Notes

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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.

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 until 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 (Broughs, 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 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 they would increase students’ 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 the two assignment chapters and the nonassignment 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 nonassignment classes.

Exam Scores

To test the performance on the exam questions derived from the chapters 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 nonassignment 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 nonassignment 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 nonassignment 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.

Conclusions

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 questions provided insight into how they chose to answer the questions. Most of them reported searching 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 assigned material prior to class, especially when they constitute part of students’ final grades.

References


Notes

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Premedical Psychology Majors in the Laboratory

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Three trends inspired this article: (a) an increasing number of undergraduates majoring in psychology; (b) an increasing number of psychology majors seeking research experience; and (c) an increasing number of psychology majors applying for, and being accepted into, medical schools. Together, these trends create a situation in which many psychology faculty supervise psychology majors in a premedical curriculum for intensive laboratory research experience. Benefits of such experiences to students include honing of critical thinking skills and preparing to read and interpret medical research. Benefits to faculty training premedical psychology majors include the presence of intelligent, motivated students with strong mathematical and scientific research skills in their laboratories.

Psychology has long been a popular major for undergraduates, but its popularity has increased dramatically over the past 15 years (Landrum & Nelsen, 2002; McDonald, 1997). During the 2000–2001 academic year, American colleges and universities awarded more than 73,000 bachelor’s degrees in psychology (National Center for Education Statistics, 2002), a tremendous increase from 1985, when American colleges and universities awarded just under 40,000 degrees (McDonald, 1997).

As the number of psychology students has grown, the number seeking psychological research experience has also increased (Kinkead, 2003; Starke, 1985). This trend is present at elite research-oriented universities (Yale University, 2003), predominantly undergraduate institutions (Malachowski, 2003), and 2-year community colleges (Perez, 2003). It is the result not only of the growing numbers of psychology majors, but also increasing interest among students in obtaining research experience (Merkel, 2003) and increasing emphasis by colleges and universities nationwide on undergraduate research (Katkin, 2003).

Coinciding with the increase in psychology majors and the popularity of undergraduate research experience in psychology are recent trends in the cyclical pattern of the number of medical students trained in social sciences such as psychology (Association of American Medical Colleges [AAMC], 2003; Koenig, 1992). During the 1980s, medical academicians debated passionately whether undergraduates majoring in humanities and social sciences received adequate preparation for medical school curricula (e.g., Alpert & Coles, 1987; Bruer & Warren, 1981; Elks, 1981; Haddy, 1981; Ouzts & Newland, 1985). In response to this debate, researchers discovered that nonscience majors achieved admission rates, grades, and medical board scores equal to science majors (Dickman, Sarnacki, Schimpfhauser, & Katz, 1980; Koenig, 1992). As a result, in the late 1980s and early 1990s, medical school admission committees began considering nonscience