

How the Use of a Virtual Cadaver Table Affects Student Understanding of Anatomy and Physiology

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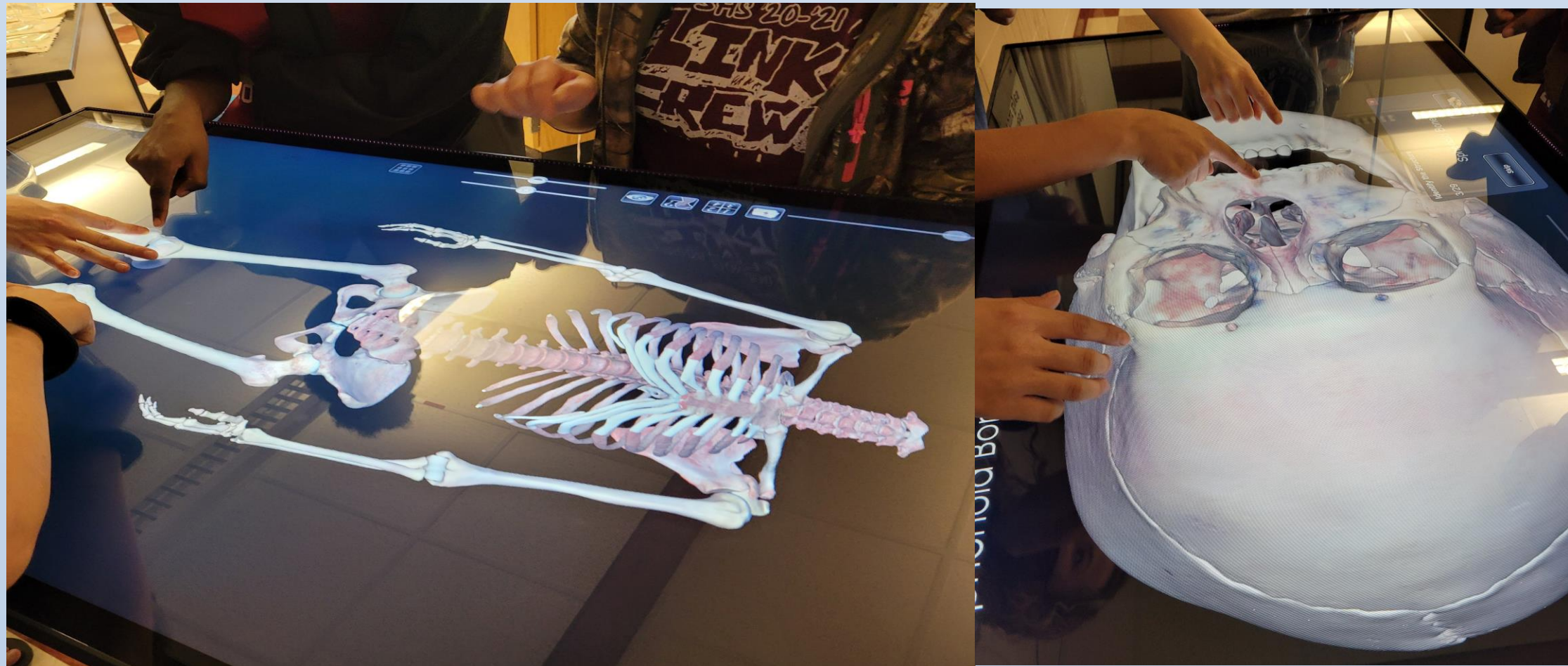


Background:

The school district purchased a virtual cadaver table to be used for teaching anatomy and physiology. The table has four different cadavers (male and female) that students can view and work with using different tools in the program. The purpose of this research is to discover if the use of this table improves student understanding of anatomy and physiology.

Research Questions:

1. How is student engagement impacted with the use of the virtual cadaver table?
2. How does the use of a virtual cadaver table affect student retention of material?
3. What are student perceptions of the use of this technology and its contribution to their education?
4. How do students feel about the use of the table outside of class time as it typically takes longer to complete labs on the Anatomage Table?
5. How do lab grades change for students using the table vs students who do not?



Sample:

The sample consists of 22 student that received a B or better in biology. There is a variety of different levels of school activity involvement with only a few of them having jobs outside of school. The school has a high socioeconomic status as it is near an oil field

Treatment:

- The students were split into two groups.
- One group used the table for their labs and the others used standard diagrams and activities for different parts of each system during the lab.
- This was done for the skeletal unit
- The groups switched for the muscle system unit .

Data:

The data gathered in this study includes a survey of learning styles (figure 1), pre-test scores, summative assessments (figure 2), and retention test scores (figure 3).

