How anatomy students' loss of confidence during remote learning can inform prospective blended-learning approaches

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Introduction

The educational paradigm of anatomy is continually changing in response to the Covid-19 pandemic. At many institutions, anatomists are considering transitioning their syllabuses to blended modes of delivery and it is imperative that prospective pedagogies are informed by the lessons learnt during the pandemic. Online learning often results in a more independent study experience for students with the replacement of in-person sessions with asynchronous or synchronous online sessions. This can impact both accessibility and interactivity, and may also negatively affect students' self-perceived confidence in the subject being taught.

Methods

To assess student opinions about their opportunities for interaction they experienced during online teaching, and the resulting impact of online teaching on student confidence, a survey was distributed in June 2020 to 242 medical students in seven different institutions across the United Kingdom and Ireland. A thematic analysis of respondent data was performed to identify prevalent themes.

Two questions were posed to students:

- Do you think the covid-19 lockdown will have an effect on your confidence in anatomy next year?
- Thinking about the amount of interaction you have had with instructors relating to anatomy during the covid-19 lockdown. Are you happy with the amount of interaction you have received? Are there ways this could have been improved?

Results

Student reports of changes in confidence levels of learning anatomy and their opinions on levels of interaction received from instructors during the COVID-19 pandemic.

Confidence in Anatomy

Opinion towards level of interaction received.

- Confidence Decreased
- Confidence Unaffected
- Unsure (of effect on confidence)
- Confidence Increased

Appropriate  |  Inappropriate  |  N/A

"We have definitely lacked the interaction, however if I had a question I am very comfortable I would be able to send an email and get a good and quick response."

"Some of the lecturers were easy to contact and happy to help out more than others who seemed reluctant. Maybe schedule in more hours or Q&A sessions."

"During the labs, pre-covid, we had the opportunity to talk to the anatomy demonstrators face-to-face and they would quiz us during the labs. Unfortunately, our lab demonstrations during covid lockdown were pre-recorded so there wasn’t as much one-on-one interaction that used to happen before the lockdown."

Results (continued)

Word Cloud to display themes within student responses on their opinions on how the levels of interaction received from instructors during the COVID-19 pandemic could be improved.

Discussion

- Sixty-five percent of students felt that the Covid-19 lockdown has negatively impacted their confidence in learning anatomy in the future (100 of 153 responses).
- Responses suggested students feel that live teaching (in-person or synchronous online delivery) offers more opportunity for interactivity and feedback compared to asynchronous online teaching.
- The instant feedback offered by live teaching, and ease of communication during in-person sessions is highly rated by students.
- Students emphasised that the availability and approachability of instructors was of great importance, primarily because they felt their tutors were one of the best resources available.
- Approachability is an important factor with relation to student wellbeing. Their comfort levels in approaching their instructors to ask for help when struggling can have significant impact on their academic performance and confidence in their abilities.
- Students felt their confidence was negatively impacted by both the lost opportunity to learn anatomy using human cadaveric specimens and the changes made to their assessment format.
- The removal of access to cadaveric specimens meant that anatomy had to be learned through other resources, often restricted to two-dimensional representations and lacking in a tactile learning experience.
- The lack of consistency over the pandemic warranted a difficult adjustment period for students, which many are still struggling with now as many institutions transition back to pre-pandemic teaching.

Conclusion

- The integration of blended-learning approaches in response to the pandemic has yielded benefits to accessibility and flexibility of learning, it is important to maintain the levels of interaction and availability of tutors afforded pre-pandemic.
- Student confidence levels drop significantly when they feel they are left to learn too independently, and so the student-tutor relationship needs to be maintained in blended environments.
- Instructors should act to mitigate impact on student confidence in anatomy by facilitating opportunities for both formal feedback through assessment, and informal feedback through live interactions during in-person or online synchronous teaching sessions.
- Student confidence during online teaching can be maintained with well-adapted curricula, effective learning resources and academic support.

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