Escape Rooms in Education Showcase 2.0

Dear colleagues

We are delighted to share the programme and abstract booklet for the 2024 event.

If you have any difficulties, please contact: LTAcademy@hw.ac.uk

Programme

Time BST	Session Type	Speaker(s)	Title and links to YouTube recordings
08.00-09.00	Live Escape Rooms	Various	Not recorded – abstracts below
09.05-10.00	Opening Keynote	Liz Cable	YouTube link: Lessons learned making games for learning
10.15-10.45	Guest Speakers	Sue Sharpe, Guddu Kaur, April Chan	YouTube link: A step-by-step guide to Educational Escape Rooms
11.00-11.45	Guest Speaker	Alice Veldkamp	YouTube link: You escaped! How do you learn during gameplay?
12.00-13.00	Guest Panel	See Panel Information	YouTube link: Evaluating Escape Rooms in Education
13.00-13.30	B R E A K	B R E A K	B R E A K
13.30-14.30	Live Escape Rooms		Not recorded – abstracts below
14.45-15.30	Lightning Talks (parallel)	Various	Various (Abstracts below) and YouTube links to parallel sessions
15.45-16.45	Question & Answer Panel for Recorded Talks	Various	Various (Abstracts below) and YouTube link to discussion
17.00-18.00	Workshops (parallel)	1. Inge Donkervoort 2. Nancy Barber	1. YouTube: Create your own digital escape room (with Xerte)? 2. YouTube: "Can you escape rehab?" Framing an online escape room for the application of theory to a clinical scenario
18.15-18.45	Lightning Talks	Various	YouTube link for last lightning talk session
19.00-20.00	Live Escape Rooms		Not recorded – abstracts below

Programme: Lightning Talks @ 14.45 BST

	Talk 1 - 14.45 BST	Talk 2 - 15.00 BST	Talk 3 - 15.15 BST
Parallel 1 YouTube link	Group tasks: Using individualised hidden information to achieve a common goal	Digital escape rooms in Nursing education	Unlocking Learning: Exploring the educational potential of a low-budget case-based escape room for medical students
Parallel 2 YouTube link	Risk management in healthcare education	Overcoming the red tape: The challenges of designing and evaluating a digital escape room platform	Escape game pedagogy - problems or solutions?
Parallel 3 YouTube link	Bringing gamification to the economics classroom	MicroBEscape room in Higher Education – Escape from the microbes!	Pedagogical Escape Room for Medicine Dispensing and Patient Counselling
Parallel 4 YouTube link	I'm a Student...Get Me Into Here!	Using Escape Rooms to show the VLE's more engaging side	Collaborative escape challenges to model co-operative learning
Parallel 5 YouTube link – note second talk not recorded	Integrating traditional and digital teaching approaches: Using augmented reality (AR) to create escape rooms	Unlocking Sustainability: Using German as a Foreign Language to Uncover Greenwashing in a Virtual Reality Escape Room	

Programme: Lightning Talks @ 18.15 BST

|	Chair	Presenter/s	Title
Session 6 YouTube link	Rosemarie McIlwhan	Nathaniel Bingham	Chemistry Escape Rooms: Improving the Tutor-Tutee Relationship
		Lisa Alberici	Escape Rooms: individual versus group participation

Programme: Recorded Talks @ 15.45

| Title – view on LTA YouTube channel by clicking the title	Speaker	Attending Q&A
A student perspective on the development and delivery of an educational escape room https://youtu.be/cuY47XvPyBs	André Justin Carpio	Yes
Infusing fun into every locked door https://youtu.be/-9sL94kypkA	Steve Phillips	Yes
Showcasing digital tools via an escape room experience https://youtu.be/emcVSeYHblg	Tracey Webb and Oliver Moore	Yes
Society of Shadows Challenge: An online escape room inspired by Scottish Gaelic language and culture https://youtu.be/8W1BHd2QOlo	Liz Hudson and DJ MacIntyre	Yes
Using online Escape Rooms for summative assessment https://youtu.be/ZCw4DxA68wI	Claire Timmins	Yes
Curse Breakers Wanted: The Haunted Battersea Power Station https://youtu.be/zGglQLeK918	Jessica Gordon-Calvert	No
Developing creative problem solving skills through an Escape Room Learning (ERL) approach https://youtu.be/h_X4mlTwNgU	Tom Cox	No
Escape Rooms – "I'd love to but…" https://youtu.be/f3j2Rz4l2So	Susan Caie, Silvia Mazzotta, Gordon Stewart, Lorna Stewart	No
Learning Collaborative Problem-Solving by Playing Digital Escape Room Games - State of Knowledge & Examples https://youtu.be/NEwmpVVCBt4	Jana Oehlke	No
Immersive Technology based Escape Rooms https://vimeo.com/944525727/773010d80d?share=copy	Kara Lewis	Yes
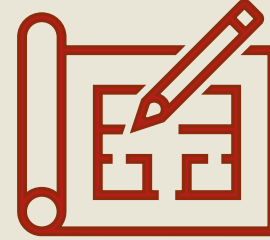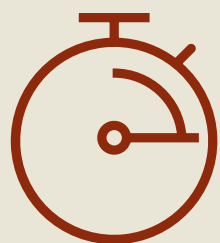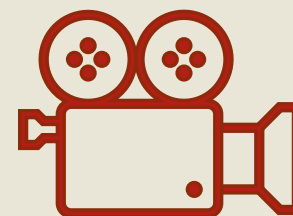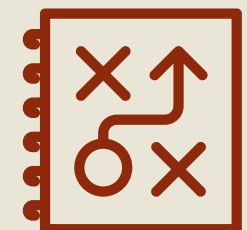
Opening Keynote: Liz Cable