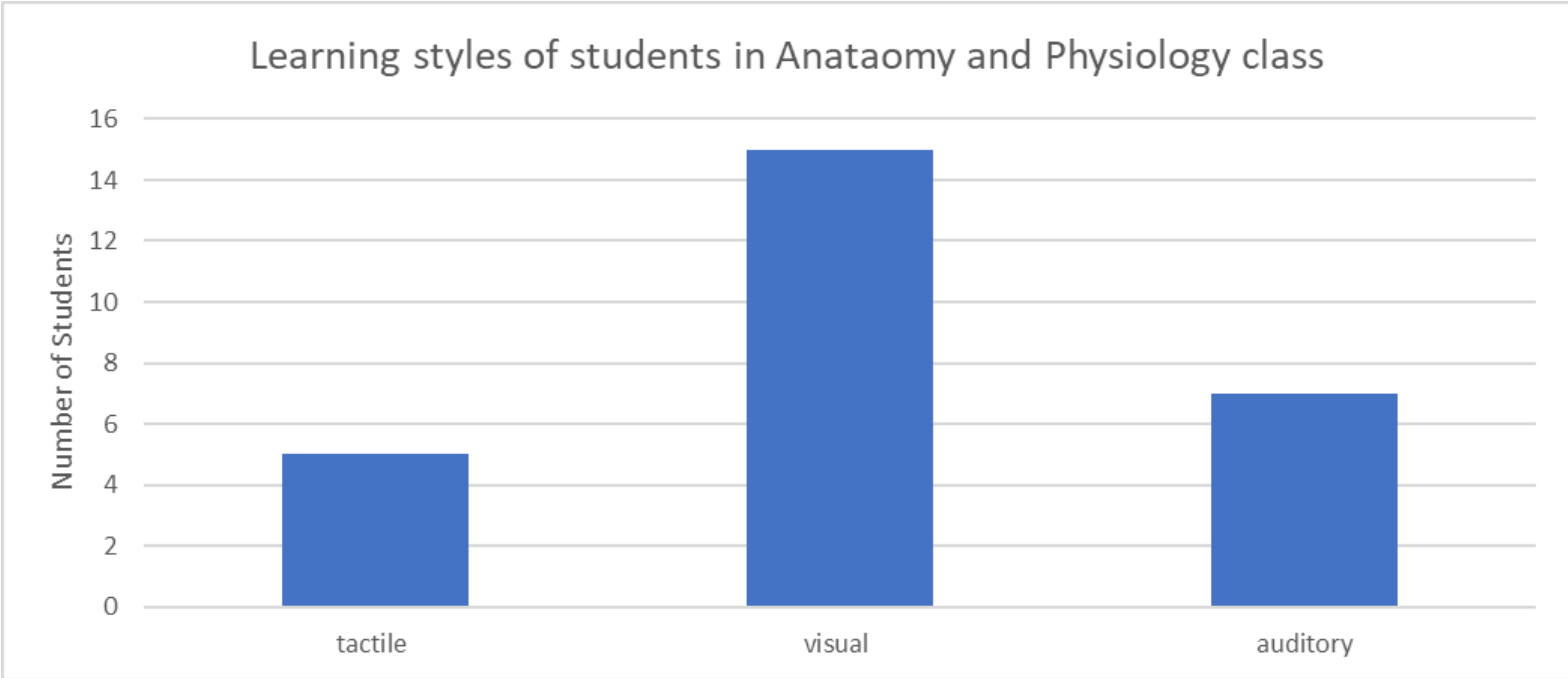


Figure 1. This show the different types of learners that I have in anatomy and physiology class. The majority fall into the category of visual learner. The fewest are tactile learners and the rest are primarily auditory learners.

