

questions (40.30%) compared to synchronously delivered questions (20.43%). At UNSW, 63% of students engaged with questions, with higher engagement in synchronous (55.08%) compared to asynchronous delivered questions (6.45%). Differences in engagement by mode were statistically significant ($p < 0.0001$, unpaired t-test).

Conclusion: The question tool supports both asynchronous and synchronous modes effectively. Differences in student engagement may relate to the targeted level of the questions (recognition) being perceived as more useful when students are learning content initially, regardless of the mode of delivery. Instructors should consider course sequencing and student preferences when integrating digital tools into anatomical education.

Keywords: histology, virtual microscopy, hybrid learning, formative assessment, student engagement

A210 | Enhancing anatomy education: Preliminary findings from ultrasound-based anatomy teaching for medical students

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Introduction: Ultrasound is a primary and critical tool in medical diagnosis. Using this tool for anatomy education provides a real-time approach as it enables students to visualize structures live to connect theoretical knowledge with clinical application. This hands-on method is vital for developing early diagnostic skills and understanding anatomical variations and pathologies.

Methods: In 2024, I incorporated an ultrasound tool into anatomy teaching for medical students at JCSMHS, MUM. This method was integrated into sessions on GIT, hepatobiliary, and renal anatomy, including streaming for remote learning students. Ongoing evaluations of Year 1 and 2 students' experiences through focus group discussions (qualitative data) have revealed that increased confidence in linking visual images to anatomical structures enhances their understanding of future clinical practice.

Results: Preliminary findings indicate that students demonstrated an improved understanding of abdominal organ imaging anatomy in the post-exposure compared to the pre-exposure. They emphasized that real-time ultrasound imaging served as a powerful tool for comprehending even the most complex anatomical imaging concepts. Comprehensive reflections on pre- and post-exposure data analysis are ongoing.

Conclusion: Integrating ultrasound into anatomy education transforms medical students' learning. Combining ultrasound with digital resources creates a comprehensive platform that enhances understanding of diagnostic and therapeutic skills. This approach equips students with essential knowledge and ensures they are well-prepared for clinical practice, bridging theory with real-world application effectively.

Keywords: ultrasound, anatomy education, medical students

POSTER PRESENTATIONS

A002 | Content analysis of human anatomy mobile apps for undergraduate student learning using MARuL

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Introduction: Mobile applications (apps) for anatomy education are increasingly used in health education, offering personalized and interactive platforms enhancing learning experience for students and educators. Despite their wide availability, there is a paucity of studies evaluating the quality of these apps in anatomy education. This study aims to systematically search and evaluate the quality of human anatomy apps for student learning using the Mobile Application Rubric for Learning (MARuL).

Methods: The iOS App Store was searched using keywords "human anatomy". Inclusion criteria were English language, non-game format, star rating ≥ 4.0 , and free access. MARuL evaluates four sections: Teaching and Learning (36), User-centered (28), Professionalism (12), and Usability (28), with a total score of 104 marks. Two trained reviewers independently rated the apps, with any disagreements resolved through discussion. Interrater calculation in the overall MARuL score showed good reliability with ICC = 0.821 (95% CI: 0.602-0.925). The total average apps MARuL scores from both raters were analyzed using Jamovi 2.3.28, and Microsoft Excel (version 16).

Results: 20 relevant apps were selected. Three apps with the highest MARuL score were BioDigital Human 3D Anatomy (71.5/104), TeachMe Anatomy (71.5/104), and Anatomyka Atlas (71.5/104). Among the four sections in MARuL, Usability emerged as the highest-rated area, as most apps prioritized aesthetics, functionality, ease of use, and technical specifications.

Conclusion: The top three apps showed high quality and were classified as 'probably valuable' by the MARuL scale. Further studies should assess their effectiveness in undergraduate anatomy education.

Keywords: mobile apps, anatomy learning, MARuL, usability

A003 | Absence of horizontal fissure with bilobed right cadaveric human lung: A case report

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Introduction: The right lung is divided into three lobes - superior, middle, inferior by two fissures. The oblique fissure separates the