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TECHNOLOGY ENABLED LECTURES IN MEDICAL EDUCATION-A PILOT STUDY

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Introduction: Lectures are the most common, cost effective way of transmitting large volumes of information to a large group of medical students. Traditional lectures are often lecturer controlled, rather than student centred, resulting in passive learning with little engagement, short attention span and little objective real-time evidence on how much learning has occurred. In this context, Audience response is a well-documented method to improve student interaction.

Methods: In this pilot study of three lectures, we designed quizzes that students took before the lecture, to test prior knowledge, and then again afterwards, to establish the impact of the lecture and improvement in student understanding. Student feedback was also sought. The quizzes were delivered using 'SOCRATIVE', a simple, web-based audience-response system. Students took the quizzes on their own web-enabled laptop, tablet or smartphone, using the Wi-Fi access in the lecture theatre. Students accessed the quiz using a QR code or short, easy-to-type URL.

Results: The answer scores before and after lectures were compared as a group of all attendees. This showed a mean improvement of 29%.

Topic	Questions	Before (%)	After (%)	Improvement (%)
Bariatric Surgery	6	59	87	29
Oesophageal Gastric Disease	7	32	62	30
Nutrition	6	55	85	30
MEAN		49	78	29

Conclusions:

We found that the strategy of before and after lecture quizzes was well received by students, providing instantaneous formative feedback whilst demonstrating increased engagement, interaction, active learning, critical thinking and improvement of scores. In addition, SOCRATIVE was cost effective and enabled participation of students attending through remote access. From the lecturer perspective, viewing students' responses in real time facilitates contingent teaching and further comparison of results provides an opportunity to feed forward into improvement of lectures.