduce the impersonalization of large lecture classes and to enhance the opportunity for active participation by each student, individualized instructional methods were incorporated in a course on The National Executive at American University. The basis for this method was developed by Charles B. Ferster, Professor of Psychology at Georgetown University.¹

Description

The course is designed to give the student a thorough exposure to the functions, powers, theories and social impact of the American presidency, but the methods would be applicable to any course of a similar nature. Materials included a reader and several collateral works². In the usual lecture course, these are supplemented by two examinations and either a term paper or book reviews. For the experimental course, however, significant departures were made from these routine procedures as lectures, mid-term and final examinations were eliminated. Instead, coverage of the textual materials was incorporated into 21 interview sessions which replaced conventional classes. Written exercises were periodically assigned, but the central activity of the course was a series of student interviews with each other and the instructor.

This procedure was prompted by both experience and experiment. A basic principle of learning is that one learns by acting and by reflecting on what has been done or said. It is common to hear a first-year teacher remark that he has learned more in one year of teaching than in several years of schooling. If both conventional and scientific wisdom are correct, then the usual method with the professor as the sole active participant is inefficient. By reducing the role of the lecturer and increasing the active participation of students, the learning process begins to correspond to reality.

Students were given a set of study questions for every 30 pages of material. An interview would be arranged when two students, working at their own pace, finished the designated study. One student, the speaker, would then present a detailed exposition of the material, within a time limit of 15

minutes. When the speaker finished, the listener, who had taken notes, would comment on the speaker's grasp of the material, on any inaccuracies, and on related aspects of the topic. If both students agreed that the speaker had a sufficient understanding of the material, he, after completing two or three interviews, would request a written exercise from the instructor. To ensure equal effort, each speaker had to listen for each time he spoke but, other than this requirement, could proceed as rapidly as he wished through the course.

The students were told that successful completion of the first seven interviews and the exercises would entitle them to a *D* even if they progressed no further during the semester. A *C* was guaranteed at the end of thirteen interviews, a *B* upon completion of twenty interviews and an *A* upon completion of twenty-one interviews and an exercise covering the entire amount of material. In addition, one desiring an *A* or *B* was required to turn in a satisfactory term paper.

The instructor continually exhorted the students to strive for a high degree of quality. To obtain a satisfactory mark which would allow a student to proceed to the next section, the exercise had to be the equivalent of a *B* or better (the same was true of the term paper). To enforce this requirement without instilling a defeatist or resentful attitude in the students, they could repeat an exercise as many times as desired without penalty except for losing the time necessary to retake the exercise. Emphasis was placed upon a thorough grasp of the material rather than on covering a wide range of reading matter. The *A* or *B* student, of course, would have done both.

During the class meeting the students occupied themselves with studying course materials, engaging in interviews, and taking exercises. Daily attendance (which was not required) ranged from about fifteen to forty-four of a group of forty-four students, and the median was about twenty. Either the instructor or an assistant would engage in the interviews if a student could not find a partner.

The rationale for this method, as developed by Ferster, is based on the principle that spaced learning is much more efficient than massed (crammed) learning relative to retention of materials. To increase the degree of efficiency, three opportunities for reinforcement are provided: the student reads the materials, discusses them with a classmate, and takes an exercise on brief sections of material at a time. Other skills and values are also developed. Active participation in a coopera-

- 1 Charles B. Ferster and M. C. Perrott, *Behavior Principles* (New York: Appleton-Century-Crofts, 1968). Ferster also has described his work in an unpublished manuscript, "Individualized Instruction in a Large Introductory Psychology Course" (1968).
- 2 Donald B. Johnson and Jack L. Walker, *The Dynamics of the American Presidency*; Richard Neustadt, *Presidential Power*; Theodore Sorenson, *Decision-making in the White House*; Erwin C. Hargrove, *Presidential Leadership*; and Nelson Polsby and Aaron Wildavsky, *Presidential Elections*.

tive effort with fellow students is encouraged and this tends to develop a spirit of inquiry as well as habits of self-discipline. Participation is fostered by requiring the student to do his own information-gathering within a structured process and by establishing a schedule of interpersonal exchanges among the students. Habits of self-discipline are developed by reducing the coercive aspects of the learning process to a practical minimum. Class attendance is made optional, fear of failing an examination is avoided by providing for re-takes, the requirement that a student take an entire semester to complete a course is dropped, and the assumption that the instructor must assign the course grade is avoided. Thus the student supplies his own motivation, sets his own pace, and determines for himself what grade he desires.