Liz Cable teaches marketing, transmedia and interactive storytelling at Leeds Trinity University. She co-authored "*Unlocking the potential of Puzzle-based Learning*" and led an Erasmus+ team in creating a methodology for escape game design to "Escape Your Stereotypes". She has run escape games for over 300 students at a time, consults for industry in game design for marketing and team-building, and uses games in HE for learning and assessment. https://linktr.ee/lizcable

You escaped! How did you learn during gameplay?

Escape rooms are unique in the history of education as they emerged spontaneously around the world. Teachers from primary school to professionalisation adapted the escape game concept to the classroom, using their educational expertise, intuition and creativity. We, as teachers, have experienced the educational potential of escape rooms in our classes. Most escape rooms were fun to play for students, and some more effective than others.

For the design of *fun and effective* educational escape rooms, there is a lack of design frameworks. For our research we used two validated frameworks from serious game research. Combined they address the challenges for designing educational escape rooms.

In the lecture, I'll address the design challenges, the frameworks and how we used the frameworks in various studies.

Nic Whitton

Professor of Digital
Learning and Play –
Northumbria
University

**Inge
Donkervoort**

Member Xerte
project/ CEO
DLearning

Jenny Moffett

Educationalist /
Faculty Developer -
Royal College of
Surgeons in Ireland

The Panel

**Rachelle Emily
Rawlinson**

Senior Learning
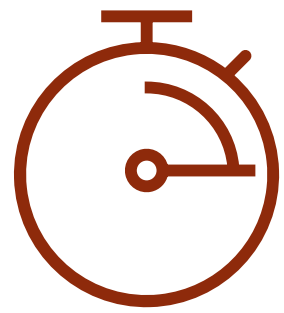Designer - Durham
University

Briyana Morrell

Associate Professor
- University of
Indianapolis

**Panagiotis
Fotaris**

Principal Lecturer -
University of Brighton

Presentation Abstracts

LIGHTNING TALKS: ABSTRACTS

Escape Rooms: individual versus group participation

Lisa Alberici

There has been fantastic feedback on the effective use of Escape Rooms in Education to promote and enhance group and collaborative working (as made clear from the 2023 showcase). But more recently, I have been offering Escape Rooms that can be completed either individually or as a group as part of a Universal Design for Learning approach.

This lightening talk is intended to promote thinking about (and hopefully gather other examples of) where the Escape Room structure and principles can be used to promote individual learning too.

Unlocking Sustainability: Using German as a Foreign Language to Uncover Greenwashing in a Virtual Reality Escape Room

Christine Bélanger and Alice Gruber

We propose presenting a virtual reality educational escape room (VR-EER) that was developed for learners of German as a foreign language (GFL). The VR-EER is on the RecRoom platform and can be accessed in high-immersion virtual reality, using a VR headset, and in low-immersion virtual reality on devices such as computers, tablets and smartphones. The escape room is suitable for GFL students with B2-C1 level of language proficiency according to the Common European Framework of Reference for Languages (CEFR).

Intercultural Citizenship Education (ICit) was used as the guiding pedagogical framework for the VR-EER. The ICit approach to foreign language learning is holistic and emphasizes action-oriented outcomes, while focusing on critical thinking, cultural awareness and intercultural communication. Accordingly, sustainable consumption was the general theme for the VR-EER, with a specific focus on sustainable fashion and greenwashing. The goal is for players to use German as a target language while working on sustainability-related puzzles.

In the game, players act as investigators for a fashion retail giant and solve puzzles that slowly reveal the company's environmental misconduct - high CO_2 emissions, water misuse, and false biodegradability claims - thus exposing its greenwashing tactics. The narrative culminates in a moral choice: to leak the incriminating documents or to aid in the company's misinformation campaign. This decision shapes the game's ending and is designed to foster critical thinking and debate among players.

In our talk, we discuss the rationale behind the VR-EER's educational strategy and share some preliminary findings from a study with language teachers who evaluated the app.

Using Escape Rooms to show the VLE's more engaging side

Steve Bentley, Paul Fulton, Mohamad Miari, Dr Sue Folley

The University of Huddersfield's monthly "Learning Bytes" staff development sessions have featured Escape Rooms as a December showpiece for the last two years. Built using standard functionality of our VLE, D2L Brightspace, we wanted to demonstrate to staff how building content directly in the platform can make the VLE more engaging than simply using it as a repository for files.

Using an Escape Room gave an opportunity for academic staff to experience the VLE from the learner's perspective and to reflect on the differences between how they use Brightspace and the approach we were showcasing, and opportunities to incorporate some of the ideas we were sharing.

In 2022 we used a range of built-in Brightspace features and embedded external tools to produce an Escape Room where teams in breakout rooms and challenged to find the lost keys for a new campus building before its official opening. For 2023, we wanted to showcase the new Creator+ add-on package for Brightspace so used this exclusively to develop a treasure hunt across four fantasy lands, with a story which was partially written by Generative AI, and using video messages from an AI generated narrator character to move the story on.

