

Unlocking Learning: Exploring the educational potential of a low-budget case-based escape room for medical students

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Within contemporary medical education, various learner-centred methodologies have emerged, emphasising the pivotal role of learners in driving innovations within training. Among these innovative approaches lies the utilisation of escape rooms. Within medical education, escape rooms serve as interactive multifaceted tool fostering team cohesion, delivering technical and non-technical skills, and facilitating knowledge acquisition and retention.

Despite initial perceptions of escape rooms as mere entertainment, they are firmly rooted in robust educational theory. However, challenges in their implementation often revolve around resource and cost intensiveness. Addressing these concerns, our team at Buckinghamshire NHS Trust developed a digital, interactive escape room tailored for medical students, requiring no disposable resources apart from electronic devices capable of running Microsoft Word and accessing the internet. The design process was straightforward, necessitating only rudimentary knowledge of common digital applications.

Themed around clinical scoring systems, our escape room comprised ten distinct cases, each demanding interpretation of varied scoring systems and clinical data. Each case was formatted using Microsoft Word and password protected, necessitating the correct clinical score from the preceding case to unlock the subsequent one.

Delivered to a cohort of 45 students, the escape room gathered overwhelmingly positive feedback. Through a combination of quantitative measures utilising Likert scales and qualitative insights gathered through free-text responses, we observed a significant increase in students' perceived understanding of clinical scoring systems, with an average improvement of 47%, coupled with a 36% rise in confidence levels. Students praised the session for its utility and enjoyment, with recurring themes of "fun," "relevance," and "teamwork" emerging in qualitative feedback.

Our experience underscores the potential of gamification in merging knowledge dissemination, clinical acumen enhancement, and teamwork development through an engaging platform. Moreover, by streamlining the escape room into a resource-light digital format, we have demonstrated its scalability and accessibility within educational settings.

Biography

Joshua Hamilton is a Doctor and Education Fellow at Buckinghamshire NHS Trust. He has a strong interest in medical education and integrated medicine and has invested the last two years as an education fellow delivering and organising teaching for medical students from both the University of Buckingham and the University of Oxford at Stoke Mandeville Hospital. As an Honorary Clinical Lecturer for the University of Buckingham he has had the privilege of being able explore creative and engaging ways to deliver teaching such as the use of escape rooms. Joshua is also active within quality improvement and has been involved in a number of projects such as improving the discharge processes for patients and also improving the Foundation Doctors teaching programme. Joshua also has an interest in antimicrobial resistance and has a recent publication on the bactericidal effect of 5-Mercapto-2-nitrobenzoic acid-coated silver nanoclusters against multidrug-resistant *Neisseria gonorrhoeae*.

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Abstract received : April 10, 2024 | Abstract accepted : April 11, 2024 | Abstract published : 30-10-2024