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Notes

Using Group Web Page and Video Clip Creation Exercises in Introductory Psychology Courses

Terry F. Pettijohn II and Elizabeth G. Perelli
Mercyhurst College

Students (N = 66) enrolled in introduction to psychology courses at a small, private college created group Web pages and video clips and then shared these creations with classmates as part of a group project on major topic areas covered in class. As predicted, students scored significantly higher on comprehensive final exam multiple-choice questions pertaining to their group project topic area compared to questions in other topic areas. Furthermore, students reported that they enjoyed working with other students in their group, enjoyed completing the project requirements, felt more comfortable using technology, and believed at the end of the term that the group project helped them learn about psychology.

Professors strive to facilitate student learning and excite students about course content using various instructional methods. Technology and the Internet offer exciting potential to generate student interest and interactive, collaborative learning experiences. Although research has shown the benefits of group projects on undergraduate psychology course outcomes (e.g., Millis, 2001), the role of technology in this relation has not been explored.

We developed a group project to assess this combination and evaluate the value of assigning group projects with technology components. The assignment was worth approximately 5% of the final course grade. Groups of 3 or 4 students explored a unit within an introduction to psychology course (biopsychology, developmental, sensation/perception, learning, cognition, motivation/emotion, personality, clinical, or social psychology). Part 1 of the group project required students to create a group Web page to learn more about their specific topic area and teach other students about their particular unit. The content was to include a general introduction and overview of the unit, at least 10 substantial information Web site links with brief descriptions that further clarified the unit, and at least two interactive Web exercises (i.e., quizzes, demonstrations, dynamic images). Students used Microsoft Word® to create their group Web pages, and the first author (the course instructor) posted the work on the course Web site. The instuctor led a brief instructional session on using Word to create Web pages at the beginning of the term. This orientation was necessary because only 2 of 67 initial students indicated prior experience making Web sites.

Part 2 of the group project required students to create a group video clip that expanded and demonstrated their knowledge of their same assigned topic area and to share this information with the class. Students produced a short (approximately 3 min) digital video segment that provided a real-life example or application of the information covered from their assigned unit. Students used a digital camcorder to record these clips. Some examples included skits of how individuals recognize emotion; interviews with other students showing how memory and motivation affect students during exam time; and examples of psychological assessment tools, such as the Rorschach Ink Blot Test, to measure personality. Groups shared these short video clips in a Microsoft PowerPoint® presentation at the end of the term, as part of a class review session for the comprehensive final exam.

The group Web page project and group video clip project allowed students the opportunity to work collaboratively, apply their knowledge, think creatively, use technology, and share information about psychology. Due to the interactive nature of group projects and the in-depth nature of the project, we hypothesized that students would score higher on their respective group topic area compared to other areas on a comprehensive final exam. We also hypothesized that completion of the group project would facilitate learning, make psychology more enjoyable, and help students become more comfortable using technology.

Method

Participants

Sixty-six students (50 women, 16 men) enrolled in two concurrent sections of an introduction to psychology at a small, private, college in the northeastern United States participated in this study. Students were traditional-aged and predominantly White, representing the typical student enrolled at this college. I randomly assigned students in each

section to groups of 3 or 4 and assigned the groups one of nine course topic areas coinciding with course instruction.

Materials and Procedure

To assess the effectiveness of the group projects, I administered a comprehensive multiple-choice final exam to each class at the end of the term. I included questions from course material divided into topic areas that coincided with the topic areas assigned to student groups. Tests included between 8 and 12 questions to assess each of the topic areas. I created the final exam prior to the presentation of group projects and therefore did not design the exam to specifically test group project information. There was some general overlap between group presentation topics and exam questions, but this overlap was distributed evenly among group areas. More important, the information reported by groups was shared with the entire class, not just between the group and the instructor.

In addition, we created a survey about the use of technology and how these group projects affected the student learning experience and distributed the questionnaire after the groups completed their projects. The survey asked students to indicate yes or no to the following questions: Did you enjoy working with the other students in your group? Did you enjoy completing the project requirements? Do you feel more comfortable using technology after completing this project? Did the group project help you learn psychology? The survey had additional space for students to explain why or why not and to make general comments about the experience.

Results

As predicted, students scored significantly higher on their respective content area compared to other areas content on the final exam, $t(65) = 3.00, p = .004$ (87.1% vs. 80.0% correct), $d = .37$. The majority of the students also indicated that they enjoyed working with other students in the group, $\chi^2(1, N = 59) = 51.27, p < .001$ (96.6% = Yes); they enjoyed completing the project requirements, $\chi^2(1, N = 59) = 47.61, p < .001$ (94.9% = Yes); they felt more comfortable using technology after completing the project, $\chi^2(1, N = 59) = 18.46, p < .001$ (78.0% = Yes); and that the group project helped them learn psychology, $\chi^2(1, N = 59) = 47.61, p < .001$ (94.9% = Yes). All of those who indicated they did not feel more comfortable using technology after completing the project explained that they were already comfortable using technology before conducting the project.

Discussion

This project demonstrates how professors can incorporate technology-rich group exercises to enrich the learning experience in introductory psychology courses. Not only did this project lead to increased learning of a particular area of psychology, it was also an experience students enjoyed and an exercise that increased their comfort level using technology. Almost all students indicated they had no previous experience making Web pages at the start of the term, and few students had used digital camcorders, but by the end of the term,

each group had produced quality projects. The effort involved in making the Web pages and video clips was quite thoughtful and creative. Students enjoyed working together, using technology, and learning about psychology. Apart from the surveys and final exam scores, students also mentioned their positive experiences with the project informally outside of class and on course evaluations.

