



An Exploration of Study Habits: How Do Four-Year Universities and Two-Year Colleges Compare?

How can instructors help students use more effective learning strategies in order to maximize their retention of course content? Before answering this question, we must document what is actually going on during students' study sessions. Only then can we implement an intervention to alter students' strategies in a way that benefits their performance.

What constitutes good studying has been examined previously and seems to focus on metacognition. However, it is not always clear to what degree students are actually engaging in metacognitive study habits. In 2010, Gurung, Weidert, and Jeske examined students' study habits, correlated their habits to their final grades in the course, and developed a Study Behavior Checklist (SBC) that could be used to easily track students' study habits. Because many factors impact successful study habits, the items on the SBC describe a number of behaviors including organization, application, elaboration, metacognition, and resource use. Positive correlations with final exam performance were found for a number of study behaviors, including attending class, answering all of the questions on the study guide, and completing practice quizzes.

Knowing that certain study behaviors correlate with performance, our present study seeks to update the picture provided by Gurung et. al and describe the study behaviors of an additional sample: Two-year college students, which are underrepresented in research findings that tend to focus exclusively on four-year American university students.

Participants

All study participants were students enrolled in an institution of higher education. One group of participants was enrolled in general education courses at a two-year college in Ontario, Canada. Eighty-seven percent of respondents were 18-25 years old and represented a number of majors across the college, including business, IT, justice, health, and social services. The second sample was from an American four-year university and consisted of psychology majors. No additional demographics were collected to protect student privacy and adhere to ethical and institutional guidelines.

Materials and Procedures

All data were collected in an online survey that asked students about their study habits and behaviors. We recruited students through an online announcement in general education courses and used the 35-item SBC to solicit students' self-reported use of various behaviors related to their study practices including, organization, elaboration, metacognition, and resource use. On the SBC, students rate 35 items on a five-point scale from one ("Not at all like me") to five ("Exactly like me.") Items included: "I reviewed the chapter after the lecture on that topic;" "My notes were organized very well;" "I attended every class;" "I generated my own examples about the material;" and "I crammed before the exam."

Results

American Four-Year University

In the American four-year university sample, the overall mean score for all items was 3.37 with a standard deviation of 0.187. The top-ranked items were: "I attended every class;" "I knew when the exams, quizzes, assignments were due and noted them in my planner, calendar, or phone;" "I answered every question on the study guide;" "My notes were well organized;" "I used practice exams to study;" "I noted figures, tables, charts, and sections that were mentioned in the lecture;" and "I read the difficult material slowly." The items that scored the lowest were: "I went to the book website for practice quizzes;" "I asked the professor or TA to explain material I did not understand;" "I asked the professor or TA for additional study material;" "I read and evaluated the application sections in the textbook;" "I created and answered questions about the material while I was reading in my head;" and "I created and answered questions about the material while I was reading my notes."

Canadian Two-Year College

The overall mean score by Canadian two-year college students for all items was 3.33 with a standard deviation of 0.517. For the Canadian sample, the top-ranked items were: "I knew when the exams, quizzes, assignments were due and noted them in my planner, calendar, or phone;" "I attended every class;" and "I was able to answer questions my classmates asked." The bottom-ranked items were: "I asked the professor for additional study materials.;" "I created and answered questions about the material while I was reading in my head;" "I created and answered questions about the material

while I was reading my notes;" and "I went to the book website for practice quizzes."

Exploring the Results

Overall, the mean scores in both samples were quite similar, although the scores for the American four-year university sample had less variability as indicated by the smaller standard deviation. The means were also very similar to Gurung et. al (2010), who used the same methods with another American university sample.

The four-year university and two-year college samples obtained in the present study, as well as Gurung et. al, gave very high scores to the items "I attended every class," and "I knew when the exams, quizzes, assignments were due and noted them in my planner, calendar, or phone." These consistencies point to the possibility that there is some homogeneity in the way that higher education students self-report studying, regardless of the type of institution they attend. Both samples in the present study consistently gave low scores to asking for additional study materials, going to the textbook website to complete practice tests, and creating and answering questions while studying. These items all tap into students' metacognitive skills. Many studies have shown the positive effects of metacognition on learning and reveal that students with lower grades tend to have less developed metacognitive skills

Perhaps more interesting than the consistencies are where the samples differed, particularly where the two-year college differed substantially from the four-year university samples: Answering classmates' questions, asking the professor or TA to explain material that was not understood, and using the application sections in the textbook. Perhaps not surprisingly, two-year college students reported paying more attention to the application section of the textbook than their four-year counterparts, likely because community college career and technical programs are more applied in nature than most four-year degrees. Additionally, classes at two-year colleges are sometimes smaller, which might explain why these students seemed to have more meaningful interactions with their instructors and peers.

Conclusion and Future Directions

This Innovation Abstracts serves as an updated account of students' self-reported study habits and extends previous research to examine a two-year college sample. It seems that students in two-year and four-year institutions still rely on similar study techniques as reported a decade ago, with attending class as the highest-rated item.

The accuracy of students' self-reported study behaviors and their engagement level while studying should be examined experimentally. Self-reports are not always accurate and can be unintentionally tainted

by some respondents' biases, although the distortion caused by respondents' social desirability bias appears to be lessened when questionnaires are completed on the computer.

The next step is to examine the relationship between these study habits and some objective measures of performance. Research in the area of cognitive psychology and learning predicts that certain study habits, such as those that are more active, involve metacognition, or engage in deeper processing, will lead to better retention and performance compared to what seems to be students' preferred techniques of re-reading and highlighting. As Gettinger and Seibert (2002) proposed, students need to have access to various study strategies, but also the metacognitive awareness of when and how to use them effectively.

Finally, some key demographic information such as student major, previous education, parental education, ethnicity, age, and gender should be collected to ensure a homogeneous sample and to allow us to examine possible group differences. This approach would allow for a more targeted intervention to student groups who consistently show poor study habits and performance.

Instructors are encouraged to ask their students to inventory their study behaviors as this information can be quite beneficial for students and faculty. It may help faculty guide students towards more effective study techniques or encourage exploration of a broader range of study techniques. Completing the SBC can introduce students to a variety of new methods they can use to learn the material and prepare for assessments. Considering their own study habits can also spur questions about how students might engage in various study strategies and which strategies might be better suited to which content, thus helping to develop their metacognition, a key skill in future academic and career success.

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