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Learning to play with film: play-based learning in a tertiary film studies classroom

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Abstract

Student engagement in tertiary cinema studies can be fickle: while most students respond strongly to films, little regard is similarly paid to prescribed readings or other coursework that is crucial to developing complex critical thinking with media. This paper presents a case study of an intervention aimed to remedy this disparity of student interest: play-based learning. Play-based learning, here defined as 'the use of playful elements in both the explanation of subjects and their evaluation' (Torres-Toukoumidis et al., 2020: 1), has a long history of encouraging lateral and creative modes of thinking, increasing engagement and participation, and fostering a supportive and enjoyable learning community. This paper outlines the ways that play-based learning was engaged in a small-scale action research project, and the positive effects that this created within the cinema studies classroom. Critically, it shows the value of play-based learning in fostering resilient, creative and motivated students, particularly at the first-year level of tertiary film education.

Keywords play-based learning; film studies; interventions in tertiary education; sustainable curriculum; student well-being; action research

In my experience as a university cinema studies teacher, one issue remains constant: students would far prefer to *watch* films than read about them. While their enthusiasm for primary texts should not be taken for granted, a lack of engagement with coursework such as required readings hampers their ability to develop complex and compelling ideas around film. Anecdotally, I had heard from students that they found required readings difficult, a concern supported by historical poor performance on reading comprehension assessment. Additionally, many students reported feeling a lack of motivation to undertake coursework beyond listening to the lecture and watching the prescribed films. Over the years, a picture slowly emerged of a tendency towards 'surface' or strategic learning – defined by Entwistle (2001) as a style of learning wherein students focus primarily on reproducing ideas to conform to learning outcomes. Students appeared to be discouraged from undertaking readings as they felt that there was a high margin for error, that these texts were beyond them, and that they were unable to read 'in the right way'. And so, it became imperative to destigmatise the required readings, and to find ways to encourage students to look at them with exploratory eyes and a sense of curiosity.

To that end, I undertook a semester-long research project into play-based learning in the film studies classroom. Play-based learning has been a staple of early years and primary school education for decades due to its role in encouraging curiosity and intrinsic motivation to study, and it has become an increasing area of interest in secondary school settings. However, despite the significant literature on its positive benefits in primary and secondary school demographics, very little research has been done to investigate its usefulness in a tertiary setting. There are a number of benefits associated with play-based learning that made it a promising candidate in amending students' approach to coursework in the subject. As noted by Smeed (2019: 311), 'Playful behaviour … contrasts directly with the behaviour of surface learners, or even of strategic learners', and it encourages 'excess effort' that does not feel as such to students. Consequently, play-based learning was thus offered as a way of increasing students' intrinsic motivation, which it was hypothesised would also subsequently improve their understanding of the required readings.

This project applied play-based learning activities within the first-year subject Introduction to Screen Studies at a large Australian university. The subject runs across 12 weeks and offers a broad overview of critical concepts within film and screen media scholarship. According to students, the subject is well-regarded, enjoyable and – by their estimation – neither too challenging nor too simple (as noted from positive student evaluations between 2017 and 2020, and from anecdotal evidence). However, many students had also expressed distress at the perceived difficulty of the required readings, and received poorer than anticipated results on assessment of their reading comprehension and research tasks. This contrasts strongly with the same students' performance in an analytical essay; this requires similar skills as the reading comprehension task, yet students have historically performed better in it. Students were also often avoidant of direct questions about the readings, claiming that they felt ill-equipped to answer in the 'right way'.

Thus, play-based learning was introduced to broadly improve students' relationship to the required readings. Having researched the methodology, I felt it plausible that it would offer two key benefits to students: an increase in intrinsic motivation to study outside the classroom, and a destigmatisation of participating in discussion around the readings. It was my hope that in encouraging playfulness, students would feel that there was no prescribed 'correct' approach to a discussion of the readings. If the students experienced discussions about the readings in a more positive and enjoyable way, I hypothesised, they would be more motivated to read the texts prior to class.

What is play-based learning?

