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Using Graded Questions to Increase Timely Reading of Assigned Material

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Abstract

We assigned students in a personality psychology class graded long-answer questions in an attempt to increase their likelihood of reading assigned class material in a timely manner. We evaluated the effectiveness of this technique by examining exam scores and student evaluations. Students performed significantly better on the exam questions that were related to the topics covered by the long-answer questions than they did on exam questions related to other topics. Students also reported having read significantly more of the assigned material when there was a long-answer question assigned, and they evaluated the method positively and recommended its use in future classes.

Using Graded Questions to Increase Timely Reading of Assigned Material

In an attempt to increase students' comprehension of material presented during lectures, course instructors often assign readings to their students before each class. Unfortunately, many students do not read the assigned material prior to class; in fact, compliance with reading assigned material has decreased in recent years (Burchfield & Sappington, 2000). Students tend to postpone preparation to a few days immediately preceding the tests (Thorne, 2000). Failing to complete readings before class is a strong predictor of nonparticipation (Karp & Yoels, 1976) and negatively affects students' learning and achievement (Burroughs, Kearney, & Plax, 1989).

Despite the potential and known benefits of reading the assigned material before class, such as enhancing the comprehension of lecture material (Solomon, 1979), motivating students to read may not be an easy task, especially when students are not given an incentive to do so. Carkenord (1994) stated "practical experience … indicates that most students don't read textbooks or journal articles as a result of their intrinsic interest and desire to learn" (p. 164). Accordingly, Burchfield and Sappington (2000) recommended the use of strategies to monitor timely reading compliance and claimed that not doing so would send a message to students that this aspect of learning is optional and of little concern to the instructor. One strategy to monitor and encourage reading compliance is the use of quizzes (e.g., Marchant, 2002; Ruscio, 2001); however, quizzes can create undue anxiety in some students. In this study, we tested an alternative strategy to increase the likelihood that students would read the assigned material prior to class: graded long-answer questions based on the assigned reading material. In particular, we tested whether graded assignments based on assigned readings would increase students'

timely reading of the material and if it would increase their performance on exam questions derived from the assignment material.

Method

Participants

Participants were 107 undergraduate students in a personality psychology course that met 12 times over the course of 6 weeks, with each meeting lasting 3 hr. For every class, we assigned students readings that consisted of two chapters in the course textbook (approximately 60 pages).

Procedure

On the first day of class, we told students that 4% of their final grade would depend on completion of two sets of two long-answer questions based on assigned readings. Their answers were to be one page in length, with single spacing. We designed the questions so that students could find the answer to these questions only by a thorough reading of most of the chapter content rather than just by searching the subheadings. An example of a long answer question was: “Briefly describe how the behavioral approach system (BAS) and the behavioral inhibition system function. Also explain in what ways the BAS is similar to and different from extraversion.” The questions were similar in format to, but more comprehensive than, the long-answer questions used in the exams. We assigned these questions in class, and they were due at the beginning of the following class. The number of students who handed in the first and second assignment was 91 (85.05%) and 85 (79.44%), respectively. The teaching assistant (TA) graded the assignments and reported spending approximately 2.5 hr on each set of assignments. The TA did not report finding any duplication of answers among students or any answers that were directly copied from the book.

At the end of the two classes for which there was an assignment due and two other randomly chosen classes for which there was no assignment due, we asked students to indicate the percentage of the readings they completed for that particular class on a 5-point scale (ranging from 0% to 100%). On the two days for which there was no assignment due, 88 and 100 students answered this question. Even though this question is likely to be subject to social desirability effects, there was no reason to believe that this effect had a greater impact on students' answers on assignment days than on non-assignment days. Moreover, because reading occurs outside of the classroom, it is difficult to estimate in an objective way how much and under what conditions students read assigned material, other than by asking them directly or by drawing inferences from quizzes and tests as done by many other researchers in the past (e.g., Marchant, 2002). The order of the assignment and no-assignment days was counterbalanced such that students completed this question on the third class, which was an assignment day, on the fifth and seventh class, which were no-assignment days, and on the ninth class, which was an assignment day. No order effects were observed.

