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Developing a three-strand approach to playfulness in learning development

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Presentation abstract

In this presentation, we outlined the development of a new Academic Skills Service at Oxford International Education Group, which, whilst supporting students from seven university-based international colleges, implemented a three-strand approach to playfulness in learning development. The presentation focused on three examples of playful approaches:

- The use of digital and traditional game-based learning within otherwise performance-driven classes.
- The creation of playful spaces in the form of extracurricular cross-college book and Maths movies clubs.
- The development of a gamified Moodle learning system through activity badging and levelling up.

These initiatives reflect current research regarding the value of playful approaches in student learning and in counterbalancing a predominantly performance-driven higher education environment (Langan and Smart, 2018; Whitton, 2018; Forbes, 2021). Firstly, game-based learning can increase student enjoyment, motivation, and participation in the learning process and promote social belonging (James and Nerantzi, 2019; Forbes, 2021). Secondly, online book/Maths clubs can operate as playful spaces where student learning is supported in a positive social environment and creativity and risk-taking become part of the learning process (Whitton, 2018; James and Nerantzi, 2019; Forbes, 2021). Thirdly, although the gamified Moodle learning system relies on extrinsic rewards, which reflect the

performance-led ethos of HE (Nørgård, Toft-Nielsen and Whitton, 2017), it can also increase student motivation in completing learning activities.

This presentation proposed that learning development departments, whilst supporting student outcomes and the student experience, may encounter fewer performance-led constraints compared with programme-based delivery, enabling the utilisation of playful approaches that are otherwise underused in HE.

Keywords: playful-learning pedagogies; gamification; student engagement.

Background information: 'playful pedagogies'

The authors briefly recapped on 'playful pedagogies' underpinning their provision of learning development within a new Academic Skills Service. Since they provided a range of learning development services and support in their education context, they initially commenced with a broad, base understanding and definition of 'playfulness' and 'playful learning', before narrowing down to more specific aspects within this, such as 'game-based learning'.

> [**Playfulness** is] a state of mind or an attitude; a willingness to accept and embrace the constraints of any activity, to try something new, to attempt something difficult where success is not guaranteed (Whitton and Moseley, 2019, p.14).
>
> **Playful learning** — learning approaches and activities that use play tools such as games or play activities, embracing a spirit of playfulness that goes beyond the formal structures of adult learning and generates a mindset of possibilities that an individual can apply to any context (Whitton and Moseley, 2019, p.15).

Community response

The presentation stimulated some valuable reflections, debate, and thought-provoking questions from the community and some useful discussions emerged in relation to game-based learning. These were centred around the following:

1. Rationale for using games-based approaches.
2. Student profiles and needs-based approaches.

3. Accessibility and engagement.

4. Embedded and creative approaches.

5. Opportunities within playful learning.

6. Challenges within playful learning.

7. Methods of evaluating the success of playful learning.

1.Rationale for using game-based approaches

A discussion arose about the underlying reasons for using game-based learning. From the presenters' perspective, this included a combination of learning from past experiences and the infusion of pedagogical theory:

> I have been interested in and committed to using game-based learning and integrating digital technologies for quite a long time (I have enjoyed reading the theory) and have tried and tested various approaches to embedding it in different contexts and at different institutions.

Putting students at the heart of game-based learning was also seen as a vital part of the process:

> When we implemented it at Oxford International Education Group, we were influenced by feedback from learners on learning preferences, our experience on which types of game-based elements seemed to be most successful, and also the current pedagogies and models.

These points highlighted that the reasons for using game-based learning were multifaceted and were driven by a creative and iterative process of implementation, with the ultimate aim of being inclusive to students and cognisant of their diverse learning preferences.

2. Student profiles and needs-based approaches

Some useful discussions were held about student profiles and the fact that 'wholesale gamification' may appeal to some types of students more than others. Questions were raised about the challenges posed by different levels of digital literacy among students. Denby welcomed the discussion and shared their experiences of placing students at the heart of game-based learning by stating:

> We conducted the usual needs-based/learner preferences analysis to get a sense of what the students' learning preferences were and what types of learning activities they may find motivating […] game-based learning and game elements scored highly.

