

Proceedings and Abstracts of the
3rd Symposium on Games in Learning
Trent Institute for Learning and Teaching
1st June 2022



Conference Conveners

James Leinster, Nottingham Business School

Dr Michael Coffey, School of Science and Chemistry

Proceedings of
3rd Symposium on
Games in Learning
2022

Hosted By
Trent Institute for Learning and Teaching (TILT)
City Campus

1st June 2022
10:00 – 16:00

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Preface and confidence themes

Welcome to this third symposium that the Games in Learning (SIG) have organised. As we emerge out of the Covid-19 global pandemic, we need to keep searching for new ways within Game-Based Learning (GBL) to make learning fun but also challenging. GBL approaches have become more widely intertwined in our teaching practices, they have focused tutors and learners to be creative in using technology and non-digital methods to support learning.

We have several submissions from contributors from NTU and our external speaker is Dr Panagiotis Fotaris from the University of Brighton.

Symposium Themes and Topics

The symposium sought submissions from academics and students to share their experiences of using games or gamification in supporting learning. Topics of interest include, but are not limited to, the following:

- Supporting Well-being and Mental Health using Game-Based Learning
- Sustainability using Game-based Learning
- Educational Escape Rooms
- Teaching and Learning using Game-Based Learning
- Impact and Measurement of Game-Based Learning interventions
- Introduction to a new Game-Based Learning intervention
- Breaking down inequality barriers using Game-Based Learning

We would like to thank the presenters for their contribution to the symposium, and to the delegates who attended.

Programme

Timings	Topic	Presenter(s) and Authors(s)
09:30 – 09:55	Registration, tea/coffee/water	
10:00 – 10:10	Welcome, preface and symposium themes	James Leinster and Dr Michael Coffey
10:15 – 11:15	Keynote title: Escape from the classroom – the potential of educational escape rooms in a post-pandemic world	Dr Panagiotis Fotaris (University of Brighton)
11:15 – 11:25	Comfort Break	
11:30 – 12:00	Paper 1: Using H5P to develop interactive video productions for the classroom & online learning environments	Paul Wallis and Chris Hallam
12:05 – 12:35	Paper 2: Reflections on the exploratory use of the SDGs in shifting Tier 2 and 3 subcontractors focus away from product invention and inspiring sustainable process innovation	Ani Raiden and Stuart Grabham
12:35-13:25	Lunch Break	
13:30 – 14:00	Paper 3: Using 'art' and creativity to develop deeper learning of the "the Law"	Antonia Genghi
14:05 – 14:35	Paper 4: COP Climate Change Negotiation Game (in-person / online)	Jasmine Ranson, Helen Puntha and Alexandra Arntsen
14:40 – 15:10	Paper 5: Students as games creators	Hua Zhong, Katalin Butt-Bethlendy and Helen Puntha
15:10 – 15:20	Comfort break – Tea/coffee/water	
15:25 – 16:00	Plenary: General discussion and closing remarks	All contributors and attendees

Note: CPD certificates will be issued after the event via email.

Abstracts of presentations

Keynote: Dr Panagiotis Fotaris (University of Brighton)

Escape from the classroom – the potential of educational escape rooms in a post-pandemic world

Escape rooms are live-action team-based games in which players work together to discover clues, solve puzzles, and accomplish tasks within a time limit to reach a specific goal. Besides being a very popular pastime for people of all ages, they have recently started to gain momentum in academic circles as educational tools, especially during the COVID-19 pandemic. Research findings have established that educational escape games can create immersion as they combine the strengths of storytelling and gameplay, therefore eliciting high motivation and engagement and so promoting successful learning. This Keynote talk will provide hands-on, practical instructions on how to plan, design, and run an educational escape room.

Paper 1 - Paul Wallis and Chris Hallam

Using H5P to develop interactive video productions for the classroom & online learning environments.

The 30-minute presentation will look at the phenomenon of Interactive Videos and how the use of interactive videos can be adapted to develop and introduce learning opportunities into film narrative and storytelling

The session will provide an overview of and guide the audience through the merits and practice of interactive storytelling through film and video platforms. The presentation will specifically illustrate how the H5P learning technology platform allows the teacher and potentially the student to develop interactive videos that supports active learning through the ideologies of gamification of learning

The key practices that will be presented are the use of the H5P branching scenario as a tool to immerse the viewer in a learning experience, and how contemporary teaching and learning resources inside the H5P, can be combined within the “branching scenario” to construct learning and assessment opportunities through an interactive immersive film experience.

Paper 2 – Ani Raiden, Stuart Grabham and Emmanuel Manu

Reflections on the exploratory use of the SDGs in shifting Tier 2 and 3 subcontractors focus away from product invention and inspiring sustainable process innovation

Social value in the built environment refers to the social impact any organisation, project or programme makes to the lives of the stakeholders affected by its activities. Social value is a national/organisation level practical

vehicle for realising the United Nation's Sustainable Development Goals (SDGs). The SDGs were used as a framework to inspire Tier 2 and 3 dry-lining subcontractors to begin to think about collaboration, innovation, and value, as part of a three-year Innovation Driven Procurement (IDP) programme. The IDP is a partnership between the CITB, a university, a main contractor, and their selected subcontractors. The aims are to strengthen the working relationships between the parties, and to help develop an enabling environment for supply chain to develop better processes and solutions for improved productivity. The programme consists of four once weekly workshops on site as the central mechanism for delivery. Weeks one to three sow the seeds for behavioural change, motivation, and collaboration. During week four, the SDGs are connected to a High Performance Work System (HPWS) to showcase how the subcontractors' input is a crucial part of a whole system. Furthermore, in order to inspire thinking about sustainable process innovation, the workshop participants were invited to consider value holistically, reflecting on the three pillars of sustainability; value in exchange, value in use, and esteem value; and social value. We discuss important learning points and connect to SDGs 3, 5, 8-13. We show how focus on product invention and cost considerations present key barriers for process related innovation, yet at the same time can offer favourable advances towards achieving SDG 13 (climate change) for example. We consider how the general classification of construction as a goods-producing sector (and not a service sector) influences the overt product-focus and reflect on opportunities for long-term sustainable development.

