

Karyn Jordan

EDG500: Educational Research and Statistics

Lab 12: Results

Research Findings

This study's statistical findings indicated that annotation as a treatment intervention to increase reading comprehension scores was not significant. The null hypothesis cannot be rejected in favor of the alternative hypothesis, which is that summative test scores will improve significantly enough to conclude that annotation and note-taking are a strategy that can be used in the elementary classroom to improve reading comprehension and increased performance on standardized tests.

Research has shown that in classrooms where students have utilized annotation over the entire school year, statistically higher test scores have been achieved. The findings of this study are consistent with other short-term research studies. A positive impact has resulted and created a positive effect, as evidenced in the measure of central tendency. However, more time is needed to significantly influence the summative test results.

Limitations and Recommendations

The short duration of this study is a notable limitation. The impact of the intervention on improvement in the mean score over a short four-week period speaks to the potential. Also, the student participant size influenced the statistical significance. This study tested a classroom with 33 students. A classroom with fewer students and the same mean score improvement would have been statistically significant at the .05 level. Another area for improvement is the phenomenon of the highest test score achievers testing down on the second test and a limited growth capacity. At the same time, the lower scorers show more improvement; the higher scorers can decrease achievement.

Further recommendations are to repeat the study for a more extended period with a slightly smaller participant size and in multiple subjects. It is known that annotation positively impacts student learning to improve retention and reading comprehension. With the rise in online education, surface reading is competing for the minds of today's students. There is a greater need for elementary teachers to pull together and engage in action research locally, regionally, and nationally.

Annotation is a higher-level cognitive skill; therefore, as students develop this skill, significant demand is put on their cognitive learning and academic achievement. When this skill is regularly practiced, the cognitive load will be lightened with increased skill and practice. Therefore, making it a regular exercise will foster an ability to obtain a wider breadth of knowledge when engaging in the text.

Implications for Practice

While the research conclusions that are inferred from the data and statistical findings are not statistically significant to reject the null hypothesis, the data also provides a clear indication that annotation positively impacted the test scores with an increase in the mean scores and a central tendency that lined up with a standard bell curve. The decrease in the interquartile range from 20.00 to 12.50 shows the spread of the middle half of the data closer to the center. This infers that the students in this classroom were improving and lining up with the expected results. Overall, the whole class improvement is positive.

While the need exists to perform better on standardized testing, it is but one form of assessment. As the learner further develops skills that are transferable to their learning domains in and out of the classroom, other formative assessments can indicate increased performance and a student's educational productivity. With the awareness of Text Structure Strategy becoming highly relevant in school today, especially in content area subjects and higher demands for informational complexity, annotation is a strategy to increase understanding and comprehension by engaging with the text. Annotation is one part of the journey.