With my rationale clear in my mind, I turned to possible forms of methodology. It is worthwhile noting that play is 'a difficult notion to define' (Briggs and Hansen, 2012: 1); in particular, it is not always apparent what specific interventions are 'play' beyond a spirit of playfulness, which in and of itself is difficult to quantify. This issue appears to have created a gap in the literature, where studies on interventions that

include play may not highlight such a subjective concept. Additionally, play-based learning runs parallel to game-based learning, a concept which has increased in popularity and research interest within the tertiary setting in recent years. Consequently, the vast majority of research into playful elements in the tertiary space centres on game-based learning and its many touted benefits for student motivation (Lengyel, 2020), engagement in previously disengaging activities (Holbrey, 2020) and positive perception from students (Mick, 2020). It is important to note that these positive impacts may be the result of play (rather than the games themselves), and as such it is worthwhile to disentangle these two concepts. This sentiment is supported by Penny de Byl's (2013) research into gamified curriculum, which highlights that despite the increasing research interest (and subsequent application) of this methodology, little is understood regarding its impact on learning outcomes, and that many elements of the tertiary curriculum are inherently gamified to begin with. While De Byl's (2013) work considers gamified education to be largely benign in its outcomes, she does outline that playfulness is a critically important factor in any positive effects that can be attributed to it. It stands to reason that incorporating playful elements separated from the strictures of game-based learning (which requires the application of strict rules) would offer or enhance benefits to learning outcomes without necessitating major changes to learning technologies or the standard operation of a class. Game-based learning, it should be noted, is highly technologically dependent; often requiring the development or adoption of new learning technologies and a high cost of entry. This study aimed to investigate the application of a cost-effective, non-technologically dependent form of play-based learning in a tertiary humanities classroom.

Play-based learning, at its core, is exactly what it sounds like: encouraging students to take up ludic logic or creative and lateral thinking to play with ideas in the classroom. Within this project, it took the form of role play, drawing and gameshow-style quizzes. While each activity closely aligned with a desired learning outcome or idea for students to investigate, they were also designed to maximise students' enjoyment of the classroom. As a practical action research project, I took my experimental design from Kemmis's action research spiral (Kemmis et al., 2014). Consequently, each teaching week of research, I planned, observed and reflected on a play-based learning activity, and used these data to moderate the next week's plan. Each activity was progressively adapted and altered to maximise student engagement (and, it was hoped, intrinsic motivation to study).

Learning through play increases students' focus and attention on the task at hand. This was noted by Kangas and her colleagues (2017: 13), who hypothesised that one of the successful elements of play-based learning is that it increases both student and teacher participation. Similarly, the positive affect generated by play has also been compellingly linked to decreased stress in students and an improvement in well-being. Gwen Gordon (2014: 213) has highlighted its role in positive personal growth and general well-being in adults, as well as in children, where it aids in the development of 'a host of affective, cognitive, social, and motor capacities'. It has been theorised that play helps all mammals respond more agilely to unexpected circumstances, and significantly boosts one's ability to 'train for the unexpected' (Spinka et al., 2001). Thus, we can see that the agile mode of thinking required for play may help foster positive mindsets towards education, while simultaneously allowing students to practise lateral thinking.

More critically to the research project at hand, play within an adult-education context has been linked to more active and creative forms of learning – a kind of remedy to 'surface' study. Louis Rice (2009) notably emphasises the transformation that play demands of its students from passive receptacles of knowledge to active participants. Locating play within experiential learning more broadly, he demonstrates that its application in higher education has the capacity to increase lateral and creative thinking. Leather et al.'s (2020: 5–6) exploration of play further supports this assessment, defining play-based learning as a playful attitude designed to 'increase our students' ability to see the positive in situations, not take themselves too seriously, maintain an open mind, embrace challenges, and increase their ability to deal with failure and adapt to change'. Although the authors' manifesto is self-admittedly biased towards play, their experiences in the classroom demonstrate the methodology's biggest strengths: it increases student motivation and engagement, and makes learning a more enjoyable experience (Leather et al.,

2020). From these preliminary applications of play in tertiary settings, it seems that increasing enjoyment in the classroom for both students and teachers translates into increased interest and engagement with the subject matter.

Play-based learning in the university classroom

Of course, it should be noted that play as a methodology remains most commonly associated with early years and primary education. Within that context, it has been shown to help students increase their academic achievements (Randolph et al., 2016) and significantly increase student motivation (De Koning-Veenstra et al., 2014). The focus on play-based learning in early years and childhood education is likely to stem from the pedagogy's association with Piaget and Vygotsky (Robinson et al., 2018), and from a cultural understanding of the importance of play for children. However, this has led to a significant asymmetry in the investigation and application of the methodology in other educational contexts, demonstrated by almost all of the existing literature on play-based learning at a post-secondary level noting the dearth of research into this area. Critically, Lisa Forbes's (2021) research has demonstrated that play is often devalued in higher education settings, and is commonly seen as an inferior form of instruction.

