CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY

Name(s)

Leila Elasaad; Leia Ryan

Project Number

J0706

Project Title

Attention vs. Retention: Effects of Notetaking on Short and Long Term Memory

Abstract

Objectives

Many students prefer to take a photograph of the teacher s notes with technological devices rather than hand-write their own notes. We wondered if this might have an impact on student focus and retention of information during the lesson. We designed a test to try to see if we could discover an answer.

Methods

In our experiment, we tested 120 students in grades 5,6,7 and 8. We divided them into two groups: a control group and an experimental group. We created a lesson about an obscure animal species to eliminate the potential of prior knowledge as an interfering factor. We wrote a quiz to assess recall of the subject matter. Both groups listened to the lesson presented by the teacher. The control group was instructed to take their own notes. The experimental group just listened, and was assured that they could take an iPad photograph of the instructor s notes at the end of the lesson. Once the lesson was finished, both groups were immediately given a memory test on the presented information. One week later, they were given another copy of the same test to attempt to evaluate long term retention.

Results

According to our results, the collective average of all test subjects scores in the control group taking notes was 12.75% higher than the experimental group counterpart for the short-term recall test. In the long-term recall test, the collective average of the subjects scores in the control group taking notes was 8.75% higher than the experimental group. In summary, the subjects who took notes did 12.75% better than those who just listened, waiting to take a photograph at the end of the lesson. On the long-term memory recall test, the note-taking group also performed significantly better than the experimental group. On average, the female subjects scored higher than the male subjects by about 2.00%, which was no significant difference.

Conclusions

Overall, the notetaking group earned an average score of 84.00% on the short-term test and an average score of 70.75% on the long-term test. The picture-taking group earned an average score of 71.25% on the short-term test and an average of 65.00% on the long-term recall.

Summary Statement

We designed a project to try to determine if taking written notes versus simply taking a photograph of the teacher s notes would impact student focus and retention of information.

Help Received

Our science teacher, Mrs. Hunker, helped distribute quizzes.