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*Leaping Forward: A Comparison of Learning Using Virtual and Traditional Frog Dissection Methods*

The purpose of this project was to compare virtual and traditional dissection methods to determine which was more effective in teaching students frog anatomy. In science study programs, students may be uncomfortable with dissecting animals, which led me to question if virtual dissection would be an acceptable replacement. The experiment involved testing seventh grade students about frog anatomy after they had performed either a virtual or a traditional dissection. After they had performed both methods, the subjects were given a survey asking which method they preferred and the reasons why.

The experiment appeared to confirm my hypothesis that the traditional method is more effective for teaching frog anatomy, since the students performing the traditional method scored consistently higher on an identical test given to both groups. In addition, the survey showed that 76% of the subjects preferred the traditional method over the virtual method because it was more hands-on and interactive, because they could more easily visualize the organs, because they could work together in pairs, and because they could ask for assistance if needed.

The two groups of test scores did not prove to be statistically different using a standard deviation Y error bar test, likely because of the small sample sizes. However, a trend could be seen, and if the group sizes were larger, the difference would likely prove to be statistically different. In conclusion, the traditional dissection method appeared to be a more effective and more preferred method for teaching frog anatomy to students than the virtual method.