

## Objectives

Does using escape room gamification teaching methodology increase communication, team building, leadership and followership when used across undergraduate and postgraduate healthcare programmes?

## Introduction

Teamwork is an essential skill for all healthcare professionals as written in Good medical practice (Good Medical Practice, n.d.), emphasizing the importance of working effectively with colleagues, both within and across teams. Teaming is a dynamic process that requires active and deliberate engagement and participation by every team member (Amy Edmondson, 2012). Using escape room gamification as an innovative teaching method to teach both medical and physician associate students teaming was found as an additional learning outcome of the teaching session (Dugnoi-Menéndez et al., 2021). Traditional teaching methods often fail to engage students in realistic team-based problem-solving.

## Methods

The escape room format challenged student teams to solve clinical scenarios that mimicked real-world healthcare situations, requiring high levels of teamwork—cooperation, communication, and shared decision-making (Davis et al., 2022). Simultaneously, senior resident doctors and academic clinicians collaborated in designing, facilitating, and reflecting on the session, honing their teaming capabilities. In line with the GMC's guidance, this approach aimed to develop professionalism through reflective practice, leadership, and peer-to-peer learning, with an emphasis on creating a supportive, collaborative environment for both students and educators.

On 10th February 2025, a pilot escape room teaching workshop was delivered at the North Wales Medical School, Bangor University, with two separate student groups:

14 Year 2 Physician Associate students (morning session)

12 Year 2 Medical Students (afternoon session)

Due to timetabling constraints, we were unable to run a mixed-cohort session as originally intended.

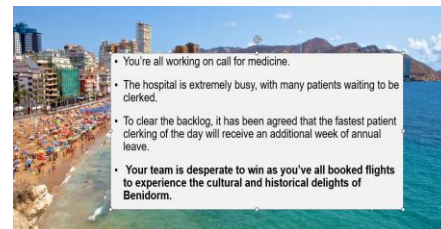
The use of escape room methodology in education has been shown to enhance adult learning (andragogy) when implemented effectively. However, poor design or facilitation can lead to negative learning outcomes (Percival, Snow & Isles, 2023). Therefore, careful planning and alignment with educational theory were critical to the success of this pilot.

Drawing from existing literature, we identified five essential elements in the design and delivery process:

- Clear definition of learning objectives
- Narrative and storytelling to embed clinical relevance
- Inclusion of escape room game mechanics to promote engagement and problem-solving
- Pilot testing of the scenario to ensure functionality and educational integrity
- Structured debrief sessions involving both students and faculty to encourage reflection and consolidate learning

This structured, theory-informed approach helped ensure that the session was not only engaging but also educationally sound and aligned with professional development goals.

*'It's an escape room with a medical twist – think laterally but sensibly, remember who and where you are.'*



## Learning Objectives

1. Apply clinical reasoning in a team-based setting
2. Develop and reflect on teaming behaviours: communication, leadership, collaboration
3. Foster peer-to-peer learning and educator development



Figure 1: Views of From Heolwg ward area. Dr George Wood providing a briefing to the Physician Associate students prior to starting the escape room workshop. From Heolwg ward area, Bangor University. 10<sup>th</sup> February 2025.



Figure 2: Physician Associate students working as a team and performing an initial assessment of the simulated patient in the start of the escape room workshop. Community room, From Heolwg ward area, Bangor University. 10<sup>th</sup> February 2025.



Figure 3: Teaching materials used for the escape room session. From Heolwg ward area, Bangor University. 10<sup>th</sup> February 2025.



Figure 4: Views of From Heolwg ward area. Prof Richard Egan facilitating the Physician Associate students during the escape room workshop. From Heolwg ward area, Bangor University. 10<sup>th</sup> February 2025.

## Results

Participants: 16 students

Post-session survey results:

Metric	Mean Range (1-5)
Session Usefulness	4.44
Engagement	4.75
Learnt something new	4.50

## Feedback from learners

'Learnt how to work in a team in stressful situation'  
'Structure in a real-life setting'  
Improvements  
'More scenarios would be great'  
'More scenarios - I understand this is dependent on time. But was an enjoyable way of learning'  
'More session like it to help solidify teaching'

## Discussion

This initiative demonstrates how teaming, as a professional capability outlined by the GMC, can be cultivated not only in students but also in future educators. By integrating gamified, team-based learning into the curriculum, we can equip both learners and trainers with the skills necessary to thrive in healthcare environments, ultimately fostering a culture of collaborative learning and patient-centred care.

## Take home message

Enhanced awareness and practice of teaming

High levels of engagement and satisfaction

Aligns with GMC guidance on professionalism

## Bibliography

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Dugnoi-Menéndez, J., Jiménez-Arberas, E., Ruiz-Fernández, M. L., Fernández-Valera, D., Mok, A., & Merayo-Lloves, J. (2021). A collaborative escape room as gamification strategy to increase learning motivation and develop curricular skills of occupational therapy students. *BMC Medical Education*, 21(1). <https://doi.org/10.1186/12909-021-02973-5>  
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