Enhancing active learning through gamification: developing research skills with an escape room experience

Jiani Liu
University of Leeds, UK

Xiaowen Liu
University of York, UK

Presentation abstract

This project represents a collaboration between researchers from the University of Leeds and the University of York, showcasing how learning developers use gamification to engage students and enhance accessibility and inclusivity in the classroom. Gamification has been recognised as a transformative tool in higher education, offering innovative methods to enhance student learning (Landers, 2014; Sanchez et al., 2020). This project is situated in in-sessional EAP/academic skills classrooms for MSc Business postgraduates, most of whom are international students. The motivation for this project stems from the researchers' observation that increasing reliance on AI and translation tools has shifted learning dynamics, with active learning often replaced by passive consumption of information. This trend underscores the need for innovative teaching methods to revitalise student engagement.

Using a game-based learning approach, the project aims to enhance student engagement and foster active learning in a session focusing on 'reading research articles' in the Research Methods module. The initiative involves in-person workshops where students collaborate in groups to complete interactive escape room tasks guided by tutors acting as non-player characters (NPCs) (Nicholson and Cable, 2021). The non-traditional task design allows students to interact and communicate in different ways, offering greater accessibility and inclusivity, particularly for those who prefer diverse approaches to learning or lack confidence in spoken English.

The learning outcomes of the intervention are to:

- Identify the structure of a typical empirical research article.

- Map reading objectives to specific sections of an empirical research article.

- Identify the methodological design (quantitative or qualitative) and ethical considerations in a journal article.

- Evaluate published research articles and apply relevant methodologies to inform the development of students' own research design.

To evaluate the method's effectiveness, triangulated data are collected through tutor reflections, observation notes, and student surveys. The surveys capture both tutor and student perspectives on how the gamification supports learning outcomes, enhances classroom engagement, and fosters the development of teamwork and communication skills.

In this interactive session, conference participants experienced a live demonstration of the escape room gamified teaching method. They engaged in a discussion critiquing its application in teaching research skills and exploring its potential as a catalyst for cross-disciplinary collaboration and student-centred learning.

Keywords: escape room; game-based learning; gamification; research skills; academic reading.

Community response

The presentation was well received by attendees. They liked the introductory 'Escape room' video. One participant remarked:

> This was a very interesting and engaging session, which got me thinking about introducing more games into my skills sessions to engage learners. In this case, the presenters presented some practical suggestions to engage international students with research skills. I thought the escape room was very well introduced, with an atmospheric video at the start. I was curious as to how often the game could be played on a module. The presenters said maybe only once was enough. I could see myself doing it more than once because students would get better at the game as the module progressed, plus it's so much more engaging than the usual forms of delivery.

Some participants were encouraged by the fact that, while devising the games and puzzles can take time, the presentation and experience showed the results to be rewarding:

> This session was fantastic. Using the most simple of props and a short video introduction to the task, the audience was engaged in an interactive task from the start. For me, it made me realise that you don't need to invest in expensive digital tools or props to make a session like this. It does seem to take a lot of thought to devise the puzzles, but again, the presenters gave some guidance on this during the session. I am keen to try out a similar activity with my own students. I was particularly interested to hear the benefits of this activity for Chinese as well as other international students who might sometimes be reluctant to engage in discussion, but who were invested in this peer group task and rated it as particularly effective. I know that this session would be of great interest to the active learning network community and would encourage the presenters to consider looking into the different possibilities of sharing this work there. I also wonder if they have spoken to Rachelle O'Brien at the University of Durham, as she has achieved a National Teaching Fellowship largely on the basis of her work with escape room activities. This was such an interesting and engaging session.

Other participants were pleasantly surprised that escape room activities can be devised in such a manner as to have a strong learning element in them:

> Such a fun session – thank you! I've participated in escape room activities before, but often found them gimmicky and more game-based than actually focused on learning. Although we only got to play one of the activities, the task of getting us to identify which journal articles were empirical research was an excellent example of putting knowledge into action in a game that was simple and meaningful. It was great fun to play (particularly because we won…), but it also got us to properly think and work as a team. I could see this working really well with some of my groups of students.