However, Denby highlighted the need to understand student knowledge about these choices, noting that 'to some extent, students may not have fully known the range of options that game-based learning includes'. Denby outlined some contextual information about the student profile, sharing commonalities in the cohorts as well as considerations of diversity:

> The profile of students in our context is quite varied, as we support students based at seven university international colleges (some of the universities are research-focused, whilst others are more employability-focused; also, the students range from level 3 to level 7). However, what they have in common is that they are all international students. It might be worth mentioning that some students require more 'orientation' when introducing physical games such as card games, as this does not reflect or match their previous educational background.

The issue of wholesale gamification was also debated, with agreement that tailored and varied approaches with a clear rationale were more effective:

> I would avoid setting up a team competition game in every class/webinar as, like anything, I have found that students respond more positively if our approach is varied. Albeit simple, I find polling quite popular — partly because it is quick and can even be set up and embedded within Teams and partly because it is anonymous.

Several important issues emerged in these discussions regarding student engagement, including the importance of completing a learner-preference analysis before implementing games-based approaches to inform the design and implementation of a tailored approach. This should take into account students' understanding of game-based learning so they can make informed choices and any feedback is meaningful. Another important consideration was international students' educational experiences and cultural backgrounds, which may necessitate more nuanced orientation approaches when introducing game-based approaches to accommodate diverse cultural reference points and foster inclusion. Wholesale gamification was not seen as a way forward and, instead, a suite of approaches tailored to students was deemed to be more effective.

3. Accessibility and engagement

The platforms and methods of delivery for games-based learning were recognised as central to its success in discussions about ensuring accessibility for all students:

> Games and gamification itself may appeal to certain students compared with others and, also, certain digital platforms do not work as well for learners with low levels of literacy. The in-class/in-webinar examples that we tend to use (such as Quizlet, Wooclap, and similar) are quite accessible and straightforward for students to use, as most students will be able to join the quiz using a QR code, which we display on screen. Learners can join quickly and easily, as in our experience students will lose motivation and interest if the joining instructions are too complicated.

Training and support were also deemed to be essential in accessibility and engagement for students, with familiarity increasing confidence:

> For learners with low levels of digital literacy, again, I agree certain platforms may be challenging. I use Canva or Genially to create short posters with an introduction and summary of the basics about the main platforms that we use; it does mean investing time at the beginning of a module or class supporting students in familiarising themselves with a new tool or platform. I have used collaborative documents, for example, with students with low levels of literacy in cases where we had a series of sessions. Once students became familiar with the platform (or, in this case, with the collaborative technology), they were comfortable and confident using it and could see the benefits.

People attending the presentation supported this and further discussed the importance of platform features assisting this process of engagement:

> It seems that your approach to gamification was dedicated and thorough. It is an approach we have taken within my institution in some aspects of our academic skills provision. Our version of Moodle allows for interactive features within e-resources and digital content.

These discussions provided notable and important insights into how best to utilise available VLE platforms. They also emphasised the importance of training students to introduce playful learning and accommodate diverse levels of digital literacy in order to increase accessibility and engagement levels.

4. Embedded and creative approaches

The presenters were praised for the creative and varied approaches to gamified learning showcased in their presentation, with further discussions and questions arising about how to motivate students. Valuable reflections were shared by the attendees about using embedded approaches, which were integrated well into sessions, as well as potential challenges in engagement within freestanding delivery:

> One struggle we have with our 'freestanding' delivery is advertising events/opportunities to students in such a way that the right balance of 'fun' and 'valuable' is hit. It isn't a huge sample, mind, but we tend to have better uptake for events that (in my eyes) look rather dry — events that highlight creative or game-y approaches do not attract the same attention, and it is tough for us to unpick why that might be. I suspect time-starved students have trouble justifying to themselves why they would attend what looks like a half-learning/half-fun event over a more decisively defined 'educational' opportunity.

This resonated with Denby, who acknowledged the same challenges and then shared ways of overcoming these challenges using creativity and a variety of approaches within their academic webinars:

> Some of the options that we used — such as the 'playful icebreaker' allowing students to vote on the order of content delivery, incorporating short Wooclap quizzes or a team-based quiz — introduced an element of 'playfulness' without taking away from the 'seriousness' of the core content and learning objectives that students expected. We still designed sessions that supported learners' acquisition of knowledge and skills. Based on the feedback, these elements motivated students to attend further sessions/webinars.