The Learning Bytes sessions take place online via Teams, but these activities were designed to have a longevity beyond that initial session as asynchronous activities.

We will reflect that the Escape Rooms were a means to an end – to provide an engaging way to show off various affordances of the VLE and associated platforms which could be taken forward as individual ideas rather than us having any realistic expectation that people would have the capacity to build anything so extensive for day-to-day use.

Chemistry Escape Rooms: Improving the Tutor-Tutee Relationship

Nathaniel Bingham

Escape Rooms have become very popular in the past decade, involving a group of people being locked in a room, aiming to escape within a set time through the completion of a series of puzzles. Whilst they are usually sought out for their fun nature, educational escape rooms have been noted for engaging students in learning along with developing teamwork skills.

We have developed our own bespoke Escape Room in the Department of Chemistry, inviting personal tutor groups to take part in week 0/1 as an icebreaker activity. The room itself was designed to require both the skills and input of the tutor and the tutees to 'escape' in time, drawing upon the team building aspect of Escape Rooms. The purpose of this talk is to discuss the construction of the Escape Room, along with the potential benefits to the tutors and tutees involved, such as improving the tutor-tutee relationship.

I'm a Student...Get Me Into Here!

Shonagh Douglas

This proposal would be to showcase an induction escape room developed on Articulate. Induction can result in information overload for many students and this escape room has been effectively used to introduce students to aspects of university support resources in a memorable way.

Risk management in healthcare education

Charlie Earle, Bedwyr Gullidge and Shannon Meachen

In November 2023 we disseminated an online escape room designed to educate first year students on a variety of risks and hazards within a clinical work environment. The activity had 4 sections to it; section 1) prior learning via a Sway, sections 2-4) three different clinical rooms with an array of hazards. Students had to identify the hazard and complete mini risk assessments. The three rooms got progressively harder, making the student more autonomous in their hazard identification and risk management. Students needed a code word to progress through each room.

This was the first activity of its kind in healthcare education at Swansea and we received some useful student feedback (which will be discussed during the talk). Previous attempts of this activity face-to-face where unsuccessful in securing student learning, were time and resource intensive. This online version proves to provide insight in risk management within healthcare.

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

Joshua Hamilton

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 an 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.

Digital escape rooms in Nursing education

Annaliese Higson, Kirsty Clouston & Graeme Prescott

The introduction of simulated placement hours into pre-registration nursing programs across the UK, has allowed educational institutes to explore a range of innovative simulation approaches. At the University of Bolton, the pre-registration nursing clinical skills team and simulation team created an on-campus simulated placement for year one pre-registration student nurses.

The Nursing Midwifery Council changed their definition of simulation in 2023 (NMC, 2023). The definition allowed us to explore the use of innovative simulation methods that were not currently used within the program, such as screen based and virtual simulation. The aim was to create a virtual experience that allowed learners to problem solve and explore decision making in a safe environment with no risk to patients. Introducing gamification to the simulations was an appealing technique as games are not only a proven education method but they are engaging and allow for immediate feedback that validates learning.

In collaboration with an e-learning developer and the use of an e-learning authoring tool, digital escape rooms were produced for the online proportion of the placement. All content was placed within a "virtual hospital" platform created by the team.

The escape rooms were based on patient case studies with a variety of health conditions which linked to other simulation days throughout the placement. Each patient required nursing interventions such as fluid balance charts, medication administration, care planning and physiological observations. The virtual patients required the learner to implement the correct interventions to be given codes which enabled them to proceed through the game.

Using evaluation feedback, we have developed the escape rooms to improve the player experience. The escape room development includes an AI generated "guide" to contextualise the scenario and offer support. Data suggests the gamification element added to the real-life pressures felt within a ward environment. The digital simulation games showed they can improve knowledge and skills in nursing students' clinical knowledge but also develop acquisition of essential soft skills.

Overcoming the red tape: The challenges of designing and evaluating a digital escape room platform

Matthew Jones and Nicola Morgan

With students increasingly accessing content via digital sources rather than in-person due to factors including the increased cost of living, identifying new ways to engage students via digital mediums is paramount. One example of this is digital escape rooms. Digital escape rooms offer a fun and interactive way for students to evaluate and apply their knowledge to enhance their understanding and how to apply this to real-world scenarios. Through experiences with other digital escape rooms that have been created at a subject-specific level (Ang et al., 2020; Horn, 2023), we developed and implemented a central university-wide platform for the creation of digital escape room content across the University of Salford. However, throughout this process there were many technical and logistical challenges in creating a platform that adds pedagogical value across the institution and facilitates student engagement.

These challenges ranged from logistical, workload and student-facing issues, with examples including how do you ensure the long-term future of a digital platform with finite funding? How do you ensure adequate value for the workload used to create the platform? How do you encourage students to participate and provide informative feedback for further project development? How do you expand the reach and content of your platform sustainably? All these issues played integral roles in adapting the direction of platform development and the enhancements made along the way to ensure a positive student experience and inform how we created further escape rooms within the platform. With many of these challenges only emerging upon commencement of the project, through this talk, we aim to showcase how we overcame these and inform prospective creators of the issues faced.

