Effects of Collaboration on Student Productivity, Accuracy, and Retention

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The effects of collaboration on accuracy, retention, and productivity were measured through this project to determine if a factor such as collaboration can have a positive impact on overall student success. Approximately 320 students participated in this research across four days in two sets of two days separated by one week. In the first set of two days, all students did the activity independently to serve as the control. On day one, students read a reading passage and answered 15 multiple-choice questions about this passage. The following day, a posttest with the same questions was given. The next week, the same basic procedures were repeated, however, one third of the classes did the activity with collaboration with anyone in the class (whole group collaboration), one third did the activity in small groups of 2-3 students, and the final group repeated the control procedures. The posttest procedures were consistent between groups. Using an analysis of covariance (ANCOVA), it was determined that students working in small groups scored significantly higher in terms of accuracy than both those in the whole group collaboration condition and those who repeated the control. However, despite the increase in accuracy for students working in small groups, there was no significant increase in retention. While the whole group collaboration yielded the highest retention, this difference was not significant. In terms of productivity, both groups with collaboration took significantly longer, as expected. Small groups did yield the highest accuracy, however, retention was not significantly affected. After additional experimentation (involving about 80 additional participants), retention was increased by about 20% for students working in small groups.

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