

## Introduction

- Computer Assisted Learning (CAL) involves the integration of animations, images, quizzes, and activities into a single online learning platform for students to access from home.
- Embryology is a subject that is taught at different periods of time in a curriculum by different disciplines making it difficult for students to understand the bigger picture.
- The integration of different disciplines, visual learning tools, and activities into a single CAL module may help students better understand embryology.
- We hypothesized that medical students would demonstrate a positive overall perception and attitude towards the use of CAL to learn embryology.

## Aims and Objectives

- To create a CAL module to help medical students learn embryology more efficiently.
- To qualitatively assess student attitude and perception towards the use of CAL to learn embryology.

## Methods

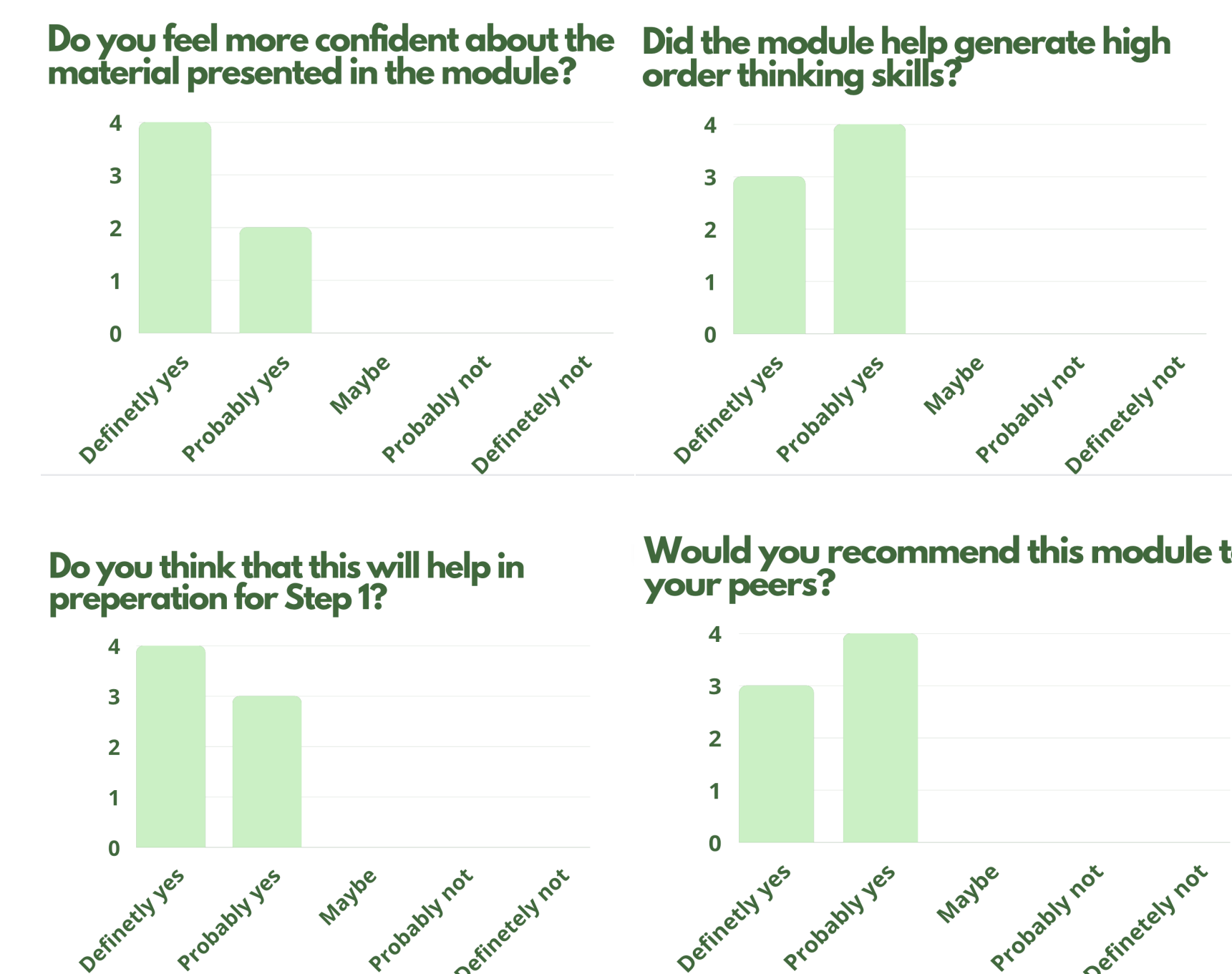
- Seven medical students were given a 25 question pre-test.
- Following the pre-test, students were required to complete a 1 hour and 30-minute CAL narrated video module which contained multiple EKGs, imaging, animations, and audio recordings.
- Afterwards, students were required to complete a 25 question post-test with provided answer explanations.
- Lastly, students were asked to complete a survey on their attitude towards the CAL module.



- The survey included seven qualitative multiple-choice questions followed by answer choices on a Likert scale as well as one open ended question.
- Tests were administered using Qualtrics software.

## Results

- Student attitude towards the module was positive overall.
- Students reported that the module encouraged them to generate higher order thinking skills and helped them reinforce material learned in lecture.
- Students also reported feeling more confident about the material presented, suggested similar modules be created for other subjects, and would recommend the module to their classmates.



- The most common suggestion to improve the module was to shorten its length.
- Other suggestions included using more NBME-style questions in the pre and post-tests.

## Conclusions

- The results supported the hypothesis that students would demonstrate a overall positive perception of computer assisted learning in learning embryology.
- CAL could be an engaging and effective tool to reinforce other subjects or difficult topics in medical school.

## References

- John L. A review of computer assisted learning in medical undergraduates. *Journal of Pharmacology and Pharmacotherapeutics*. 2013;4(2):86. doi:10.4103/0976-500x.110870.
- Moxham BJ, Emmanouil-Nikoloussi E, Standley H, et al. The attitudes of medical students in Europe toward the clinical importance of embryology. *Clinical Anatomy*. 2015;29(2):144-150. doi:10.1002/ca.22667.