Course Evaluation

A surprise final examination was given to the class, whether the student had finished the materials necessary for an A or not. The examination consisted of two general questions which required the student to draw upon a considerable amount of material. The questions were the same as those given to another section of the same course, taught in a more traditional manner by Dr. Cornelius Vahle. He also corrected the examinations in order to provide a comparative and independent judgement of their quality. Since it was a surprise examination, no special preparation by the students occurred, while it may be assumed that considerable cramming had taken place in the companion section. The writer felt that if the student did substantially worse on these examinations then this would be an argument in favor of the *lecture* method.

The results were mildly encouraging. Of the forty-four students, course final grades included twenty-one A's, one B, twenty C's and two D's. (The reason for a single B was due to the small margin of additional effort needed to attain an A compared to the attractiveness of the grade.) Of the twenty-two A's and B's, none were rated more poorly than a C on the final examination, three received C's, seventeen received B's, and two received A's. In Vahle's opinion, the two sections performed comparably on the examination even though the experimental class received no lectures. This would indicate that students are able to obtain, roughly, the same material through their own efforts and, at the same time, probably ensure greater retention.

Moreover, the writer was convinced that the students' performances on the written exercises during the semester were far superior to equivalent

essay examinations given during the preceding semester. This is attributed to the fact that the student took the exercise immediately upon reading the material, as well as to the virtually unlimited time available. This aspect of the course should prove to be of value to the student and encouragement to the instructor. For he can demand excellence not only in terms of content but in terms of style, grammar, and organization. Whether there was improvement in analytical ability could not be ascertained.

To check further the writer's impressions, a twelve item free-answer questionnaire was distributed to the students at the end of the final examination. All were more favorably inclined toward this method than toward the lecture method. 90 percent would take a similar course if conducted in the same manner; 60 percent found that they developed new friendships which they thought they would not have developed in a lecture course; 90 percent thought they had to use their analytical abilities to a greater degree than in a lecture course; 89 percent found a higher degree of motivation present than would be expected in a lecture course; and, 89 percent thought that the interview session was of positive benefit to the speaker. A few additional advantages were suggested by the students, including the opportunity to do high quality work; self-scheduling by the student; the existence of a relaxed atmosphere pervading the classroom; no penalties for making mistakes; and the encouragement of self-expression. As a last observation, 90 percent of the students found they had to spend 2-4 times as much time on the course as on comparable lecture courses.

The students identified as major defects the lack of lectures (23 percent) and too much student responsibility (16 percent). Other disadvantages suggested were too much detail required and insufficient supervision of the interviews.

Possibilities

There is no question but that the students enjoyed the course more than a comparable lecture class. Being an experimental class may have had something to do with this feeling. However, the tension created by the uncertainty of traditional grading procedures was almost completely absent. This, by itself would tend to improve learning conditions since psychologists' findings indicate that a condition of tension inhibits the learning process. Also, the often noticed reluctance of the student to speak with the instructor was completely absent (with most of the communication taking place in the classroom). Finally, the writer is convinced that the caliber of work he can demand is higher

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than he could expect in the more traditional classroom situation.

A few caveats are in order, however. This method need not be used in classes smaller than 20-25 since there is ample opportunity for class participation. Rather, this technique can best be used in dealing with large classes, which every school now experiences. It can provide an opportunity for a greater degree of personal involvement and personal contact with the instructor or his assistants than can be done by relying solely on the lecture method or closed-circuit television.

To deal with large groups, an instructor should have about one assistant for every 25-30 students. It is not necessary that these assistants be highly qualified, only that they have taken the course themselves and have time to devote to the enterprise, for the time factor is an obvious problem for the busy faculty member.

Lectures should not be completely dispensed with. Probably seven or eight lectures during the semester would allow one to communicate his original research and thinking and assist the student in formulating a perspective of the overall system which he is studying. This allows the instructor to take special pains with his lectures to make them worthwhile, although the student probably will not be exposed to as many different perspectives as he might be via a large number of lectures.

By use of this method, the impersonalization of the present system can be alleviated as can be the inevitable tendency to "spoonfeed" the student. If a student wishes to get by with as little work as possible he can opt for a C, but in having to do superior work to obtain it he may become enthused with the academic enterprise. The student who is capable of doing high quality work but has a bad day on an examination is not penalized; he simply re-takes the exercise. And a student who finds himself able to complete the normal course requirements in half the time is able to do so and to spend the remainder of the semester on other pursuits. He is not bound to the speed of the average student. Finally, an important benefit accrues to the instructor: he can try to assist the poorer student as well as communicate easily with all of them for his role as "grade assigner" is no longer a barrier between himself and his students.

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