*AN EXPERIMENTAL COMPARISON OF A
CONTINGENCY MANAGED COURSE WITH
LARGE LECTURE METHOD¹*

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Contingency management procedures resembling the Personalized System of Instruction (PSI) were compared with a conventional lecture method in teaching an introductory psychology course. The use of a within-subjects design in which half of the students experienced both teaching conditions made it possible to examine the reliability of test-score differences over time when subjects were balanced over conditions. In the contingency management course, material was broken down into 14 small units, each unit covering about 30 pages of text. Students were assigned to an undergraduate teaching assistant who was encouraged to develop a close working relationship with each of his/her 13 assigned students. Specifically, this meant that the assistant was to call each student by his/her first name, show an interest in the student's quiz performance, help the student understand difficult concepts, and discuss various topics of interest to the student. Each week, the teaching assistant administered up to four different 10-item multiple-choice quizzes over the week's chapter. A modified "Doomsday Contingency" required each student either to achieve a score of 80% on one of the four quizzes or drop the course. Most students passed the quiz during the first session of the week; those not passing were tutored on special areas of weakness. No student was actually forced to leave the course under the Doomsday Contingency. Although quizzes were administered on a group basis, they were scored individually while the student stood near by. In addition to the weekly quiz assignment, students under the contingency management procedures were asked to attend one lecture per week. The contingency management method departed from traditional PSI in that (1) self pacing was minimal, such that students were required to master one unit per week or drop the course, (2) teaching assistants met with students in small groups, and usually gave individual tutoring only to those students who did not pass the quiz on the first attempt, and (3) students were asked to attend one lecture per week. However, it was similar to PSI in that small units of subject matter were assigned and unit mastery was assessed through use of undergraduate assistants who delivered immediate feedback. Students in the conventional lecture group attended three 50-min lectures each week; two of these lectures followed textbook material closely, while the third, which was attended by all students, concerned material only indirectly related to the text. As a result, students in both conditions were exposed

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to essentially identical material. Students in the lecture condition could also obtain copies of the unit quizzes, although few did so. Course grades were determined by scores on two 45-item multiple-choice hourly exams, each covering half of the semester material (each worth 25%), and by a 90-item final exam over the entire course (worth 50%). These measures also served as the dependent variables. The experimental design employed a crossover technique in which one fourth of the students began with the contingency management method and then switched to lecture method at midsemester, while another fourth began with the lecture method and switched to contingency management. The other students stayed in the same condition throughout the semester, half under contingency management and half under the lecture method. On the last day of class, all students filled out an extensive questionnaire that assessed their opinions and attitudes about the teaching techniques. In addition to allowing for assessment of any progressive effects that the contingency management procedures might have had over time, the crossover design also permitted students to make meaningful comparisons of the two teaching methods, since half of the students experienced both methods in the same course. Although average test performance was only slightly higher under the contingency management condition, this difference occurred on each exam and was statistically reliable in each case. Further, the method did not interact with time, as it produced about a three-item advantage per half semester. On each of the three exams, teaching method accounted for between 5 and 8% of the total variance in test scores. Finally, attitude measures indicated that students experiencing half a semester of the contingency management procedures preferred them to the lecture technique, but that only those students with a full semester of contingency management rated the course significantly better than students in the full semester lecture course.

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