Bringing gamification to the economics classroom

Suzanne Lampert

My lightning talk will reflect on the first use of an on-campus escape room activity in a first year economics course. Since the pandemic, low tutorial attendance and poor engagement in first year economics tutorials had been a real issue for us. We needed a format for tutorials that would encourage students to attend, and engage them; so I started putting together my first escape room. We had ten tutorial groups at the Edinburgh campus, with up to 50 students in each, and six tutors involved in delivery. The escape room would be delivered to all of these students and by different tutors.

It was surprisingly easy to adapt previous tutorial questions, but I also added a couple of easier rounds of questions to ease students in, and I used a combination of mathematical questions and word based puzzles. I set the questions within the context of a realistic business scenario, and opted for hard copies of each round of questions. In January 2024, I delivered the first escape room and it went really well. All students in the class were engaged and most appeared to really enjoy the activity. One of the things that really struck me was how inclusive it was – in all of the tutorials I delivered, every person in the room was involved. As the week progressed, positive feedback was coming in from both students and tutors. It felt like a great way to start our tutorials and to help achieve a strong grounding for collaboration and engagement from the outset. In my talk, I will share my observations and reflections on the planning and delivery of the escape rooms, and discuss the changes that were needed to the design and format. I will also discuss what happened when we delivered a second escape room in the fourth tutorial of the course.

Up to this point, I have only informally evaluated the escape rooms, but the next step is to run escape rooms in the next academic year and to formally evaluate them. This will involve considering both the student and tutor experience. A mixed methods approach will be adopted. The instruments for evaluation will be two student surveys using MS Forms – a feedback survey and an evaluation survey, student interviews (which will be informed by the student surveys), and tutor interviews.

MicroBEscape room in Higher Education – Escape from the microbes!

Isabel Murillo, Lydia Mason, Emma Stevenson and Laura Wright

We aimed to create an escape room game to enhance the experience of undergraduate students when studying microbiology. As a project leader and educator, I was interested not only in the game but also in the collaboration of students as co-creators. Together, we developed an educational activity for Microbiology based on Escape Rooms called "MicroBEscape Room". This engaging and intricate escape room activity was created from scratch by first year undergraduate students Emma Stevenson, Laura Wright and Lydia Mason and supervised by Senior Lecturer Isabel Murillo. By engaging students in the game design process, we made it easier to understand the purpose of the game, tailor it to its aim and tune the difficulty of the tasks, ensuring that the content was pitched correctly and flowed smoothly as a game.

MicroBEscape Room has been used as a revision tool for students enrolled in the 1st Year Fundamentals of Molecular Microbiology unit. This game is played in the classroom in groups of around 6 students. Students are provided with a bag containing the different pieces of the game. The game starts with an informative letter from a hypothetical Public Health England and a news article about an infectious bacterial strain released in the city of Bristol. In groups, students work through a number of intricate puzzles, wordsearch and codebreaking activities, each leading to the next clue to finally reach the solution to the original problem. Each step is an opportunity to explore the concepts explained in the unit, which will be assessed during the exam period. It also provides students with the perfect environment for peer-learning, team-work and problem-solving skills under the umbrella of a game. The game was evaluated using an anonymous questionnaire and the data obtained will be shared.

Integrating traditional and digital teaching approaches: Using augmented reality (AR) to create escape rooms

Laura Nicholson and Stefan Van Der vyver

We have designed a unique escape room design by combining Xerte, which is open source software for authoring learning objects, with the augmented reality (AR) capabilities of a HoloLens. The augmented reality aspect of the HoloLens means that the wearer isn't completely immersed in a virtual world. This makes it a perfect environment to enable the collaborative elements of an escape room because the HoloLens wearer can still see everyone in the room, in addition to 3D objects and holograms projected in front of them.

The escape room consists of a HoloLens wearer and a group of seated participants. Each has access to the unfolding escape room mission on Xerte, and they must all work together to 'escape the room'. The HoloLens wearer and seated participants each have access to slightly different clues, promoting communication and collaboration to resolve the puzzles. There was also a strong focus on an underpinning storyline, which unfolds throughout the escape room. The escape room is based on a mission whereby the participants have to imagine they have been invited to the grand opening of an event, and they have to deliver cardiopulmonary resuscitation (CPR) training to the staff and visitors. However, the prized CPR mannequin has gone missing, which they use to demonstrate this, so they must engage in an impromptu mission to find it to ensure the event goes ahead as planned. In creating this escape room,we have essentially combined traditional delivery methods with AR to take that all-important step forward towards developing the digital skills and experiences of students.

The talk will include the justification for using AR to design escape rooms and will also feature a brief walkthrough of the Cardiopulmonary Resuscitation (CPR) escape room we have created.

Collaborative escape challenges to model co-operative learning

Stian Reimers

I'll present an escape challenge run during induction over the past couple of years for the BSc Psychology programme at City, University of London. Up to 50 students participated in each session, divided into small groups of seven, using a variety of classic escape room puzzles and props - combination boxes, hidden compartments, barcode scanners, mystery phone numbers - to learn about the university and work together. Each small group discovered a unique clue which helped crack the final whole-cohort puzzle involving a thousand index cards with codes on.

This was used to introduce a - probably slightly corny - discussion of how study at university is at its best a collaborative rather than a competitive exercise. I'll give a quick overview of the tasks, discuss how it went down across the eight sessions we ran and what we learnt, and reflect on potential for future development.

Escape game pedagogy - problems or solutions?