However, Denby still encountered challenges when encouraging student attendance at their book club and Maths movies club, and shared other ways of addressing this through the use of reward systems, advertising, and other methods:

> We have tried a range of approaches (foregrounding the academic skills they will develop and gain and making explicit links between certain book-club activities and the learning outcomes of the EAP and Study Skills modules). We have tried many different types of advertising to raise student awareness of the events and support attendance (including the usual posters etc.). In some cases, attendance at extracurricular events is linked to 'house points' (at some university international colleges). Sometimes we badge attendance at a webinar or at an extracurricular event if students can demonstrate a skill, a learning gain, or a specific output such as a poster.

This may not work for all students, but some enjoy building a 'backpack' of badges.

Creative approaches were seen as inspiring to attendees, with one stating 'I particularly liked the Maths film club, offering a social and accessible space to play in the face of Maths anxiety — what a great idea!' These discussions underlined the importance of motivating students to attend, specifically when games-based approaches were freestanding extracurricular events and not fully embedded into learning, which was less challenging. Utilising reward systems, aligning playful-learning sessions to learning gains, and thoughtful advertising were useful pointers to address some of these issues.

5. Opportunities within playful learning

There were some thought-provoking discussions and questions about opportunities for playful learning as well as contentious issues within education settings, such as academic misconduct cases and whether playful-learning pedagogy could contribute in this area. Denby shared their experiences of using features within Moodle to design activities, in part to address issues around academic misconduct, and acknowledged that this could be developed further:

> Usually, we play the academic integrity/misconduct game(s) with the whole group, but I believe these approaches could be effective with individual learners as they are designed to support 'attitudinal change' (student attitudes and behaviours). For those students who have cases of academic misconduct, it might be effective to design questions based on scenarios.

Denby also shared some ideas about how they raise awareness around academic misconduct:

> On Moodle, I designed two H5P activities: in the first activity, students have to identify between scenarios that involve academic misconduct and those that are acceptable academic practice (to raise awareness); in the second activity, students are provided with a set of 'problem scenarios' and have to select the most appropriate 'solution' from among those provided. Feedback from these two quizzes was very positive; the idea is simple, however, students reported finding them effective.

6. Challenges within playful-based learning

Interesting questions were also posed in relation to designing games which span knowledge-checking activities and more nuanced discursive activities, with one attendee stating:

> One challenge I see is how to design games, especially in an online environment (quizzes, MCQs, etc.) that are nuanced, dialogic, critical, and not only testing right/wrong answers or knowledge acquisition. […] this is perhaps especially an issue where quick games are added in as knowledge checkers into more didactic classes — does it risk simplifying the expectations we have of students in terms of their learning, or is it fine as one aspect within a range of playful approaches, encouraging moments of active engagement in more acquisitive-focused classes?

Denby responded and acknowledged the complexities of getting the balance right:

> I fully agree with you that there are risks associated with certain types of quick games being often used as knowledge checkers, though others could also be used to get feedback on students' interests and ideas or as community-building activities.

Denby further elaborated on areas they could not discuss in their presentation:

> One area that we did not have time to expand on in our presentation was other types of 'playful' approaches, using certain digital technologies for student collaborative-creative projects. These do provide more scope for creativity and criticality such as Padlet, collaborative documents (either MS Docs/Slides or Google Docs/Slides), and other collaborative-creative platforms. We use these in the extracurricular clubs for collaborative student projects and encourage learners to share these on the club website. In my current and previous jobs, I have built a range of collaborative projects with students (including staff−student websites, multimedia magazines, podcaster series etc.).

7. Methods of evaluating the success of playful learning

As the discussions drew to a close, the presenters were asked about ways they measure engagement and outcomes and Denby shared a variety of methods and approaches with attendees:

> For the webinars, MS Forms were used to design and use a short pre-webinar 'reflective questionnaire' based on the webinar learning outcomes. This was so that students could self-assess/self-rate to identify

what they felt their level of knowledge and/or skill was at the beginning of the session. We also used Forms to design and implement a post-webinar 'evaluation and self-assessment questionnaire', which was a combination of elements. Firstly, students rated their knowledge and skills again against the same learning outcomes/same questions as those in the first questionnaire. Secondly, we included some evaluative questions to obtain feedback about the effectiveness of the lesson design, delivery, use of digital tools and games, and teacher performance.

