

Memorization Strategies for Anatomy and Physiology

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Introduction

“Why are they not getting it?” That was the question pondered as incredibly bright students were observed genuinely struggling to explain the physiology behind organ systems. Lessons were being taught three-dimensionally, students were encouraged to critically think and relate material, yet there seemed to be something missing. After prodding the students about study skills, time spent studying, what they ate before class, etc., it was discovered that the students simply could not remember some of the foundational anatomical terms needed for the physiological functions. Finally, the epiphany came, **“These students were never taught how to memorize!”** When surveyed, **94%** of these students depended **solely on repetition** to memorize material. If students were taught more effective memorization techniques, could this possibly help support their learning at higher levels?

Research Questions and Data Instruments

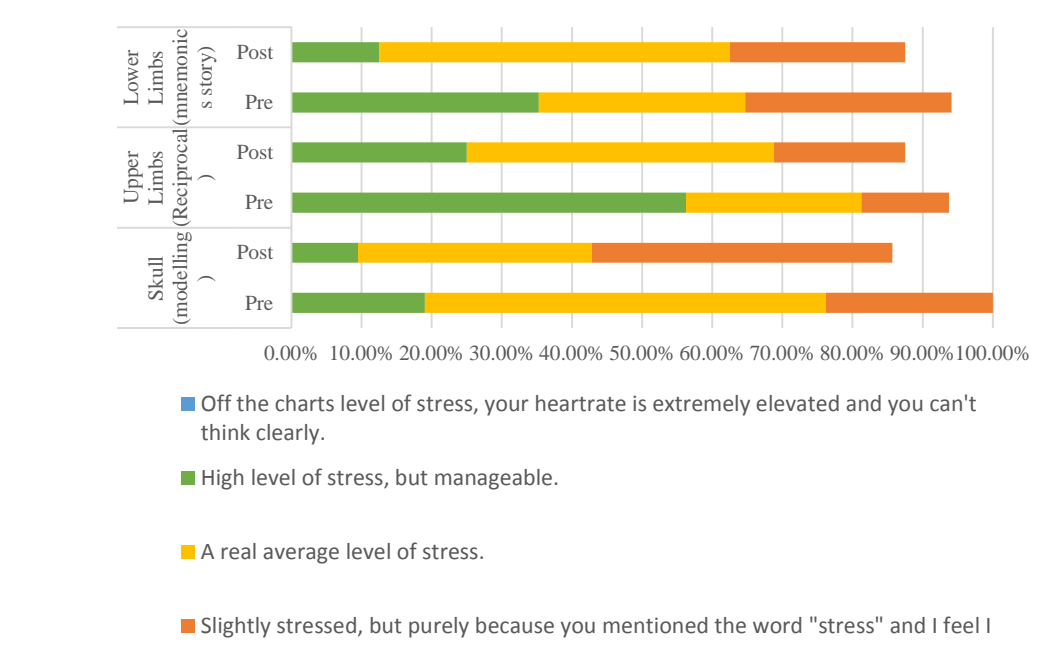
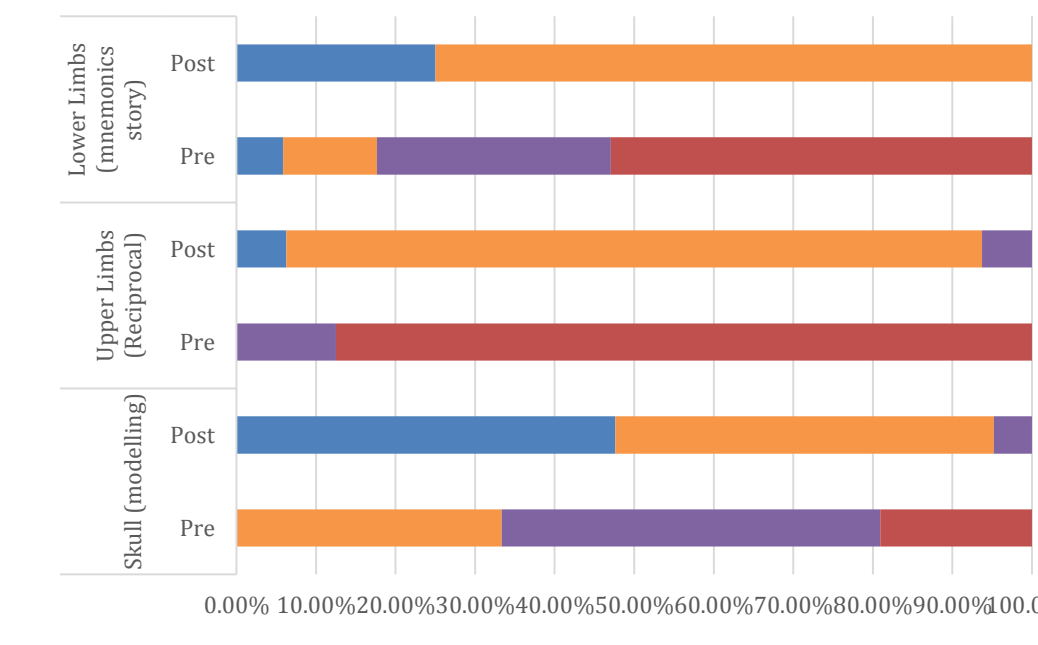
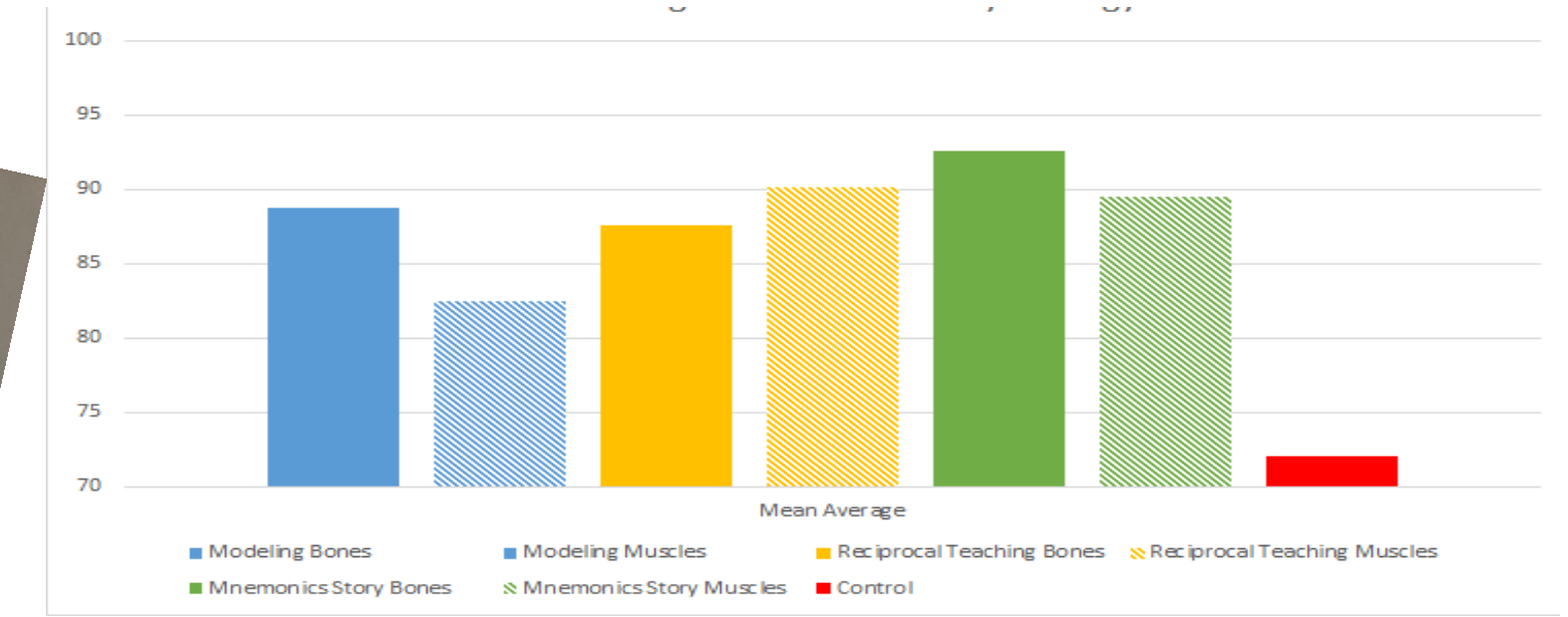
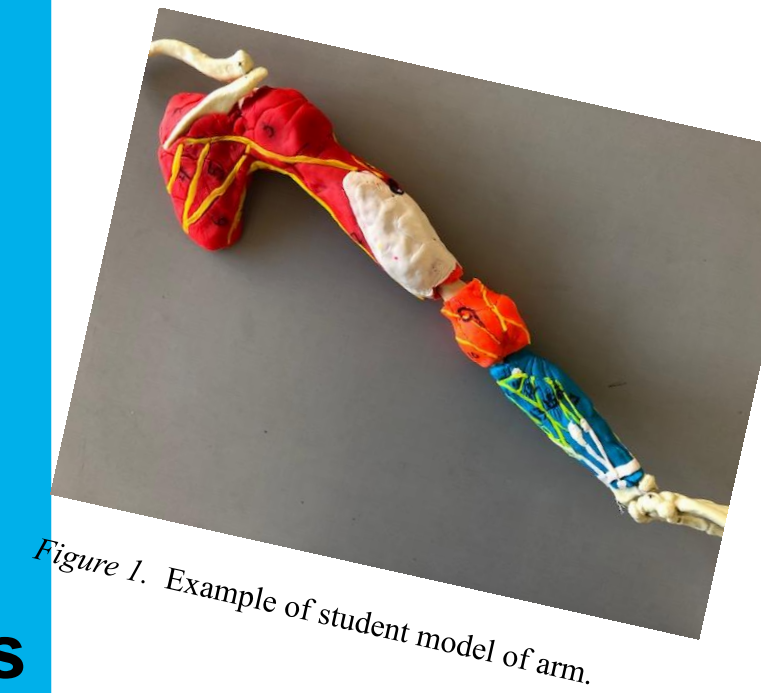
Q1: Will the teaching and implementation of different memorization techniques impact student’s long-term and short-term memorization in a high school anatomy/physiology classroom when students are assessed on anatomical terminology? If so, what types of techniques (kinesthetic, auditory, visual) make the greatest impact?