Playful pedagogy may also suffer from a perceived unsuitability for the tertiary system's ideal of standardised classrooms. The academy has historically been a highly structured and formalised environment, and this attitude persists in the contemporary university. As Robinson (2011: 57) observes, 'industrialism influenced not only the structure of mass education but also its organizational culture', and this is reflected in a desire for highly specific learning outcomes and linear curriculum design. Play, as an informal, minimally structured activity, clearly stands in opposition to some of these ideals. However, in spite of this perception, Forbes's (2021: 62) study also demonstrates that play 'awakened students' positive affect and motivation … [and] ignited an open and engaged learning stance to enhance learning'. While it may offer a circuitous path, play may well be ideal in helping students achieve their learning outcomes.

Considering that the dominant themes in existing research into play-based learning are increased student engagement, enjoyment and a transformative approach to learning, it seemed an ideal conduit to improve students' engagement with coursework. Additionally, educators using play-based learning have already had observable positive outcomes on the more technical aspects of humanities tertiary education, such as referencing (Smeed, 2019; Dix, 2019). As play encourages a creative mindset, ideally it should help students take on a more transformative approach to learning, and generate more analytic capabilities. By motivating students to take a more imaginative attitude to this coursework, play activities may also increase students' capacity for making lateral connections between ideas, and reorient them towards a 'transformative' approach to learning, as per Entwistle's (2001: 311) definition.

Application of play-based learning in a film studies classroom

Due to the issues outlined above, and the notable absence of research on play-based learning within this specific context, my research aimed to analyse and assess the suitability of play-based learning activities in a first-year screen studies subject as an intervention to increase student engagement with required readings. I generated a repertoire of play-based activities that are suitable for a university-level film classroom and aid in improving student engagement in the classroom. This study was implemented in five tutorials in a first-year screen studies subject, Introduction to Screen Studies. Two of the classes were undertaken in person, and three took place online using the Zoom platform. While 84 students were enrolled in these classes, data were only collected from students who consented to participate in the study, and so the research demographic was limited to 21 students: 19 domestic students, and 2 international students.

As mentioned above, the project followed an action-research model, taking Kemmis et al.'s (2014) proposed structure of consideration, implementation, reflection and adaptation. In order to ensure that the activities were having a positive effect, I both kept a field journal and made a note of participating students' abilities to answer reading comprehension questions. At the outset of the study, it was determined that if the activities appeared to have a net negative effect on learning outcomes, the activities would be ceased. However during the study, it became apparent that the quantitative metric imposed was not recording additional benefits that the activities were having on student engagement. While it should be noted that in Weeks 10 and 11, net negative outcomes were recorded in response to direct questions, significant benefits were also recorded in terms of student engagement and anecdotal feedback from participants. Consequently, activities were adapted but not entirely removed from the curriculum.

Playful activities

Table 1 shows each activity used within the experiment, a citation for which specific required reading it responded to (if applicable), and reflections based around students' ability to answer questions on required readings and observations in my field journal.

Outcomes of the project

It cannot be denied that the play-based learning activities engaged in this project did not have the intended outcome of increasing student engagement with the required readings. A particularly illustrative example of this emerged at the mid-point of the semester, where more direct questions were posed in order to better assess the level of engagement and recall that students had of the course materials. The more direct questions revealed that while many students enjoyed participating in the activities, this enjoyment had not translated into additional effort undertaken to engage with required readings. Ultimately, the activities revealed that while students were more eager to participate in play-based learning, their engagement with course materials was still primarily defined in a strategic or surface-level manner.

However, many positive benefits can be observed from the activities as well. Students clearly enjoyed these activities, and engaged vocally and often. Attendance for all tutorials was higher than the previous year. This may indicate that while students did not necessarily gain autonomous motivation to engage with course materials outside the classroom, they were more eager to attend tutorials, and were objectively more participatory as a whole. One key success was in students' performance in the second assessment task, which directly examines students' understanding of a required reading, and subsequent research skills. This assessment task has historically been students' worst result. However, with play-based learning, it was (on average) the best result the students received in the course. Although assessment results were outside the scope of data collection and analysis for this project (and thus specific or identifiable analysis would be unethical), this does perhaps indicate that students felt more confident in analysing required readings.

