*SHORT- AND LONG-TERM EFFECTS OF CONTINGENCY
MANAGED INSTRUCTION ON LOW, MEDIUM,
AND HIGH GPA STUDENTS¹*

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Undergraduate students had been assigned to a contingency managed course or a conventional lecture course (Du Nann and Fernald, *Journal of Applied Behavior Analysis*, 1976, 9, 373-374). Two years later, some 35% (N = 86) of the original classes responded to a letter offering them \$2.00 to participate in a study of their educational experiences. These students completed a multiple-choice test on material from the course, and answered questions about activities and attitudes that might have been affected by the experience in Introductory Psychology. In the contingency management course 2 yr past, students were tested each week on a chapter of textbook material with 10-item multiple-choice quizzes. The course employed a modified "Doomsday Contingency", requiring each student to achieve 80% mastery on one of the four weekly quizzes or drop the course. Quizzes were given in small groups and scored individually, while the student stood near, by an undergraduate proctor assigned to that group. The proctor was asked to show interest in the students' quiz performances, help clear up difficult areas, and develop a friendly working relationship with each student. While many students passed the quiz on the first attempt, others were given individual tutoring, so that no one was in fact forced to drop the course. In addition to the weekly quiz assignment, students in the contingency managed group were asked to attend one lecture each week. While the contingency management course procedures had much in common with PSI (Keller, *Journal of Applied Behavior Analysis*, 1968, 1, 79-89), several departures made them unique. First, self-pacing was curtailed because students were required to master one unit per week or drop the course. Second, proctors met with students in small groups, usually giving individual tutoring only to those students who did not pass the quiz on the first attempt. Finally, students were asked to attend one lecture per week. Students in the conventional lecture group were not asked to pass weekly quizzes, but instead attended three 50-min lectures each week. Two of these lectures followed the textbook material closely, while the third, which was also attended by students from the contingency management course, covered material only indirectly related to the text. This partition of lecture content allowed material to be similar across the two instructional groups. Although students in the lecture condition were told they could obtain copies of the quizzes, few of them did so. Course grades were determined by scores on two 45-item multiple-choice hourly exams, each covering half the semester material (each worth 25%), and by a 90-item final exam, which served as a measure of short-term retention. Before analyzing the follow-up data, several characteristics of the returning students were compared to determine the comparability of the sample from the two original classes. Most important, both attrition and the current mean GPAs of students from the two classes were very similar. These considerations, and others, suggested there was no systematic sampling bias to confound comparisons of student performance. A 2 (contingency management *versus* traditional lecture) by 3 (high,

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medium, and low GPA) analysis of variance was computed on the course final-exam scores and the follow-up measures. Instructional procedure and GPA interacted on the final exam such that low and medium GPA students performed significantly better under contingency management, but there was no significant effect of instructional procedure with high GPA students. On the 2-yr retention measures, students from the contingency management course performed significantly ($p < 0.01$) better on items drawn from quizzes used in their original course, and marginally better ($p < 0.10$) on items drawn from the final exams, but no interactions with GPA appeared. Furthermore, instructional method produced no significant main effects or interaction with how many students became majors or minors in psychology, how many psychology courses were later taken, how many books in psychology were reported to have been read, or on students' evaluation of the interest and importance of psychology.

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