

Assessing Student Attitudes Towards Pair-learning of Cadaveric Thorax, Abdomen and Pelvis Anatomy Practicals: A Covid-19 Intervention

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Introduction

Cadaveric-based practical teaching remains a key pedagogy in anatomy education [1,2]. However, congested medical curricula and trends showing increases in transactional distances have resulted in a documented reduction in cadaveric contact time [3,4,5].

Prior to the challenges imposed by the COVID-19 pandemic, our anatomy practical sessions entailed eight to 10 students per donor station, rotating between digital learning, anatomical models/osteology specimen and cadaveric learning activities for three hours [6]. To maintain cadaveric participation in the dissection theatre (DT) while adhering to social distancing guidelines, a transition to pair-learning (PL) was implemented. This mode of delivery allowed two students to spend one hour per week in the DT and all digital learning elements were transferred to the virtual learning platform (VLE) Blackboard as pre- and post-practical learning activities.

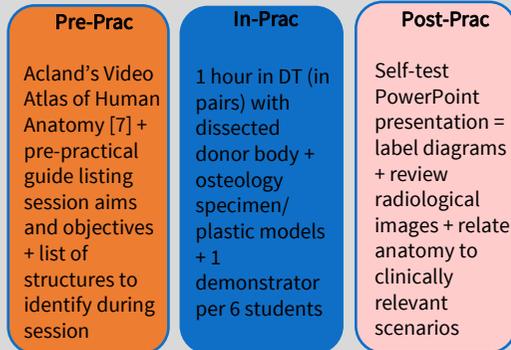
The effectiveness of very small group anatomy practical sessions from the student's perspective is unclear.

This study describes student perception of PL in response to distancing guidelines and emphasizes the importance of gauging students' preferences to optimize satisfaction and learning output when pivoting to blended learning strategies in anatomy education.

Materials and Methods

The study sought to quantify medical student opinion of PL for cadaveric thorax, abdomen, and pelvis anatomy practicals at our institution, Trinity College Dublin (TCD).

Implementation of PL for TAP practical curriculum



Voluntary completion of anonymized, self-administered online questionnaire

Questionnaire

- Asked students to what extent they agreed with a series of statements relating to the delivery of the TAP practical curriculum and their attitude towards PL using a 5 point Likert scale
- Asked whether anatomical structures were seen or missed during practical sessions
- Space provided for supplementary thoughts and opinions - examined using thematic analysis

Results

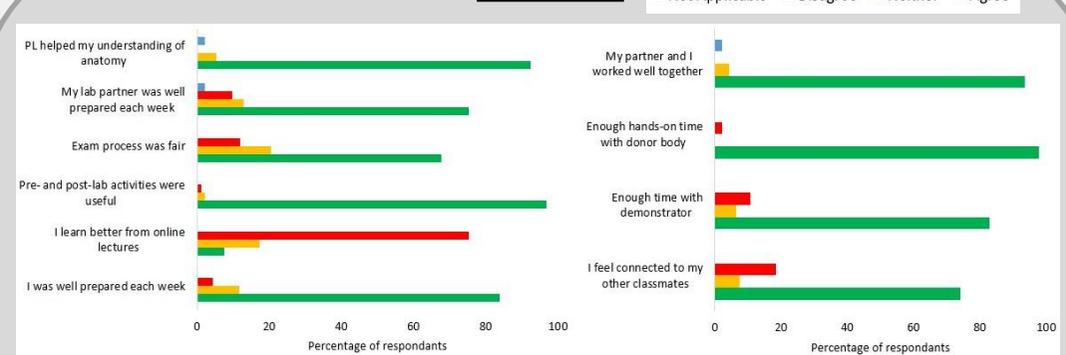


Figure 1.

Responses to questionnaire items. Graphs showing the distribution of preferences (indicated by the bars) for a particular answer regarding (A) learning preferences; and (B) time reduction and feelings of connection.

"So much hands-on experience that we wouldn't get in bigger groups. Definitely worth sacrificing the extra hour. Quality over quantity"
- First year medical student

"I thought the pair-based learning was extremely useful, the only part that was not ideal was that we were only able to use one donor and so couldn't really see any variations"
- First year medical student

"Even though there was just one hour of lab time per week, that fact that there were just two of us meant that there was more than enough time to see what we needed to see each week"
- First year medical student

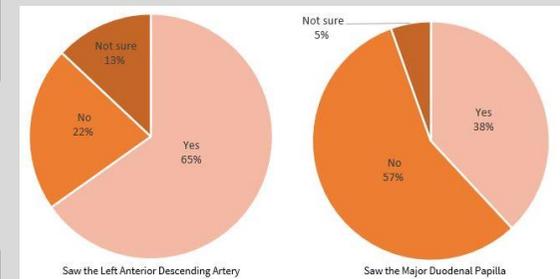


Figure 2.

Responses to seen or missed anatomical structures

Conclusion

We have detailed the process of integrating PL into the TAP practical curriculum for first year undergraduate medical students at TCD. Student opinion of PL in anatomy was positive. It varied whether students saw or missed small anatomical structures during the one-hour sessions. Thematic analysis indicated that more opportunities to experience anatomical variation would have been beneficial.

References

1. Estai M, Bunt S. 2016. Best teaching practices in anatomy education: A critical review. *Ann Anat* 208:151-157.
2. Sheikh AH, Barry DS, Gutierrez H, Cryan JF, O'Keefe GW. 2016. Cadaveric anatomy in the future of medical education: What is the surgeons view?. *Anat Sci Educ* 9:203-208
3. Singh R, Tubbs RS, Gupta K, Singh M, Jones DJ, Kumar R. 2015. Is the decline of human anatomy hazardous to medical education/profession? - A review. *Surg Radiol Anat* 37:1257-1265.
4. Stone DM, Barry DS. 2019. Improving virtual learning interactions: Reducing the transactional distance of online anatomy modules. *Anat Sci Educ* 12:686-687.
5. Rockarts J, Brewer-Deluce D, Shali A, Mohialdin V, Wainman B. 2020. National survey on Canadian undergraduate medical programs: The decline of the anatomical sciences in Canadian medical education. *Anat Sci Educ* 13:381-389.
6. Davy S, El Kininy, W, Barry D. 2016. Old Dog, New Tricks: A Practical Approach to Incorporating Thoracic Radiology into Anatomy Teaching, *British Institute of Radiology Annual Congress*, London
7. Acland RD. 2013. *Acland's Video Atlas of Human Anatomy*. Wolters Kluwer Health/Lippincott, Williams & Wilkins, Baltimore, MD. URL: <http://aclandanatomy.com/>