Besides the data from the two Forms questionnaires, other methods were used for evaluation as detailed below:

> We kept a record of student attendance so that we could identify which types of services/offerings were most popular or under-attended. We could then provide more sessions based on student need/interest and, also, we could examine why certain services or offerings were not as well attended or used and work on initiatives to improve them. Additionally, as we have access to students' performance data, it is possible to identify how many learners with positive student outcomes (who have progressed/passed their exams) attended the service/offering.

Editorial comment

Some fascinating insights arose from discussions. The additional practical considerations highlighted could amplify the implementation of engaging, inclusive, student-informed, playful learning in a variety of ways within both embedded and free-standing learning opportunities. Thoughtful questions and reflections provided a springboard to consider other potential uses and considerations for introducing playful learning. These included academic conduct cases and introducing playful learning to different groups of students who may not be familiar with it, such as international students.

Next steps and additional questions

1. To explore ways that playful learning and gamification can be introduced effectively within the context of academic misconduct.
2. To identify the best ways to support students who are unfamiliar with playful learning.

Authors' reflection

The authors extended their thanks to ALDCon24 and to those who attended their session. They appreciated the warm reception, positive engagement with presentation ideas, helpful feedback and contributions in the online chat, and questions and critical reflections about their talk in the 'collaborative writing' space for their paper. The positive feedback, along with the questions and critical observations, have already inspired us to reflect further on our ideas and practice. Rather than providing a summary of the key ideas in our presentation, we aim below to try to respond to some of the key questions and comments that we received, which revolved around our approaches to game-based learning in 'traditional' classes or webinars and how we measured student engagement. It is our hope that we have responded to questions and feedback regarding other aspects of our presentation in the 'community reflection' section.

The value of playfulness and playful methods

The first quotation on 'playfulness' used at the beginning of this article emphasises the importance for learning developers to encourage learners to adopt an open mindset, fostering an environment where they feel comfortable taking risks and exploring new ideas without fear of failure. This attitude can be particularly empowering, as it helps learners engage more deeply with learning material and develop resilience.

The second quote highlights the use of playful methods to create a dynamic learning environment, encouraging creativity and engagement beyond traditional educational methods. Playful-learning approaches help students experience learning as a dynamic and enjoyable process, fostering an open mindset that is transferable to other contexts.

The dichotomy between playfulness and seriousness

'Playfulness' and 'playful learning' have often been defined in contrast to the characteristics of 'seriousness' associated with HE. For instance, HE focuses on metrics, quantifiable performance, and extrinsic goals, potentially leading to a fear of failure, risk avoidance, and an assessment-driven environment, according to Nørgård, Toft-Nielsen, and Whitton (2017) and Whitton (2018). In contrast, research on 'playfulness' in HE has identified positive outcomes for learning development and the student experience. For

example, playful methodologies foster positive emotions, intrinsic motivation, and a safe space for experimentation and risk-taking, promoting the generation of new ideas, creativity, and engagement without the pressure of extrinsic rewards (Nørgård, Toft-Nielsen and Whitton, 2017; Whitton, 2018; Forbes, 2021; Lubbers et al., 2023).

Figure 1. Dichotomy between 'playfulness' and 'seriousness'.

Whilst this a useful starting point, it is important to acknowledge that seriousness versus playfulness is not a true dichotomy. From our experience, learning development departments may have more flexibility to implement playful pedagogies, but they also face accountability and metrics. Nevertheless, based on our context, we agree that the unique position of learning development departments (whose role is to support learning development, student outcomes, and the student experience, rather than to deliver assessed modules or programmes) allows for more flexibility in integrating playful approaches.

Three-fold model of playfulness

Although it is not the purpose of this reflection to summarise our whole presentation, I would like to briefly outline our application of Whitton's (2018) three-fold model of 'playfulness'. This was instrumental in building our ideas and planning and integrating playfulness into our context. The first element concerns playful-learning *tools*, using objects or technologies, which inspired our use of physical objects such as card games, as well as various digital polling and quiz technologies in class. The second area involves playful-learning *tactics*, namely approaches and pedagogies, which guided our use of 'playful icebreakers' (Whitton and Moselely, 2019), students voting for the order of presentation delivery (Piatt, 2019 cited in Whitton and Moseley, 2019), and the

implementation of students' creative projects and performances, for instance, those underpinning book-club projects. Whitton's (2018) third area of playfulness concerns the use of playful-learning *techniques* in the guise of game mechanics and techniques, which we applied through team competition activities and a badging system. In our estimation, a principal benefit of this model was that it allowed us to view playfulness from different perspectives and integrate it at three distinct levels, making our approach more comprehensive and effective.