They also appreciated the active manner in which the lecturer participated, and thus became part of the activity, commenting:

> I appreciated the suggestions at the end, including having the lecturer participate as an 'NPC' and organising the game mechanics to avoid guessing. If the presenters were to publish their research or to share game materials online, these sorts of suggestions would be very welcome for those of us looking to utilise a similar approach.

Other participants found the creative problem solving aspects useful, adding some thoughts that give room for contemplation:

> This was a very innovative session that allowed us to experience what the students experience in delivery. The value of the 'layers' of the puzzle was evident. I have tried a similar escape room activity in my setting, and I can attest to it working very well as an activity that fosters creative thinking and problem-solving. As escape rooms become ever more popular, I wonder if they run the risk of people getting 'escape roomed' out, so I think it would be valuable as a community to consider how we can now build on this activity. In line with the principle that if you have to teach something, you really have to understand it, perhaps asking Level 6 students to create an escape room experience for Level 3-4 students to embed the learning will foster a greater depth of critical thinking and demonstrate a scaffolded curriculum.

The active learning aspect was highly appreciated by many participants:

> This was a great session; it helped support the use of active learning and was done really well. The booming video at the start of the activity helped to set the atmosphere for an escape room. I would like to know if you have completed any data collection on the use of your activity and whether you have found it more effective and memorable from a student perspective.

Authors' reflection

We were delighted by the high level of engagement from attendees with the taster escape room game and the introductory video, which mirrored our classroom experiences. As participants noted, building atmosphere was crucial to the activity's success, resonating with established motivational theories in game-based learning, such as the design framework proposed by Garris et al. (2002), where sensory stimuli and mystery sustain engagement.

The question of how frequently such an activity could be used within a module was particularly interesting. At Leeds, in our pre-Masters module, students reported that traditional sessions felt less engaging after experiencing the escape room and requested more game-based activities. In response, we adapted the design principles into lighter digital formats, offering short 'test your learning' escape game activities towards the end of the module. While repeating this approach may work well in low-stakes contexts such as pre-Masters programmes, its resource intensity may make running it multiple times less feasible for credit-bearing Masters-level modules, such as the Business Research Methods module at York that our presentation's context was based in. Further research and student feedback will be important to explore this balance.

We appreciated the encouragement to share our work with the Active Learning Network and will follow up on possible connections, including with Rachelle O'Brien. It was also encouraging to hear that participants valued the clear link between the escape room and learning outcomes. While some were surprised by this connection, our survey data indicates that students not only enjoyed the format but also found it highly effective in developing reading and research skills. This reinforces the importance of constructive alignment and scaffolding in game-based learning design.

The suggestion of involving students in designing escape rooms for peers to foster deeper learning was especially valuable. We are considering applying for ALDinHE funding in 2026 to develop this student-partnership model, and the feedback makes us feel positive about pursuing this direction.

Finally, we were encouraged that participants saw potential in our approach beyond novelty, and their interest in practical implementation guidance, including game mechanics, use of props, and lecturer participation as an NPC. This suggests that publishing our materials and findings would be of real benefit to the community. We are currently preparing a book chapter on the pedagogical framework, design, and data analysis of our project. Please watch this space.

Acknowledgements

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Author details

Jiani Liu is a lecturer in EAP at the University of Leeds and a Senior Fellow of Advance HE (SFHEA). With over 10 years of experience in learning development, her work focuses on transition, assessment literacy, and active learning. She leads impactful academic skills initiatives, including the award-winning 'Step Up to Masters' and the 'Critical Thinking at University' MOOC. She enjoys working collaboratively across disciplines and contexts, including transnational education, and is especially interested in inclusive, research-informed approaches that help students feel more confident and prepared in their academic journey.

Xiaowen Liu works as an associate lecturer in Skills Development at the University of York, where she designs and delivers embedded academic and communication skills support across undergraduate and postgraduate programmes. She holds a PhD in Education, and her research interests focus on student experience and creative pedagogy in higher education. She has extensive experience working in the higher education context, teaching academic literacy, academic English, and TESOL-related subjects.

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