- Pre-test, Post-test Growth
- Unit test averages on specific content
- T-tests used to compare test scores and different groups of students.

Q2: Will the implementation of these techniques impact student’s confidence and perceptions of the material when it comes to memorization in anatomy?

- Pre-memorization Surveys
- Post-memorization Surveys
- Individual Interviews
- Class Interviews

Results



Treatment Description

Subjects

- 18 highly intelligent students in a dual-enrollment anatomy and physiology class
- 15 girls, 3 boys
- 5 seniors, 13 juniors

District

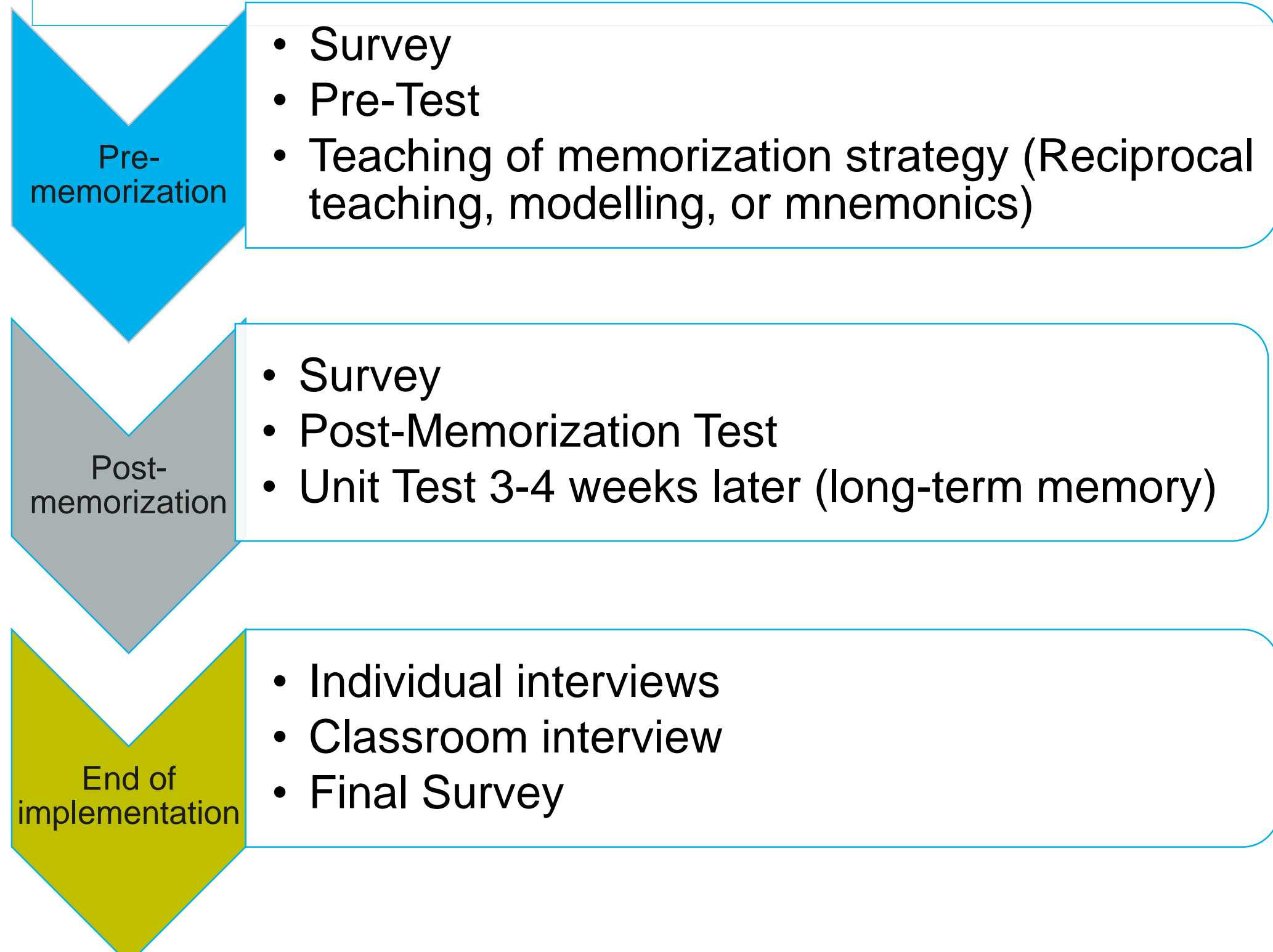
- Approximately 700 students K-12
- Rural district
- Accredited with Distinction 3 years in a row

Meeker, CO

- Hunting, ranching, and sheep herding.
- Nestled in the Colorado mountains.



Methodology



Conclusion

After analyzing the data from this study, it was determined that the intentional teaching of memorization strategies targeting multimodal learners not only improved test scores, but improved student confidence levels and decreased stress levels. According to one of the students, “With the many memorization tools implemented throughout this unit, I have gained a better tool set for studying. I have seen my test average grow tremendously from what it was last semester and I am finding that it is easier for me to memorize the material in a short amount of time.” Students felt the study was valuable to them and will be something they can use in their future studies.

