

Medical Students' Perspective – Students' Perceptions and Attitudes After Exposure to Three Different Instructional Strategies in Applied Anatomy [Letter]

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Dear editor

It was a pleasure to read the study by Bin Abdulrahman et al¹ regarding anatomy teaching methods and whether anatomage, plastinated specimens or combining both methods were more effective in first year medical students. As medical students ourselves, we feel that utilising multiple resources may be beneficial, however the long-term improvement in anatomy understanding and consolidation is hard to determine.

The results of the study are ambiguous as to why students showed a higher attitude for combined teaching compared to anatomage or plastinated models alone. The authors only reported the results of 5 questions from the 15-question survey assessing student's attitudes to teaching methods. The unreported questions may shed more light on factors contributing to combined teaching receiving better feedback. The 3 questions that displayed significant differences between combined teaching versus single methods, are largely subjective and non-specific compared to the other 2 reported non-significant questions which involved tangible outcomes of anatomy learning. Additionally, a higher proportion of students felt that combined methods benefited learning outcomes, however there were no significant differences in the student's final grades. It is therefore difficult to ascertain why students perceived combined methods favourably.

Importantly, the objective structured practical examination (OSPE) was conducted straight after the practical teaching session, thereby only testing students' short-term memory. This suggests that the results of the study cannot be applied to long-term understanding and memory of anatomy, which is required for end of year assessments and clinical practice. Furthermore, if the OSPE was additionally performed prior to the teaching sessions, the improvement in test scores could have been quantified to assess the effectiveness of the teaching methods. Alongside fulfilling one of the aims of the study, this would also strengthen the argument to adopt novel methods such as anatomage² and plastinated specimens³ in medical school curriculums.

Additionally, the study states that the student groups were tested with the help of their assigned teaching method, with questions being demonstrated using either

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anatomage, plastinated specimens or both. The ten questions in the OSPE were standardised amongst the three groups, but there were key differences in how they were presented. Differences in the clarity and difficulty of the question's presentation would in turn impact the final grade scores and students' perceptions of the teaching method, which decreases reliability of the results.

To conclude, the value of combined anatomical teaching resources found in this study may be limited to superficial effects surrounding student's confidence and preference, as opposed to improving consolidated and tested anatomical knowledge. Furthermore, the quantity of resources may explain the preference as opposed to the specific usefulness of anatomage and plastinated models. Encouraging sole use of two largely non-practical anatomy resources, with no hands-on exposure, could hinder overall anatomy understanding and appreciation.^{3,4} Further research could expand on whether such combined methods quantitatively improve anatomical learning in the long-term or act as adjuncts to traditional textbooks⁵ and cadaveric dissections.⁴

Disclosure

The authors report no conflicts of interest in this communication.

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