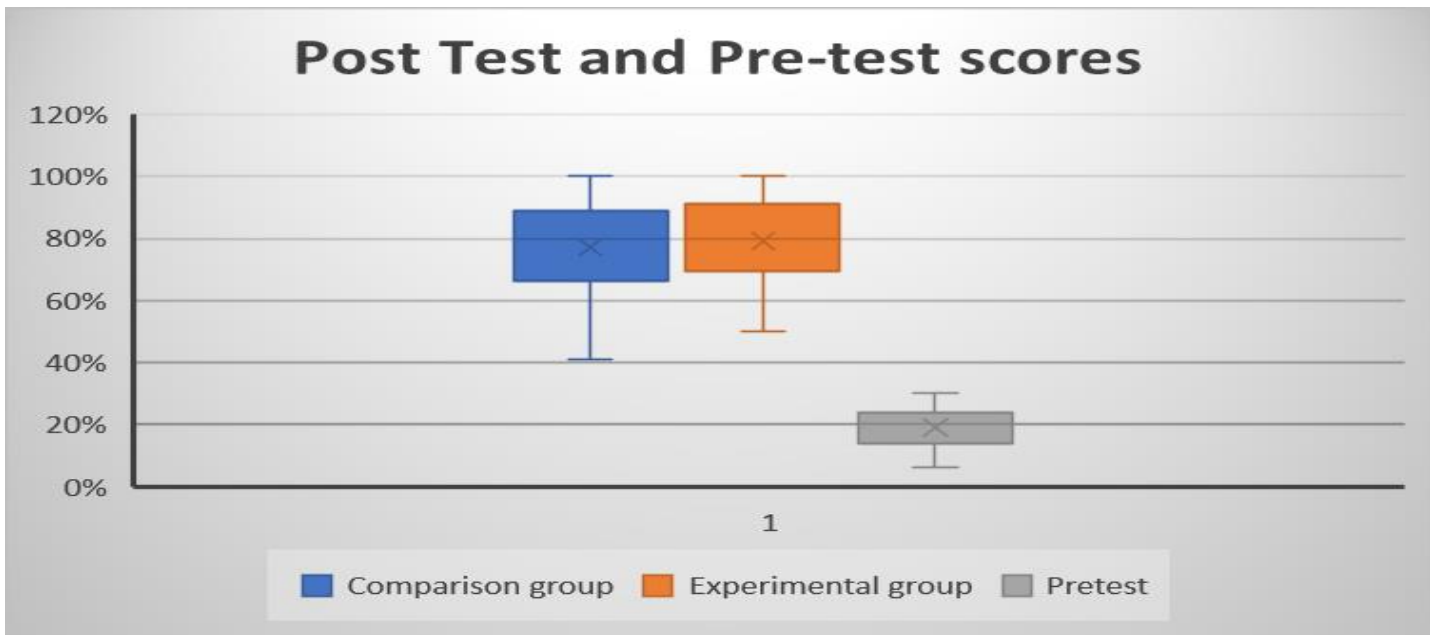


Figure 2: is the comparisons of the pre-test and post test scores that were achieved from the research. The experimental group did preform better than the comparison groups and there was a significant improvement for the pre-test scores in both.

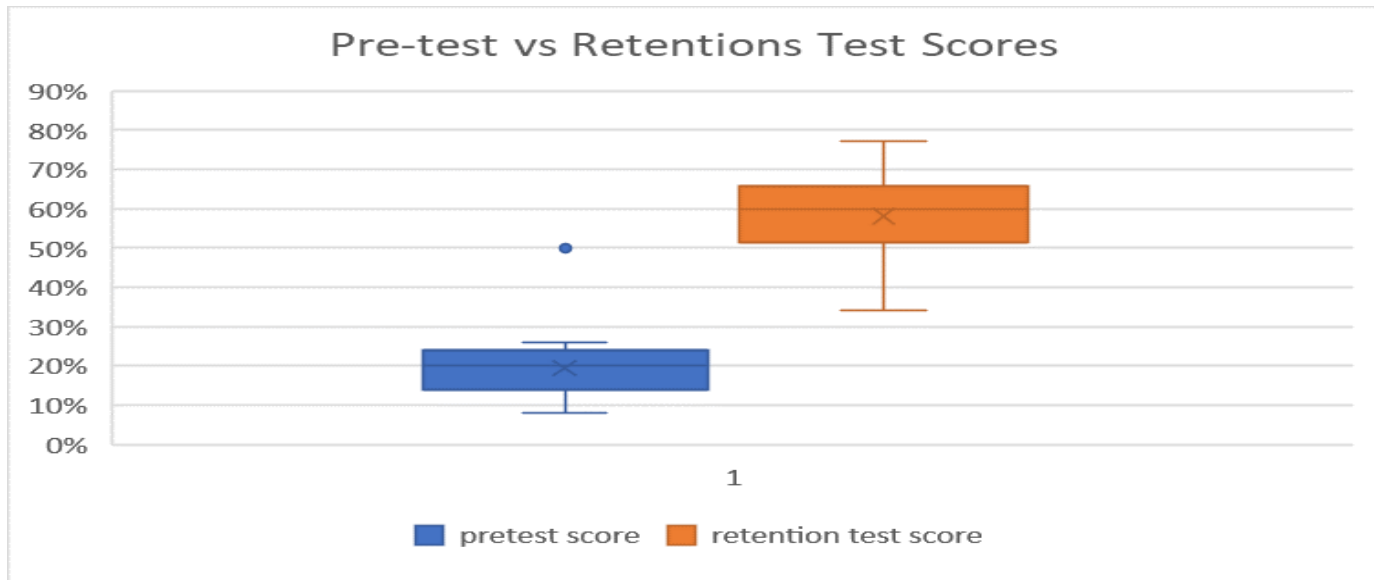


Figure 3: Shows the comparison of pre-test scores and retentions test scores.

Teaching Implications:

- Use of the Anatomage tables in labs will increase
- The activities will be more focused to the most useful activities. This will also save on time.

Conclusion:

- There are a lot of visual learners that are taking the class this year and a higher number of auditory learners than expected.
- Student test scores did improve with the use of the Anatomage table especially on the practical test
- There was good retention of information from all of the students