Paper 3 – Antonia Genghi

Using 'art' and creativity to develop deeper learning of the "the Law"

Most, indeed, all of the students who undertake 'Employment Law' on the level 7 professional Human Resource Management programmes see this learning as an 'essential' component of their development and learning. It is key to their work activities which they see as 'bread and butter' to the roles they undertake. They come with an anticipation that it will be 'black and white', straightforward and give them clear and unambiguous knowledge which they can apply to practice.

They are quickly disabused, realising that they have entered a world of 'grey'; a world of interpretation. Indeed, this year the students have termed the module, 'Employment Law – Fifty shades of grey' with no connection to the fictional use of this term!!

How to enable the learners to develop the fluid thinking which is required to interpret and apply the relevant law in practice, whilst recognising that there is a vast array of legislation to actually come to terms with which often overlaps, is a challenge. Achieving this challenge enables the learners to come to terms with the fact that the law is not 'black and white'.

To be able to consider the application of employment law it is first important for the students to identify what the terrain is in which it can be and indeed, is applied. What do I mean by 'terrain'? I mean the circumstances that a legal

consideration should be taken into account; the context in which the law may need to be applied.

To do this the students are enabled to create a foundation for their understanding. They create a map of the terrain in which the law might be applied within the context of employment; a journey through the life of an employment relationship between the employer and the employee.

The use of 'art' as a creative learning tool is well known. The students are asked to 'draw' the journey, the key stages in the employment relationship as they see it. This is their map of the terrain. The use of traditional flip chart pages, pens, poster paints, scissors, glue brings out the inner child and releases the deeper thinking.

The strategic points where the legislation should be applied is considered through the use of a pack of cards detailing national legislations which are applied and discussed by the students. The realisation dawns that the touch points are many and varied from each individual legislation thus enabling some detailed critical discussion around the application of the legislation to work practices.

The nature of the exercise means that it is not only appropriate for HR practitioners but anyone who has an employment relationship be they an employee or line managers to learn about the complex application of employment law in an accessible and meaningful manner.

Paper 4 – Jasmine Ranson, Helen Puntha and Alexandra Arntsen

COP Climate Change Negotiation Game (in-person / online)

OP (Conference of the Parties) is arguably the most significant international conference of our time where world leaders, activists, lobbyists, researchers and a host of other individuals congregate to reach agreements on addressing the climate and ecological emergency. COP26 was held in Glasgow, UK. COP27 will be held in Sharm El-Sheikh, Egypt in November 2022. As a sector leader in Sustainability, the NTU community needs to be COP-ready (!) so we can join the conversation and act on climate change.

We present the NTU COP game – where players take part in their own simulation of COP26, as small teams role-playing key nations. Players outline their national concerns, priorities and commitments in relation to the climate change negotiations. This type of gamification allows learners to engage behaviourally, emotionally and cognitively which is crucial when engaging with sustainability (Chih-Yen and Elving, 2020). This enables a deeper understanding of climate issues from a technical as well as systems- and value-based perspective so that players are in the best position to integrate their learning into their personal and professional lives. Through group discussion and negotiation players explore themes such as climate science, deforestation, carbon management, poverty, climate justice and geopolitics. Players gain an understanding of general

negotiation principles as well as the COP process. Previous research indicates that simulations provide opportunities to develop a variety of skills including interpersonal communication, teamwork leadership, decision making, task prioritizing, stress management (Flanagan, 2004).

In this session participants will take part in a 10-minute COP negotiation game taster. This will be accompanied by an explanation of the game development, a background to gamification in sustainability literacy, transferability of the game to different disciplines, and time for questions.

Paper 5 – Hua Zhong, Katalin Butt-Bethlendy and Helen Puntha

Students as games creators

In March 2021, NTU Green Academy and Confetti organised a 36-hr sustainability-themed 'Game Jam'. Six groups of six students (from Confetti, AAD, ADBE and ARES) worked around the clock to research information for and create a prototype game/app to teach sustainability. Commissioned by the Vice Chancellor, endorsed by PVC Education Jane McNeil, and coordinated by dedicated Project Officer, Eve Riley, this fast-paced online event which is due to be repeated in person in May 2022, served as a pilot for multidisciplinary, game-based learning projects using a student-as-creator model.

At the end of the event students presented their prototypes to a panel of specialist judges and prizes were awarded. As a result of their active participation, students gained the Sustainability in Practice (SiP) certificate to be added to their HEAR. Confetti students could also use the project as part of their industry-based sustainability scheme 'Albert' led by Confetti colleague Paul Wallis.

Using TILT bursary funding, Confetti and ADBE students developed the second-highest ranked Game Jam prototype – a 'Green Harvest' farm simulation – into a working demo which is available to share. The Confetti students continued to take the role of game developers and ADBE students fed in research on sustainable technologies to tailor the game for use in the ADBE module 'Sustainable technology and environmental control'. Feedback from focus groups has been positive and the demo will begin to be utilised in 22/23; further development is needed for it to become a mature teaching tool.

The session will explain the model of Game Jam and game development. We will provide a demo of the game, propose some ideas for its transferability to different disciplines and other learning environments and will invite questions and discussion around the concept.