

Introduction

- Medical students often rely on rote memorization for anatomical terminology¹ which may limit comprehension and retention.²
- Etymology, the study of Latin and Greek roots, enhances understanding and integration of terminology across disciplines, yet its role in anatomical education remains underexplored.^{3,4}
- Given the rise in medical errors linked to misinterpretations of anatomical terms and the reduction of donor access and anatomy instruction hours, exploring etymology as a supplemental learning tool is increasingly important.

Aims and Objectives

- Determine the effectiveness of Etymological Dissection Approach (EDA) on student performance through usage data and quizzes.
- Evaluate the usefulness of EDA through post-module survey.
- Identify potential implementation in the national medical school curriculum to supplement the increasing learning gap.

Methods

- First-year medical students from the Class of 2026 and 2027 (n = 126, 129) were provided with five optional, interactive Etymological Dissection Approach (EDA) modules, each with an embedded quiz aligned with the OUWB anatomy curriculum.
- Engagement was assessed based on completion rates and time spent on the modules. Survey responses provided feedback on module effectiveness and areas for improvement.
- EDA modules consist of a combination of quizzes and visual content to connect a 5-step process to understanding terminology and etymology.

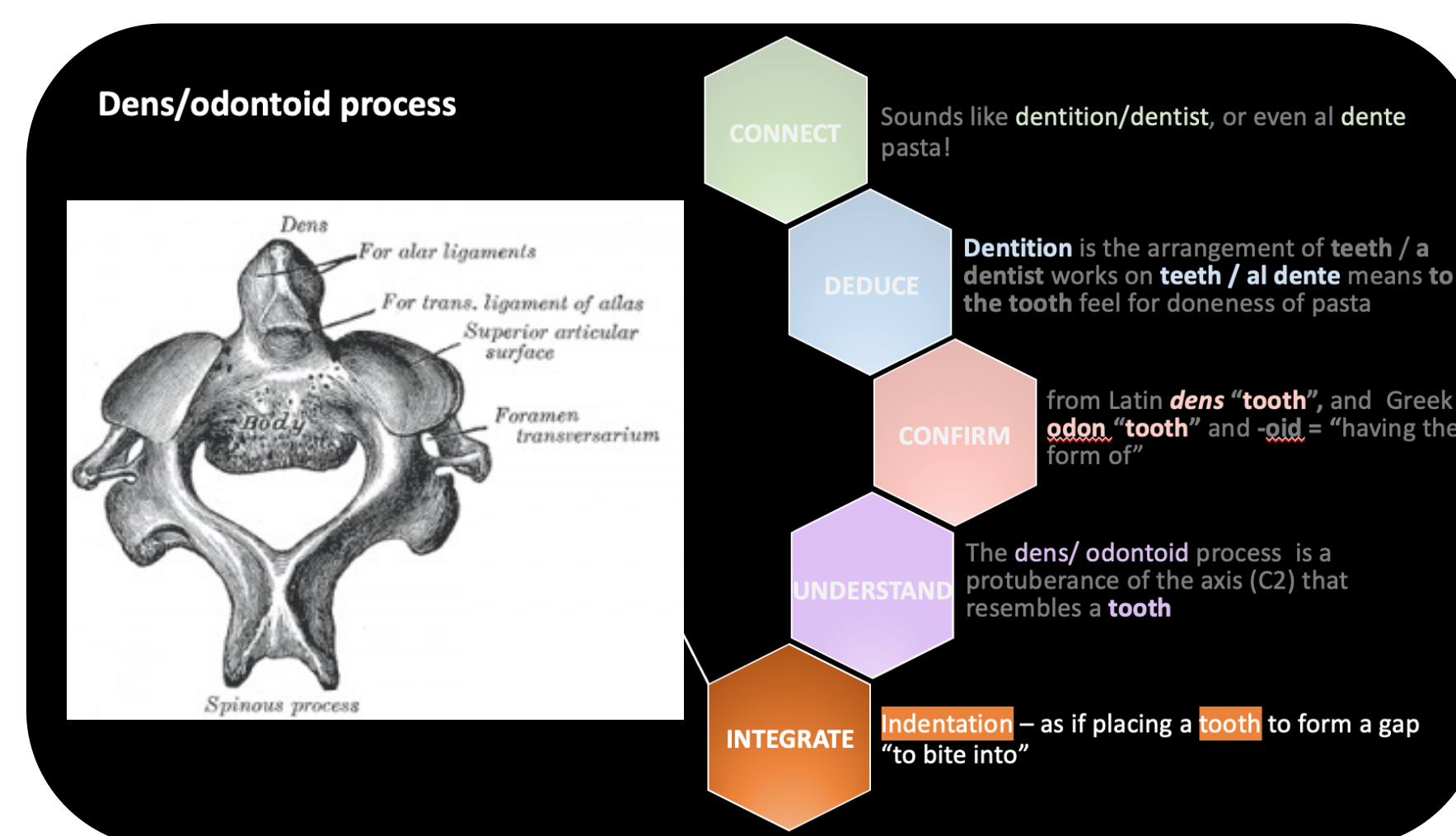


Figure 1: EDA module demonstration of the term “dens/odontoid process” from the “Head and Neck Etymology” module.