Dependent Measures

The first set of dependent measures consisted of two exam scores. Each exam contained 60 multiple-choice questions. We derived 16 questions in Exam 1 and 18 questions in Exam 2 from the assigned readings for which students had received an assignment. For each exam, we calculated the percentage of correctly answered questions for the assignment chapters and no-assignment chapters. We carried out this calculation only for those students who completed the corresponding assignment. We excluded the exam questions based on the lecture material not included in the textbook from this

calculation. The second dependent measure was the self-reported amount of reading completed for the two assignment classes and for two random no-assignment classes.

Student Evaluation of the Method

Questions on the short questionnaire designed to obtain students' evaluation of the technique included how effective they found the assignments in encouraging them to do the assigned readings before class (1: *not effective at all* to 7: *extremely effective*), to what extent they would recommend the use of this technique in future classes (1: *not at all* to 7: *very much*), and to indicate what kind of strategies they used to complete the long-answer questions.

Results and Discussion

Exam Scores

To test the performance on the exam questions derived from the chapters that were included in the assignments, we conducted a repeated measures ANOVA for each exam. The ANOVAs revealed that, for the first exam ($N = 91$), the percentage of correctly answered questions based on the assignment chapters (78%) was significantly higher than the percentage of correctly answered questions derived from no-assignment chapters (73%), $F(1, 90) = 20.46$, $p < .001$. For the second exam ($N = 85$), the pattern was the same, with a higher percentage of correct answers on the questions derived from the assignment chapters (69%) compared to the no-assignment chapters (59%), $F(1, 84) = 53.81$, $p < .001$.

Student Reports on Reading

We conducted a separate repeated measures ANOVA to determine if the amount of readings completed for the days on which an assignment was due differed from the amount of readings completed for the days on which no assignment was due. The

analysis revealed a significant difference, $F(1, 59) = 5.69$, $p < .05$, with a mean of M = 72.75% for the assignment days and M = 67.73% for the no-assignment days.

Student Evaluations

Seventy-nine students completed the evaluation questionnaire. Students evaluated the effectiveness of the long-answer question assignments favorably (M = 5.37, SD = 1.41) and recommended the use of this technique in future classes (M = 5.43, SD = 1.37).

We asked students to select from a list the strategies they used while completing the long-answer questions: 86% said they searched for the answers while reading the chapters; the rest of the students indicated having searched for answers on the Internet, discussed the answers with friends after reading the material, and just scanned the text to find the correct answers.

Conclusion

These results indicate that the long-answer assignments increased performance on the exam questions. Students reported having read more of the assigned material when there was an assignment compared to when there was no assignment and evaluated the technique positively. Students' choice of strategies in answering the long-answer question provided insight into how they chose to answer the questions. Most of them reported having searched for the answers while reading the assigned material. To conclude, we believe that using long-answer questions can be an effective strategy to increase timely student reading of the assigned material prior to class, especially when they constitute part of students' final grade.

References

Burchfield, C. M., & Sappington, J. (2000). Compliance with required reading assignments. *Teaching of Psychology, 27,* 58-60.

Burroughs, N. F., Kearney, P., & Plax, T. G. (1989). Compliance resistance in the college classroom. *Communication Education, 38*, 214-229.

Carkenord, D. M. (1994). Motivating students to read journal articles. *Teaching of Psychology, 21*, 162-164.

Karp, D. A., & Yoels, W. C. (1976). The college classroom: Some observations on the meanings of student participation. *Sociology and Social Research, 60,* 421-439.

Marchant, G. J. (2002). Student reading of assigned articles: Will this be on the test? *Teaching of Psychology, 29,* 49-51.

Ruscio, J. (2001). Administering quizzes at random to increase students' reading. *Teaching of Psychology, 28,* 24-206.

Solomon, P. R. (1979). The two-point system: A method for encouraging students to read assigned material before class. *Teaching of Psychology, 6*, 77-80.

Thorne, B. M. (2000). Extra credit exercise: A painless pop quiz. *Teaching of Psychology, 27*, 204-205.

Notes

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