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## ABSTRACT

A study was conducted at the College of Saint Rose, in Albany, New York, to evaluate the effectiveness of a student workbook that accompanies the 5th edition of the textbook "Introduction to Psychology: Exploration and Application," by Dennis Coon. The study examined the academic performance and attitudes of 106 undergraduate students enrolled in four sections of an introductory psychology course during fall 1990. Two different instructors taught the four sections, utilizing the same policies, outline, content, and multiple-choice tests. Each of the instructors taught one section in which workbook exercises were required (and examined on test days), and one section in which the use of the workbook was optional. On the last day of the semester, all students completed a questionnaire on the workbook. Students were divided into two groups: those who reported completing all or most (75%) of the workbook exercises (Group A); and those who reported completing little (25%) or none of the exercises (Group B). Study findings included the following: (1) there were no differences in how Group A and Group B students went about using the workbook; (2) workbook multiple-choice exercises were frequently cited as being most helpful, while students reported the most dissatisfaction with fill-in-the-blank sections; (3) no statistically significant differences in course grades were found between students who had completed 70% of the workbook (as assessed by instructors) and those who had completed 30% of the workbooks or less; and (4) over 90% of the students who actually completed most workbook assignments felt that the activity had improved their grades. The survey instrument is included. (PAA)

ED350060

THE USE OF STUDENT WORKBOOKS

IN

INTRODUCTORY PSYCHOLOGY COURSES

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&

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Each year thousands of dollars are spent on the production, marketing, and purchase of student workbooks that accompany introductory psychology textbooks. Many instructors recommend that students use the workbooks under the assumption that such efforts will enhance achievement. There is, however, little or no literature available evaluating the effectiveness of this instructional strategy in a college population.

The purpose of the present study was to evaluate the extent and the effectiveness of the use of the student workbook that accompanies Dennis Coon's INTRODUCTION TO PSYCHOLOGY: EXPLORATION AND APPLICATION, 5th edition. Casual observation over 21 combined years of teaching experience suggested that students who used the workbook effectively and consistently did better on multiple choice tests and quizzes than those who did not. This observation was further strengthened by the frequent comments of students who, having done poorly on the first unit test, started to use the workbook and noted an improvement in their grades. The present study was a systematic attempt to evaluate this casual observation.

The subjects for this study were 106 undergraduate students in four introductory psychology classes at the College of St. Rose in Albany, N.Y. during the fall 1990 semester. Two different instructors taught the four classes. Over 80% of the students in the classes were freshmen and sophomores. All classes were taught using the same course policies, outline, content, tests, and

quizzes. The three unit tests and five quizzes were in multiple choice format; all items were drawn from the item bank that accompanies the test. At the beginning of the semester, each instructor randomly assigned the workbook to one of her two sections; the remaining class was offered the option of using the workbook but was not required to do so

All students required to use the workbook were told to bring their workbooks to class on the day of each unit test. While the test was in progress, each instructor and an aide estimated how much of the workbook assigned for that unit each student had completed. This was done primarily to increase compliance among students required to use the workbook. On the last day of the semester, students in all four sections filled out a questionnaire evaluating their use of the workbook. The questionnaire appears in Appendix A.

For the purposes of this analysis, students were divided into two groups based upon their responses to the questionnaire: those who did all or most of the workbook exercises and those who did little or none. These groups were combined across instructors since there appeared to be little difference between them based on instructor differences. The groups were also collapsed over the assigned vs. the unassigned conditions since several students in the classes that were offered the option of doing the workbook did it, while several students who were required to do the workbook did not. Students were included in the "assigned workbook" group if

they reported on the questionnaire that they had completed all or three quarters of the exercises or only the multiple choice sections of the exercises. Students were included in the "not assigned workbook" group if they reported on the questionnaire that they did not do the workbook at all, did only about a quarter of the exercises, did only the fill-in sections of the exercises, or did the exercises for only one of the three course units. This was done to maximize differences between these two groups. Although students who did none of the workbook were instructed not to complete the questionnaire, they did complete the demographic section of the survey. The final "assigned workbook" group was composed of 36 females and 15 males, while the final "not assigned workbook" group was composed of 8 females and 13 males.

Virtually all of the students in the classes who were assigned the workbook and, therefore, selected for the "assigned workbook" group reported purchasing the textbook and attempting at least some of the exercises. This is not surprising in view of the fact that students were told to bring their workbooks to class on the days of each unit exam. What is somewhat interesting is that over half of the students in the "not assigned workbook" group also purchased the workbook. However, slightly less than half of the group selected to participate as the "not assigned workbook" group reported attempting any of the exercises. Apparently assigning the workbook as required activity increases the probability that students will purchase and

attempt at least some of the exercises.

There were no differences in how students in the "workbook assigned" and "workbook not assigned" groups used the workbook. Slightly less than half of all student participants reported that they studied each workbook chapter after studying the textbook chapters. For about 10% of all students, doing the workbook was their primary studying activity. Another 10% of all students reported that they used the text and workbook simultaneously. Virtually all participating students reported that they checked the accuracy of their answers with the answer key.

All except 10 students reported that they found the workbook helpful. The multiple choice exercises were frequently cited as being the most helpful. Several students felt that the workbook could be improved by increasing the proportion of multiple choice items and reducing the proportion of fill-ins. Students' biggest complaints about the workbook centered around the fill-ins. They complained that these exercises parroted the text verbatim, were "too specific", required them to simply memorize material, and, therefore, did not contribute to their understanding.

