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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 significant at the .01 level. The null hypothesis was rejected in favor of the alternative hypothesis: that summative test scores will improve significantly enough to conclude that annotation and note-taking are a strategy that enhances and favorably impacts reading comprehension when used in the elementary classroom to increase test scores and performance on standardized tests.

Research has shown that even statistically higher test scores have been achieved in classrooms where students have utilized annotation over the entire school year. The result is a positive impact, as evidenced in the mean and median central tendency measures. However, more time could influence the summative test significantly higher. The findings of this study are consistent with other short-term research studies.

### **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. The phenomenon of highest test performers testing down on the second test and a limited growth capacity; the lower scorers showed more improvement.

It has been acknowledged in other studies that annotation positively impacts student learning to improve retention and reading comprehension. Further recommendations are to repeat the study for a more extended period with multiple subjects. 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 practiced regularly, the higher-level skills will strengthen, and the cognitive load of annotation will be lightened. Therefore, making it a regular practice will foster an ability to obtain a wider breadth of knowledge when engaging in the text.

### **Implications for Practice**

The inferred research conclusions from the data and statistical findings are statistically significant to reject the null hypothesis; the data also clearly indicates that annotation positively impacted the test scores with an increase in the mean scores and central tendency 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. It also infers that the students in this classroom were more capably 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 validate increased performance and the 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.