Results

- For 2023–2024 (n=164) and 2024–2025 (n=71), median EDA module completion was 15.0% (IQR: 4.0%–56.0%) for the Class of 2027 and 11.0% (IQR: 3.0%–50.0%) for the Class of 2026, showing variable engagement.
- Among 18 survey respondents, 50% reported improved terminology learning, and 77.8% completed EDA modules.
- Positive ratings were given by 55.6%. Engagement improved for 70.5% (52.9% significantly), while 82.3% reported better comprehension (58.8% moderately, 23.5% significantly).
- Prior anatomy experience showed a trend toward higher engagement (p=0.079) but no significant difference in comprehension scores (p=0.80).
- Students suggested expanding EDA to embryology, pathology, microbiology, and biochemistry.

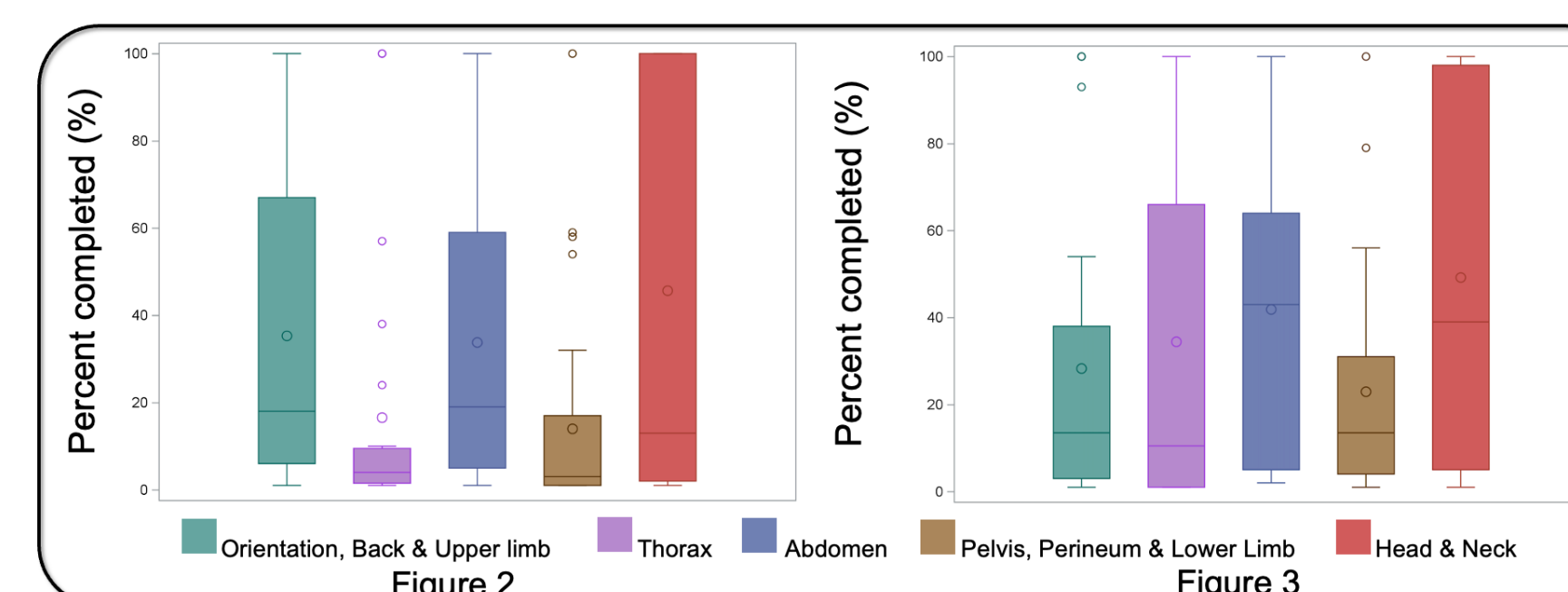


Figure 2: Graph showing module completion percent as a function of module utilization, Class of 2026 (2023-2024). Figure 3: Graph showing module completion percent as a function of module utilization, Class of 2027 (2024-2025).

Conclusions

- While not statistically significant, trends suggest EDA modules have potential benefits.
- Initial engagement was high, but sustained use was limited. Median time spent on modules was low, indicating inconsistent usage. However, students who completed them reported improved comprehension and engagement.
- Integrating EDA into the curriculum may enhance learning, warranting further exploration across disciplines and implementation strategies.

References

1. Louw G, Eizenberg N, Carmichael SW. The place of anatomy in medical education: AMEE Guide no 41. *Med Teach*. 2009;31(5):373-386. doi:10.1080/01421590902825149
2. Estai M, Bunt S. Best teaching practices in anatomy education: A critical review. *Ann Anat - Anat Anz*. 2016;208:151-157. doi:10.1016/j.aanat.2016.02.010
3. Olive E, Venuti J, Barremkala M. The Etymological Dissection Approach for Learning Anatomical Terminology. Presented at: OUWB SOM William Davidson Medical Education Week; Rochester Hills, MI.
4. Mohr M, Venuti J, Barremkala M. Determining the Effectiveness of an Etymological Learning Tool. Presented at: OUWB SOM William Davidson Medical Education Week; Rochester Hills, MI.

Acknowledgements

The authors sincerely thank Dr. Judith Venuti, PhD, for her insightful contributions to this project, and Jacob Keeley for his statistical support.