One student who anticipated receiving an "A" in the course did not find the workbook reflective of college level work; but most of the students who commented claimed that the workbook provided them with a good review for the tests and helped them highlight material they would have otherwise ignored. According to one student, "It

made me think".

Over 90% of the students who actually did the workbook reported that they thought this activity improved their grades and every student who did the workbook reported that they would use the workbook again. However, about 70% of the students who did very little of the workbook felt that it did not improve their grades. Thirty percent of this group felt it would have improved their grades but this apparently was not sufficient to motivate them to do more of the workbook. Sixty percent of those who did not use the workbook said they would use the workbook if they ever again had the opportunity.

Inspecting the data more closely suggested that within the classes who were assigned the workbook, some students actually did the workbook and some did not. This was objectively verifiable since each instructor had estimated how much of the workbook each student had completed on the day of each unit exam. To assess the achievement levels of workbook users vs. non-users more specifically and more objectively, each instructor evaluated how much of the workbook exercises for the entire course each student had completed. The mean course grade of students who completed 70% or more of the workbook for the entire course was compared to that of students who had completed 30% or less of the exercises. This resulted in 38 students who actually completed the workbook and 9 students who did not. Analysis revealed no significant differences

between the two groups in terms of their final course average ( $t=.20$ ,  $df=45$ , ns). This may have been due to the small number of students not completing the workbook, self-selection factors, or, most likely, to the greater variance among students in the workbook group.

All but four students in the study described themselves as "White, non-Hispanic". The responses of the four minority students did not differ from their non-minority counterparts. It is typical that the number of minority students at this college who take introductory psychology is small, although it has been increasing recently.

In conclusion, it would appear from this study that students who do the workbook exercises find them helpful and would use the workbook again, despite the lack of statistically significant achievement differences from their non-workbook using peers. In view of this, procedures designed to encourage students to comply with the workbook assignment seem in order.

Students report that they are more likely to do the workbook exercises if their tests/quizzes contain some of the workbook items. Improving the quality of the workbook by shortening the length of the exercises for each chapter and replacing some of the fill-ins with additional multiple choice items was also recommended. Giving students credit for completing all workbook exercises assigned has also been found to increase compliance, in our experience. Since a frequent complaint of students in this

study was that the workbook repeated the text almost verbatim, instructors using the Coon text might more productively use the "Mastery Study Guide" that also accompanies this text. This study guide is somewhat more conceptually oriented, more abstract, and more individualized. Thus, students might find the Mastery Guide more appealing. Future research in this area might evaluate the usefulness of more conceptual study guides compared to the more concrete type of guide evaluated in this study. Additionally, procedures designed to secure more representative samples would also be in order to help test for any aptitude-treatment interactions.

Right now, it is probably safe to say that study guides improve the performance of at least some students, depending on the initial skills of the learner and the quality of the guide. Therefore, it makes sense, at the very least, to recommend the use of study guides to your students and perhaps to require them if you sense that you have an especially reluctant or underprepared group of students.

APPENDIX A  
WORKBOOK SURVEY

Directions: Read each of the following statements and circle the response that best describes your attitudes and behaviors. Your response in no way will influence your final grade in this course.

1. Did you purchase the student workbook that accompanies the text for this course?
  - a) Yes
  - b) No
  
2. If your answer to the above question is "no", you need not complete the rest of this survey. If you answered "yes", did you attempt any of the exercises in the workbook?
  - a) Yes
  - b) No
  
3. If you attempted the exercises in the workbook, how much did you do? Circle all that apply.
  - a) all the exercises corresponding to the required chapters from the text
  - b) about three quarters of the exercises corresponding to the required chapters from the text
  - c) about half of the exercises
  - d) about a quarter of the exercises
  - e) only the fill-in sections of the exercises
  - f) only the multiple choice sections of the exercises
  - g) only the exercises for Unit I
  - h) only the exercises for Unit II
  - i) only the exercises for Unit III
  
- 4) Which of the following best describes how you used the workbook? Circle all that apply.
  - a) studied each textbook chapter, then did the workbook
  - b) did each workbook chapter, then studied the text
  - c) used the workbook as my primary studying activity
  - d) just filled in the workbook exercises by looking at the answer key at the end of the chapter
  - e) read all the text chapters for the unit, then did the workbook exercises
  - f) other: \_\_\_\_\_.
  
- 5) Did you check the accuracy of your answers?
  - a) Yes
  - b) No
  
- 6) Did you find the workbook helpful?
  - a) Yes
  - b) No

Explain:

- 7) How would you rate the effectiveness of your study habits before using the workbook?
- a) Ineffective
  - b) Poor
  - c) Average
  - d) Good
  - e) Excellent

- 8) Do you think that doing the workbook improved your grades?
- a) Yes
  - b) No

- 9) How would you change the workbook to make it more helpful?

Explain:

- 10) Given the opportunity, would you choose to use the workbook again?
- a) Yes
  - b) No

- 11) Please indicate your year in college: Fr So Jr Sr

- 12) What is your date of birth?

- 13) What grade do you expect to get in this course?

14. Are you: a) female  
b) male

15. Ethnicity/Race. Which of the following describes you best?

- a) African-American
- b) Asian-American
- c) Hispanic/Latin American
- d) Native American
- e) White, non-hispanic
- f) Other (please specify): \_\_\_\_\_.

# END

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