Ville Tahvanainen

The unique classroom space for learning observation, Sm4rt LOC, is intended for teaching and research use and where escape game pedagogical educational interventions are especially implemented. This globally unique learning environment in academic education has been put into use in the fall of 2020, where numerous educational escape games have been implemented by both teachers and students.

The speech related to pedagogy and teaching presents observations in the Finnish context related to escape games. In addition, materials made for teachers that would support the implementation of the teaching method are presented. As one example, an escape game manual is presented, which includes recordings from Finland's only educational escape game seminar as well as expert podcasts.

The presentation also brings out research perspectives, which the presenter has also participated in making. At the University of Eastern Finland, the teaching method is currently used in more than 20 study courses, ranging from teacher training to pharmacy and language teaching.

Pedagogical Escape Room for Medicine Dispensing and Patient Counselling

Piia Siitonen

The pharmaceutical escape room was built on the campus in the Spring of 2022. The game focuses on medicine dispensing and patient counselling using real-word scenarios and tasks. In the Spring pf 2023, 68 pharmacy students participated the escape room.

Of the students, 75% strongly agreed that the escape room was well constructed and motivated to play. 88% strongly agreed, that learning in the escape room was enjoyable, and that escape games should be used more in pharmacy studies.

In addition, the majority of the students strongly agreed that escape room promoted logical reasoning, problem-solving skills, and active participating.

Group tasks: Using individualised hidden information to achieve a common goal

Adam Turner

As part of the admissions process for our programme, students are expected to undertake multi-mini-interviews (MMIs). One of the qualities we look for in our applications is the ability to work together with others. Borne out of the COVID19 pandemic, an online Zoom based interview process was devised. Design of the group task was devised following faculties experiences with breakout rooms. A number of applicants are taken into a breakout room and using the private chat function on Zoom are given individualised links to different pieces of a jigsaw puzzle (three per person). These pieces have overlapping information which require applicants to match their piece(s) to that of other applicants. The students are given a grid (labelled alphabetically) and pieces of the jigsaw (labelled numerically) – the solution should then be communicated to faculty by matching the letters to the numbers. If applicants encounter difficulties, there are clues available to help them better work towards the shared objective. The ability for the applicants to complete the activity (without or with clues) is important as the sense of achievement should (hopefully) lead to a positive experience with the institution. This process thus allows us to determine the ability for applicants to work as part of a group and also showcase our institution to applicants.
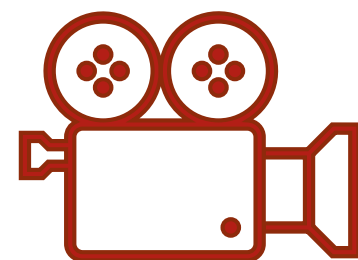
RECORDED TALKS: ABSTRACTS

Escape Rooms – "I'd love to but…"

Susan Caie, Catriona Cunningham, Silvia Mazzotta, Gordon Stewart, Lorna Stewart

As a group of educators from different disciplines across two universities in Aberdeen, we have a mutual interest in pedagogical escape rooms. This led us to meet regularly in order to discuss contextualised practice and encourage each other to learn from our diverse experiences. We would therefore like to share what we have learned so far with colleagues across other educational establishments.

Drawing from our personal experiences setting up and running escape rooms with a range of disciplines and cohorts, we have identified a number of practical issues which we would like to tease out together. These range from what software can be used, from basic start-up options, (eg One Note and Google Forms), to more advanced applications.

We will then summarise how to design simple escape rooms, based around identified learning objectives, and consider the practicalities of running these successfully, both in person and online. As part of this, we will go on to address time-management concerns which educators may have, as well as the importance of ensuring we uphold inclusive pedagogical approaches.

Last, but not least, we will highlight the importance of debriefing as an integral part of the escape room process. Building upon our belief in the power of experiential learning and collaborative pedagogies, we will examine both examples of good practice and lessons learned from less positive experiences along the way! By doing this, we hope to encourage others to embark on their own escape room journeys, knowing that rocky routes are often the most rewarding.

A student perspective on the development and delivery of an educational escape room

André Justin Carpio

As part of a summer project supervised by Dr Silvia Mazzotta and Dr Catriona Cunningham and funded by the University of Aberdeen (UoA), I designed an escape room to teach medical students about the health implications of climate change.

Two challenges I faced were picking a suitable topic and not having any prior experience with escape rooms (having never played, let alone designed one before!). In my talk, I will therefore start by discussing how I chose to teach the relationship between climate change and human health to medical students via my escape room.

Participating in last year's Escape Room in Education Showcase really helped with the workflow behind developing my escape room. I will discuss how I used H5P and WordPress as the main framework for my escape room and the various technical issues I faced. As the escape room turned out to be quite a success and a talking point amongst students and educators at University of Aberdeen, I was offered the opportunity to run a revised version of it as an icebreaker on the first day of the incoming medical students.

As a junior medical student myself, this was a thrilling, yet quite nerve-wracking experience. There were over 300 people in the year and as they were the largest incoming cohort in the medical school's history, the stakes were quite high if the escape room experienced any issues. With this in mind, I will detail the steps I took to minimise any chances of technical difficulties. To conclude, I will share the behind-the-scenes of delivering a virtual escape room in a physical setting from a student perspective, and I will wrap up by giving practical tips for any potential student or educator who would like to build an educationally themed escape room in the future.