Does this group project increase depth of material understanding at the expense of breadth of material understanding? We do not believe so. Although we did not have another class without group projects for comparison purposes, we did consider the results of a final exam from a previous section of introductory psychology taught by the first author. Although actual course content was not identical and some of the final exam questions were slightly different, final exam scores from these two sections were not significantly different. The similar final exam scores suggest that the level of material understanding at the end of the course for the group project classes was most likely not confined to one single area. Additional studies may investigate the depth versus breadth issue in the future.

There are several potential refinements to the project that may be addressed in future research. Redesigning the assessment tool to include Likert-type scales to evaluate student perceptions would provide a more sensitive indication of the effectiveness of the group project. Additional questions about the amount of time students invested in the project or how much effort each group member contributed may also be useful information. If a single group project can have these effects, perhaps requiring additional, smaller projects using technology for each content area throughout the term may also increase learning in multiple areas.

Although this group project was a worthwhile experience, it did require additional effort and time on the part of the instructor. The first author was familiar with developing Web pages and using digital video prior to incorporating this requirement, and this familiarity was necessary to answer questions and troubleshoot throughout the term. Lack of this knowledge would require additional preparation time and could make the project unfeasible. For each section, the instructor spent an estimated 30 min in class leading an informational session on how to make Web pages, 1 hr transferring completed group Web pages to the Internet, and 2 to 3 hr transferring the digital video from the camcorder onto a computer and converting the footage to a digital file to incorporate into a PowerPoint presentation. The instructor also spent some extra time with individual students, grading contributions, and reserving equipment. The unavailability of resources and larger class sizes may be an obstacle for some professors.

Student effort and time involved with the project is more difficult to estimate, as some groups certainly spent more time and effort on their creations than others. A rough estimation of time invested in these group projects would be 3 to 5 hr for the Web page and 3 to 5 hr for the video clip creation. Some of the groups met together initially, developed a plan, divided the tasks among members, completed some individual work, and met again to put all the individual pieces together. Students indicated some minor problems getting together with their groups outside of class due to work, sports, and other conflicting activities. In all, this was a positive exercise that facilitated learning, excitement for psychology, and comfort using technology.

Reference

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Group Differences in Academic Achievement: Service Learning in a Child Psychology Course

Kari Knutson Miller and Shu-Chen Yen
Department of Child and Adolescent Studies
California State University, Fullerton

We analyzed the relation between service learning and academic achievement and sought to determine whether characteristics of the service experience mediate academic outcomes. We compared outcomes associated with non-service-learning, indirect service-learning, and direct service-learning conditions. Students participating in direct service-learning experiences incorporating structured reflections achieved a greater mastery of course learning goals than students participating in indirect service-learning activities. Students participating in direct service-learning experiences also scored higher on the final exam than nonservice learners.

The purpose of this investigation was to examine the impact of service learning on academic outcomes. Although the literature generally notes a positive relation between service learning and academic achievement, questions remain due to measurement or design issues such as student self-report (Hardy & Schaen, 2000), self-selection of service-learning or non-service-learning options (Reeb, Sammon, & Isackson, 1999), and instructor effects (Marcus, Howard, & King, 1993).

Shastri (2001) and Strage (2000) addressed several of these concerns in studies of performance outcomes associated with service-learning experiences in educational psychology and child development courses, respectively. Shastri reported nonsignificant group differences on achievement as measured by exams. Strage found group differences were significant on second and final exams; further analysis of the second exam revealed that service learners achieved higher scores on essays, but not multiple-choice components. As in-

structors commonly use exams that include multiple-choice questions to measure academic outcomes, specific characteristics related to the service-learning experience that promote achievement in this context need further exploration.

This investigation is an extension of Knutson Miller, Yen, and Merino (2002); they examined academic outcomes related to non- and indirect service-learning experiences in a child psychology course. Indirect service-learning experiences were those in which students learned about a community, applied course knowledge to create a service or product designed to meet community needs, and analyzed course content through this application (Connor-Linton, 1995). In the context studied by Knutson Miller et al. (2002), indirect service-learning participants developed resources based on needs articulated by tutors in the America Reads and Counts (ARC) Program and disseminated these resources at tutor training sessions. Participants submitted reflections connecting this experience with course learning goals at the conclusion of the semester. Results indicated between-group differences on measures of academic achievement, including exams, were not significant. The authors suggested two potential modifications for future service-learning integrations. First, they recommended that instructors consider the potential impact of direct versus indirect service-learning experiences on the achievement of course learning goals. Second, the authors suggested that instructors design prompts for reflection that require participants to link service experiences and course themes on a regular, systematic basis. The purpose of this study was to compare academic outcomes across three conditions. In addition to the conditions studied by Knutson Miller et al., we considered the impact of direct service-learning experiences incorporating structured reflection prompts.

Method

Participants

Participants included 266 students enrolled in an upper division undergraduate child psychology course during three subsequent semesters (Semester 1, $n = 103$; Semester 2, $n = 91$; and Semester 3, $n = 72$). The majority of the participants were women ($n = 259$), and all were junior- and senior-level child and adolescent development majors. For the purpose of this investigation, we designated Semester 1 as non-service learning, Semester 2 as indirect service learning, and Semester 3 as direct service learning. Participants were unaware of these designations prior to the first day of class.

Course Description

Course content, exams, and instructors were consistent across conditions. Noncumulative midterm and final exam questions required analysis of contextual situations and application of course themes in a multiple-choice format. All students also completed an applied course project that required identification of a theme related to development in middle childhood, review of relevant scholarly literature, and identification of practice implications in written format (e.g., newsletters, handbooks, resource guides). Project assessment was based on a standardized grading rubric.