One key revelation from the project was the role of framing in engendering a playful style of learning. Many of the activities used in this study were ultimately very similar to more traditional forms of discursive learning, in that they simply posed discussion questions to the class. The key difference was that they were framed as games, often involving prizes (although these prizes were immaterial, such as a high-five), time constraints and/or a continued refrain that there were 'no wrong answers'. It appears that the students' perception of the seriousness of the task determines their likelihood to be open or responsive to questions. In this way, one of the core goals of the study – to destigmatise ideas from the required readings – was achieved. While this increased comfort with course materials did not necessarily transmute into additional engagement with them outside class hours, it is still noteworthy in and of itself, and highlights possible positive applications of play-based learning.

Table 1: Play-based activities

Activity	Reading	Reflection
Draw the Male Gaze In small groups, students were asked to 'draw' the concept of the male gaze as Mulvey outlines it. Each group was encouraged to work collaboratively to ensure they captured the core ideas of Mulvey's paradigm. After all groups were happy with their work, an 'art gallery' was held, where each group explained their drawing.	Mulvey (1999) 'Visual pleasure and narrative cinema'	This activity is designed to help students feel more comfortable discussing a complex reading by forcing them to manifest their current level of understanding. Critically, it helps differentiate between a lay understanding of Mulvey's theory (which is generally devolved into 'films that objectify women are sexist') and a more nuanced comprehension of the role that both psychoanalysis and cinematographic perspective play in her theory. Across tutorials, the activity worked extremely well. Students participated actively and vocally, and the activity often became a starting point for a nuanced and sophisticated conversation about the reading.
Is! It! Political? This activity borrows a quiz-style format to underscore the point made by Comolli and Narboni (2004: 814): 'every film is political, inasmuch as it is determined by the ideology which produces it (or within which it is produced, which stems from the same thing)'. Using a colourful slide show of film posters and music to create a gameshow-like atmosphere, students were asked the same question ('Is it political?') in response to four films: *Finding Nemo, How to Lose a Guy in 10 Days, Parasite* and *Joker*. After a student 'buzzed in' their answer, their table was asked to justify why something was 'political' as a group.	Comolli and Narboni (2004) 'Cinema/ideology/criticism'	This was a highly successful way of gauging students' reading comprehension and their ability to apply these ideas laterally. Critically, multiple students in two tutorials referred back to the text to look for additional advice or ideas, which showed a sense of familiarity and comfort with the reading. Another key theme from the research also emerged this week: that framing something as a game was often all that is needed to encourage a more active mode of participation from students. Indeed, this activity could simply be a list of discussion questions; yet with the added framing devices (colourful slides that look similar to a gameshow presentation, music, buzzers) engendered a different style of engagement. Notably, many students spoke in this game who were not comfortable responding to direct discussion questions, or who would otherwise be quiet in class.
Think Like a Film-Maker Students were encouraged to role play as a director who had been called in to reshoot a typical dialogue scene to make it more sensorily engaging. In small groups, they had to brainstorm a strategy to reshoot the scene and highlight which shots needed to be changed and how.	Elsaesser and Hagener (2010) 'Cinema as skin and touch'	This was a highly successful way of encouraging students to articulate a key point in the readings: the role of close-ups in encouraging an affective response in the spectator. However, while many students participated in a highly engaged way, and offered nuanced and moving responses, their ideas seemed divorced from the ideas within the reading. This is a key example of one issue that emerged with the project: while play made students more eager to participate in the classroom, it did not always clearly correlate with a deeper familiarity with, or comprehension of, the reading. Despite this, many students appeared to derive productive meaning from the activity.

Table 1 (continued)