Game-based learning

A recognised method for introducing playfulness into teaching is through game-based learning. Many of the interesting questions, comments, and feedback that we received referred to our pedagogic approach to game-based learning as well as the methods that we had employed to measure student engagement with our implementation of both digital games and physical games (i.e. using physical objects). To help us plan and implement this effectively, we followed key guidelines from game-based pedagogy. Firstly, effective games have specific game elements to support learner engagement. According to Mavroudi et al. (2021) and Piatt (2019), these include clear game objectives, roles, and feedback on progress, which provide participants with: clear goals; opportunities for interactivity and collaboration; creative, 'fun', and enjoyable elements (e.g. storytelling); and elements such as media that are visually appealing. A second consideration is that effective and engaging games have strong design principles, such as a clear game purpose (well-defined objectives), accessible game rules and content, and a seamless integration of learning materials within the gameplay (Mavroudi et al., 2021).

To apply this guidance, we created a webinar landing page to introduce game-based activities and set expectations in advance, provided clear task/game instructions on a Canva poster or PowerPoint slide. We clearly linked the purpose of the games to our learning outcomes and designed and utilised feedback forms via MS Forms to capture students' responses and implement improvements. Applying these guidelines from game-based pedagogy helped us to incorporate games effectively, enhancing engagement while achieving learning outcomes and objectives.

Inspired by game-based pedagogy (Mavroudi et al., 2021), the diagram below shows a model we developed for incorporating games that address various student learning and development objectives. We focused on three primary game purposes:

1. **Skill acquisition:** encompassing a variety of academic study skills.
2. **Knowledge acquisition:** covering discipline knowledge and factual, conceptual, procedural, and metacognitive understanding.
3. **Attitudinal change:** emphasising academic integrity, research ethics, and sustainability.

This model helped us diversify our approach and ensure a comprehensive coverage of different learning outcomes.

Figure 2. Game purposes.
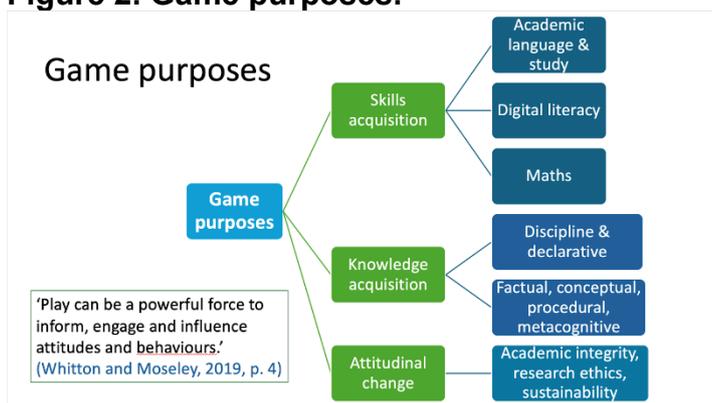
Student engagement and evaluation

One question we were asked involved how we have measured student engagement with the game-based learning approaches and methods we have employed. We employed a combination of methods and tools briefly outlined below.

1. To evaluate the effectiveness of the webinars and classes in which we employed either physical or digital games, we used MS Forms to design a short, pre-webinar 'reflective questionnaire' based on the webinar learning outcomes. This provided learners with the opportunity to self-assess/self-rate and to identify their level of knowledge or skills at the beginning of the session.

2. We also used Forms to design and implement a post-webinar 'evaluation and self-assessment questionnaire', which comprised a combination of elements. Firstly, students rated their knowledge and skills again against the same learning outcomes, i.e. the same questions as those in the first questionnaire. Secondly, we included some evaluative questions to obtain feedback about the effectiveness of the lesson design, delivery, use, and effectiveness of digital tools and games and teacher performance.

3. Besides the data from the two Forms questionnaires, we maintained a record of student attendance to identify which types of services and offerings were most popular with learners or under-attended by learners and at key points in the students' learning cycle. This helped us to provide further learning development sessions based on students' needs and interests, and to examine why certain services or offerings were not as well attended and develop initiatives to improve this.

4. Finally, as we have access to students' performance data, we were able to identify how many students with positive student outcomes (who have progressed i.e. passed their exams) attended various services and took advantage of our academic skills offerings (e.g. series of webinars).

Acknowledgements

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