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EVALUATING TANDEM TESTING AS AN INSTRUCTIONAL TOOL

For several years many of the faculty members in our psychology department have utilized a tandem testing procedure in our classes. This procedure allows students to test in pairs and began as a response to a change in our student population. Our student population saw an increase in first-generation college students, students who had little background or experience in the expectations and demands of college. By empowering students with more control over their educational experience (through choices in the type of testing situation they might use), we sought to ease their transition into post-secondary education. We have found that the majority of students prefer tandem testing. Further, incidents of academic dishonesty have dropped to nearly zero in classes in which tandem testing is used.

When tandem testing is offered as an option, the general procedure is for students to take the first exam individually. They are then given the option to test with a partner for all subsequent exams. The choice of a partner is theirs as is their continuance with tandem testing. Thus, students may try tandem testing and go back to individual testing if they wish. They may also change testing partners if they wish.

Students almost universally appreciate the option (even if they elect not to use it), with participation ranging from 66% to 100% of any class. When questioned informally, students state that they believe tandem testing helps them and improves their grades. When we have described what we were doing to other faculty, their primary concern was whether this process would lead to grade inflation. Therefore, we decided to examine test grades to determine whether tandem testing inflates grades. Additionally, we examined whether any improvement is universal or applies only to certain ability levels of students.

Participants

We compared test scores for high-ability and low-ability students over three tests for two sections of day students and two sections of evening students enrolled in an introductory psychology class in a large southwestern community college. A total of 80 students participated in the study.

We did not use students who dropped the course or missed more than one exam. High-performing students scored above 70 on the first exam. Low-performing students scored below 70 on the first exam. This criterion was chosen because a 70 is the lowest score for a grade of C, the minimum grade for transferring credit to most other institutions.

Procedure

All students took their first test individually. These test scores were a standard of comparison for future tests taken individually or in tandem. Students always had the option of testing individually. The tandem condition paired two students (or, in rare cases of odd numbers of total students wishing to use tandem testing, three students). Before we returned grades to students, we asked for voluntary, informal feedback about their reaction to cooperative testing and the effect they expected it to have on their grade.

Results

We compared all grades from the first test with grades from tests two and five. Grades from test two and test five were significantly higher than grades from the first test. To see whether this increase in grades applied to all students, we compared the scores of high- and low-performing students from tests two and five with the first test. There were no significant differences in scores for high-ability students.

To determine whether the significant difference in scores from the first test to the second and fifth tests was due to the use of tandem testing, we compared scores from individuals testing alone with scores of students testing in tandem. In all cases, we found no significant differences.

These results indicate that test scores increase over the course of the semester. This increase is due to the

increased performance of low-ability students. However, this increase in performance does not appear to be due to the use of tandem testing. Since there is no significant difference in achievement in test grades when using tandem testing, the use of tandem testing does not appear to create grade inflation.

Discussion

The results indicate that there is no significant difference in test grades between those students who tested individually and those who chose to test in tandem. These findings suggest that tandem testing does not necessarily improve test scores.

Further, the results imply that test scores for high-performing students do not significantly increase over the course of the semester. Additionally, individual versus tandem conditions do not make a difference in high-achieving student scores.

Low-performing students show significant increases in test scores during the semester. However, these increases are not the result of testing individually or in tandem. Therefore, improvement in test scores for low-performing students occurs whether or not the students use tandem testing.

Since there were no significant differences between individual and tandem testing, tandem testing as described here does not result in grade inflation.

Why did tandem testing not appear to improve student performance? Students had no specific training in tandem testing. Moreover, students selected their own testing partner and could change partners if they wished during the semester.

So, if cooperative testing does not increase achievement for either high- or low-achieving students, what are its benefits? Qualitative data gathered after each test suggest that one benefit may be the reduction of test anxiety. Students reported that having the opportunity to talk with others during the exam drastically reduced their anxiety levels. In our experience, many first-time, first-generation college students, older students, and nontraditional students exhibit an excess of arousal in testing situations. Surprisingly, they believed that their grades improve with tandem testing.

Moreover, students said that the exam is a learning experience. They have the opportunity to explain material they know and to hear explanations about material they do not know when in discussion with other students. This process, they believe, increases their understanding and helps them better learn the material.

The advantages of tandem testing may lie in the eye of the beholder. Students participating in tandem testing experience less anxiety and believe that they are doing better academically. They perceive that they have more freedom and a greater responsibility for their education. Perhaps this translates into more and better learning that is not evident in the testing situation. Finally, is it too much of a stretch to believe that tandem testing is part of this process of cooperative learning?

Therefore, even if there are no demonstrable achievement gains with tandem testing, the decrease in anxiety that students report and the students' perception of the course, the subject matter, and their achievement may yield extremely reliable benefits in other arenas and other courses.

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