Developing creative problem solving skills through an Escape Room Learning (ERL) approach

Tom Cox

Escape Room Learning (ERL) in education is becoming far more prevalent as an approach to developing and assessing knowledge an understanding of a subject area, however, the planning of puzzles that target 'specific elements' of creative thinking within these engaging ERL environments is still an extremely underdeveloped aspect of this effective pedagogical approach. This talk outlines a targeted ERL approach that solely focuses on development of learner's creative thinking and problem solving skills.

Participants will not only further their understanding of 'specific elements' of creative problem solving, but how a classroom based ERL approach can develop these. Attendees will gain knowledge of how to plan for and create puzzles that develop a range of creative thinking skills such as divergent thinking, convergent thinking, curiosity, risk taking, overcoming functional fixedness, combinatory play, challenging assumptions and changing perspective.

Through lively discussion, classroom based examples and practical puzzles, practitioners will gain insight into how to plan, create and deliver their own ERL experiences that target these specific elements of creative thinking and develop their learners' creative problem-solving skills.

Curse Breakers Wanted: The Haunted Battersea Power Station

Jessica Gordon-Calvert

Themed around the Battersea Power Station redevelopment, UCEM's virtual escape room resulted from student and staff collaboration for Go Green Week - an informal curriculum opportunity for students and staff to engage with sustainability and the built environment together. The game uses the Microsoft OneNote application and utilises staff hosts, to guide the student and staff groups to free three, less-than-friendly ghosts.

Each of the ghosts, their stories and the clues to free them link to some of the United Nation's Sustainable Development Goals: No. 4 – Quality Education; No. 5 – Gender Equality; No. 7 – Affordable and Clean Energy; No. 10 – Reduced Inequalities; No. 12 – Responsible Consumption and Production; and No. 15 – Life On Land. Demonstrating that sustainability can take on many different forms and that you can engage with them in a fun, informal way such as an escape room!

Our Student Officers for Sustainability were at the heart of the creation of this activity and it has been utilised twice during Go Green Week/Climate and Social Action Weeks, most recently in October 2023.

Society of Shadows Challenge: An online escape room inspired by Scottish Gaelic language and culture

Liz Hudson and DJ MacIntyre

The Society of Shadows Challenge (Dùbhlan Comann nan Sgàilean) is an online escape room built by Liz Hudson, Founder and Director of Learning at Lexedio, for the University of the Highlands and Islands (UHI).

The activity was developed as part of the UHI Gaelic Awareness and Support project, with funding from Bòrd na Gàidhlig. The concept was initially tested through in-person activities and the recently released online version was built using Articulate Storyline.

You don't need any Gaelic to get in, but you'll need to learn a wee bit to get out!

Immersive Technology based Escape Rooms

Kara Lewis, Digital Creativity & Learning Team: Emma Jones, Digital Learning Technologist; Nathan Chaplin VR Technology Specialist; Glyn Jenkins, Digital Experience and Engagement Manager, Calum Gregory, Learning Designer UWTSD

This presentation explores the use of escape rooms for education, focussing on language acquisition, Law & Public Service training and cultural awareness using cutting-edge immersive learning spaces - Samsung LED panel-screens on three walls of a room.

Our multidisciplinary team has designed experiences that combine the digital and physical realms, fostering learning through play, inquiry and creative problem-solving in an environment which enhances communication skills and allows for "safe failure"; an approach crucial to reducing anxiety over errors (errors being a vital aspect of language acquisition).

Our case studies demonstrate that using Immersive Rooms in educational settings increases engagement, achievement of learning outcomes and promotes inclusivity of individual preferences and strengths. The blend of digital, physical and AR puzzles encourages creativity, resulting in holistic, experiential learning.

Study 1: Emma Jones and Kara Lewis developed a proof-of-concept escape room focussing on Welsh language acquisition and cultural awareness using the Welsh Youth Eisteddfod as the narrative. Google Slides displays the activities in the Immersive Room, providing a format requiring minimal technical expertise from academics.

Study 2: Kara Lewis has been creating digital escape rooms to teach Welsh language skills online to primary school teachers. This inspired the development of a science-themed escape room featuring a combination of immersive, physical and augmented reality language puzzles, requiring teams to develop their spontaneous communication skills.

Study 3: Nathan Chaplin with Calum Gregory and Glyn Jenkins developed a hybrid escape room for a Law & Public Service event, accommodating six groups of ten teenage students. Clues and tasks are placed on both the immersive screens and physically within the room, the design serving as a versatile template that academics can customise for various educational or team-building purposes. By integrating technology with traditional learning methods, we are forging a new standard for effective educational engagement in a technologically-enriched environment.

Learning Collaborative Problem-Solving by Playing Digital Escape Room Games - State of Knowledge & Examples

Jana Oehlke

The modern world is complex and changes at an increased rate, putting increased demands on individuals to develop competencies that allow them to tackle the challenges of our time. One of these so-called 21st century skills is collaborative problem-solving (CPS). Collaborative problem-solving is a complex composite skill which can be described as a combination of social and cognitive sub-skills that must be used effectively in order to solve problems within a team. Collaborative Escape Room games with dependency gates could be a fruitful environment to teach or practise those skills because they present a believable problem to a team of players, thus fostering both collaboration and problem-solving activities.

Research on the effectiveness of Escape Room games on the development of collaborative problem-solving skills is in an early stage of maturity. Ad hoc research designs with unsystematic evaluation dominate the publication landscape of research on the benefits of using Escape Room games in education (Garcia et al., 2020). Systematic reviews show homogeneous findings, with both significant improvements and at times even declines in knowledge stated (e.g. Makri et al., 2021). These mixed findings call for an in-depth examination of the conditions that might help educational Escape Room games to reach their full potential.

The aim of this presentation is to present an overview of the current research findings on the use of Escape Rooms to teach and practise collaboration and problem-solving skills. This section will go beyond presenting just the results and evaluate the games and methodology critically. Furthermore, commercial digital Escape Room games will be presented along with benefits they might have for education and research.

References:

Garcia, I., Pacheco, C., Méndez, F., & Calvo-Manzano, J. A. (2020). The effects of game-based learning in the acquisition of "soft skills" on undergraduate software engineering courses: A systematic literature review. Computer Applications in Engineering Education, 28(5), 1327–1354. https://doi.org/10.1002/cae.22304

Makri, A., Vlachopoulos, D., & Martina, R. A. (2021). Digital Escape Rooms as Innovative Pedagogical Tools in Education: A Systematic Literature Review. Sustainability, 13(8), Article 8. https://doi.org/10.3390/su13084587

Infusing fun into every locked door

Steve Phillips

How to you make sure that the core messages of any subject, delivered through escape rooms are remembered and influence behaviour change?

From league tables to cartoon characters, Xcapism Learning will discuss how creating as fun an experience as possible helps increase information retention. It's all about a compelling story, an immersive environment and learning through discovery.

Plus puns.

Using online Escape Rooms for summative assessment

Claire Timmins

Following O'Brien (2021), I created a OneNote online Escape Room as a summative assessment for 1st year students. Ten password-protected rooms containing a variety of puzzles were created based on weekly lecture content, to help Geoffrey the air particle make his way from the lungs to the mouth. The puzzles were mostly designed by prompting and correcting ChatGPT (OpenAI, 2023), an idea gained from attending the Escape Rooms in Education Showcase 2023. This resulted in anagrams, riddles, and T or F statements based on the teaching content being assessed. Other tasks required students to link out to Flippity, another idea gained from attending the Escape Rooms in Education Showcase 2023. The Escape Room was piloted with colleagues with the same content knowledge as the student participants, resulting in some changes to complex puzzles.

The assessment was an on-campus, timed activity. The timing of the activity was hard to determine, so a flexible approach was taken. For this initial run, the students were told that they would pass the assessment when they 'escaped' and that there would be many hints to help them successfully reach the end. Hints ranged depending on the need of the student with some requiring prompting from the tutor invigilating (a guide had been prepared in advance), but answers were never provided. For this first run, there was no real way for students to fail the assessment. This led to the biggest challenge going forward. If there is no way to fail, then how would students be motivated to study if hints were easily available?

In this session, I would like to demonstrate my Escape Room and invite ideas on how to manage assessments using Escape Rooms.

Showcasing digital tools via an escape room experience

Tracey Webb and Oliver Moore

Learning Technologists at Bournemouth University (BU) have been exploring the concept of escape rooms and how they might be used to promote innovative technologies to staff. At a recent internal conference, we took the opportunity to run an escape room, incorporating both online and classroom activities, during one of the sessions.

Our goal was to showcase the various digital tools and technologies available to staff at BU, to demonstrate the capabilities of these tools, and to inspire staff to utilise these in their teaching, or even to create their own escape rooms or immersive learning scenarios.

This presentation will discuss the activities that made up our escape room, the digital tools we incorporated (such as AI generated mission brief videos, VR headsets, 360 cameras and H5P interactions), and how we leveraged Brightspace tools, our VLE, to deliver the session. We'll reflect on the success of our first attempt at creating an escape room and how successful it was in achieving our intended aims.

WORKSHOPS: ABSTRACTS

"Can you escape rehab?" Framing an online escape room for the application of theory to a clinical scenario

Nancy Barber

In working with speech-language pathology (SLP) students, it has been observed that students tend to have difficulty applying theoretical knowledge to clinical scenarios. This challenge is not novel to SLP students but has been identified in other aspects of medical and health-related educational fields.

This observation led to critical reflection as to how to ensure students could learn the theoretical underpinnings of communication disorders, integrate the theory and apply it to a clinical scenario. Therefore, an online escape room was designed for SLP students, incorporating case-based learning for the module "Traumatic Brain Injury and Motor Speech Disorders". This workshop will explore the theoretical basis of the incorporating of social constructivist learning theory, adult learning theories and case-based learning to design an online escape room as a learning task to support the integration and application of theory to a clinical scenario.

An escape room design will be explained from the initial concept to implementation with practical strategies on how to use an escape room for using theoretical knowledge in a practical/clinical scenario.

Create your own digital escape room (with Xerte)?

Inge Donkervoort

Online workshop "Building an escape room" with the open-source authoring tool Xerte. Is that possible? Yes, and we will work on that during this hands-on workshop. You will get started with your own escape room and we will give you tips and tricks to create an escape room in Xerte. If you don't have access to Xerte, you can also join us, just to take a look or you can get access to an Xerte installation from us.

What do we do in this workshop?*

- How do you design an escape room?
- What do you need to prepare to create the escape room?
- Which pages are best to use?* We will show some examples...
- What additional features and settings do you need?

At the end of the workshop, you will have created your own escape room that you can immediately use and share with others. We also provide you with a template to help you start building escape rooms in Xerte.

A step-by-step guide to Educational Escape Rooms

Sue Sharpe, Guddu Kaur and April Chan

The Step-by-Step Guide to Creating Educational Escape Rooms (EERs) was written in a purposeful academic/education design collaboration, to embed both pedagogy and practical experience. Building on current EER evidence, relevant pedagogical concepts were applied to the EER context, including constructive alignment, universal design for learning, summative vs formative assessment, assessment security, feedback, active learning, and authentic assessment. It includes insights from an academic with experience creating and running EERs spotlighting hints and common mistakes.

The resulting 12 step 'how to' guide is both practical and user-friendly, supporting evidence-informed development. It assumes little prior knowledge of either education concepts or EERs, walking through EER design choices, providing rationale for different decisions without being prescriptive. In this showcase, we identify highlights of the guide, including methods to increase accessibility and inclusion; impact of EER purpose on design choices; security vs engagement trade-offs and behind-the-scenes thinking on themes, storylines, and riddles.

Creating an Educational Escape Room: Evidence-informed guidelines (On fig**share**)
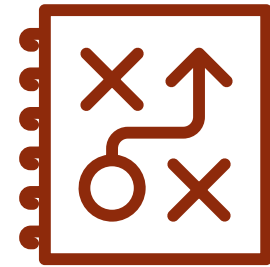
ESCAPE ROOMS: ABSTRACTS

Escape Room Schedule

Time BST	Session Type	Speaker(s)	Title
08.00-09.00	Live Escape Rooms	Scott Chesworth	"Better the Devil You Know" Digital Escape Game
		Toby Jones	Gone Viral – now full (Teams link & instructions will come from Toby)
13.30-14.30	Live Escape Rooms	Luke Middleton, Helen Speck, Veena Raigangar and Lucy Chilvers	Escaping the Statistics Labyrinth: A Gamified Approach for Healthcare Students
		Toby Jones	Gone Viral – now full (Teams link and instructions will come from Toby)
19.00-20.00	Live Escape Rooms	Scott Chesworth	"Better the Devil You Know" Digital Escape Game
		Toby Jones	Gone Viral
		Jasmeen Kanwal	Locked in the DATA base

"Better the Devil You Know" Digital Escape Game

Scott Chesworth

Escape [to] the Library Goes Digital returns with a new escape game for the Escape Rooms in Education Showcase 2.0.

Dr Connie Zia escaped Vomo Island [last year's digital escape room] with the research data, but what did she do with it? After infiltrating MegaWOLF's secret laboratory, you and your team now have to work your way through the series of puzzles on each floor inside the huge tower of glass before time runs out.

Evil has a new face and sometimes it's better the devil you know...You'll need to play a bite-sized digital escape game before playing this one, which acts as a prologue to the live event and gives you an idea of what to expect in the live game: https://cutt.ly/prologuecarrot

You don't need to have played last year's game to enjoy this one, so good luck!

Gone Viral

Toby Jones

Gone Viral is a collaboration between Toby in Utrecht NL (puzzles, IT) and Liz in Leeds UK (puzzles, theme, flow). See the link in the welcome email to register (and make sure you check your email Junk/Spam folder on the day of the event). Watch the trailer.

Locked in the DATA base

Jasmeen Kanwal

This escape room is available to do online, asynchronously: https://dataschools.education/resource/locked-in-the-data-base/

There is a play-along video (https://youtu.be/hzpUk94DsCA), but it can also be done by just downloading the "Rollercoaster Data Sheets" and using the "Alarm Code Entry Webpage".

I am available on the day to do a live drop-in session for people wanting clues, and/or a Q&A about the full series of escape rooms (available here: https://dataschools.education/escape/) and how they can be used in the classroom for teaching data literacy.

Escaping the Statistics Labyrinth: A Gamified Approach for Healthcare Students

Luke Middleton, Helen Speck, Veena Raigangar and Lucy Chilvers

Students in healthcare professional programs often face challenges with quantitative research methods involving statistics due to limited mathematical backgrounds and training. To address this, an innovative gamified narrative escape room experience focused on statistics has been developed to make the subject more interactive and engaging.

During this session, participants will undertake a mini version of a **statistics-based OneNote escape room experience** designed for healthcare students. The escape room utilises a narrative where "*Professor Cypher*" has disappeared, and participants must unlock a sequence of rooms by solving statistical puzzles. The design comprises three sections modelling progressive statistical learning. The first introduces probability concepts through puzzles, building foundations in statistical thinking. The second focuses on descriptive statistics, with participants calculating and interpreting summary measures, reinforcing practical skills. The final stage is a virtual inferential statistics maze, emphasising applied understanding over complex calculations to align with real-world applications. In this maze, participants navigate statistical questions, receiving instant feedback on their responses as they progress.

By gamifying statistics education, the aim is to transform a traditionally challenging subject into an engaging experience that fosters statistical literacy and competence among healthcare professionals. This approach aligns with contemporary pedagogy, emphasising active learning, problem-solving, and real-world applications to enhance engagement and retention.

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HERIOT WATT UNIVERSITY

We hope you had fun, learned something new and met lots of new connections which take you totally new adventures with escape rooms.

Thank you for joining us

If you go on and create an escape room or bring a touch of challenge based learning into your teaching spaces please keep in touch and let us know how you get on.

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