Activity	Reading	Reflection
Is! It! Ethical? Similar in style and tone to Activity 2, Is! It! Political?, this gameshow quiz encouraged students to consider Sinnerbrink's broad theory on the ways in which films offer ethical experiences by presenting them with a variety of film posters and asking if they offer an ethical experience and why.	Sinnerbrink (2016) 'Cinematic ethics: Film as a medium of ethical experience'	This activity highlighted the true strengths and weaknesses of play-based learning within the classroom. While students were both familiar with the films and happy to discuss them, they often became hesitant to answer when asked to relate these ideas back to the readings. Across the five tutorials, it became clear that many students had not completed this specific piece of coursework. Unfortunately, this revealed an ultimate shortcoming of play as an intervention: intrinsic motivation to participate in class does not equally motivate students to take up study outside the classroom.
Think Like a Television Producer Students were asked to role play as a film producer and to think about how they would adapt their favourite television series to the big screen. This was designed to inspire creativity but, importantly, to help them articulate the differences in narrative and aesthetic between television and film.	N/A	Noting the critical issue of a lack of reading comprehension in the previous week, the activities from this point became more tailored to engendering classroom engagement. It became useful to introduce playful exercises early in the class to generate engagement and participation, before moving on to more challenging or academically rigorous work. To that end, students participated well in this activity, and the encouragement to perform in character and role play generated a strongly positive response.
Draw a Western As the week's topic centred on adaptation and genre, this activity was designed to encourage students to consider the role of iconography and semiotics within the western. Students were asked to draw their interpretation of a western as a group, and we again held an 'exhibition' of the completed works.	N/A	Again, this activity was used not to encourage engagement with required readings, but to encourage engagement more broadly in the classroom. To that end, it was a significant success, with many students who would otherwise be more hesitant to participate actively responding and discussing concepts from the course. However, I noted in my field journal that this felt 'too easy', and that while it was an interesting way of broaching the topic, it did not feel appropriately pitched to tertiary-level students. This highlights an important consideration in introducing play into the classroom: the need to ensure that activities are appropriately challenging and complex for the cohort.
The Forgetful Teacher The instructor loudly (though gently) slapped their head with the nearest book/object, and pretended to have amnesia. Students were then asked to recap specific concepts (in this instance, definitions for key ideas from a required reading) to help the class 'get back on track'.	Elsaesser and Hagener (2010) 'Digital cinema: The body and the senses reconfigured?'	This activity ran in the final week of the semester, and as such, I wanted to organise an exercise which affirmed the knowledge students had gained over the course of the subject. The exercise went extremely well in the three tutorials in which it ran, and students offered thoughtful and detailed definitions of ideas they had found in the readings. Critically, students demonstrated a high degree of reading comprehension, indicating that while these activities do not necessarily encourage independent study, they do encourage participation in the classroom, which is strongly associated with developing a more sophisticated knowledge of their coursework. However, it should also be noted that two classes were cancelled due to COVID-19-related restrictions, which hampered data collection.

One major influencing factor that should not be ignored in interpreting these results is the role of online learning. Significantly better outcomes were observed in in-person classes, where students appeared more willing to participate in a playful activity even if they did not quite understand the boundaries or rules for it. In essence, in-person classes provided an environment where students were willing to 'go along' with whatever happened, whereas in online classes, students appeared more hesitant and were more concerned about not immediately comprehending instructions for a task. Another key concern with these results arises from the design of the study. Measuring the results of play (an inherently free-form and minimally structured activity) in a rigid metric may have resulted in the experiment appearing less successful than it actually was. However, more crucially, this kind of quantification may simply be unsuitable, considering the nature of play itself. Considering that the purpose of the study was to explore applications of play in a tertiary setting, it was perhaps short-sighted to limit successes and failures. Play encourages open-ended questions, exploratory learning and unfettered creativity. Quantifying students' responses to play in this way consequently ignored the many subsidiary benefits in favour of a specific aspect of learning.

Conclusion

Ultimately, it may prove that improving student engagement with course materials such as required readings is a 'wicked' problem, as any learner's motivation to study is unique to their situation and intended outcomes from their education. While play-based learning may not necessarily be suitable for increasing a student's reading habits, it does certainly hold several key benefits: increasing student participation, enthusiasm for attending learning, and lowering the perceived complexity of engaging with critical theory. Consequently, I feel comfortable concluding that play-based learning has a positive role in a tertiary setting, but its application must be used to engender an engaging classroom and to increase student participation, rather than having specific learning outcomes attached. Using play-based learning in this way would allow the activities to work within their strengths and, importantly, acknowledges the free-form, creative nature of play.

Declarations and conflicts of interest

Research ethics statement

The author declares that this project was granted human ethical approval by the University of Melbourne's Office of Research Ethics and Integrity on 31 March 2021 (Project ID: 20909).

Consent for publication statement

The author declares that research participants' informed consent to publication of findings – including photos, videos and any personal or identifiable information – was secured prior to publication.

Conflicts of interest statement

The author declares no conflicts of interest with this work. All efforts to sufficiently anonymise the author during peer review of this article have been made. The author declares no further conflicts with this article.

Filmography

Finding Nemo (US 2003, Andrew Stanton)
How to Lose a Guy in 10 Days (US/DE 2003, Donald Petrie)
Joker (US 2019, Todd Phillips)
Parasite (KR 2019, Bong Joon-ho)

References

Briggs, M. and Hansen, A. (2012) *Play-Based Learning in the Primary School*. London: Sage.

Comolli, J.-L. and Narboni, J. (2004) 'Cinema/ideology/criticism'. In L. Braudy and M. Cohen (eds), *Film Theory and Criticism: Introductory readings*. 6th ed. Oxford: Oxford University Press, 812–19.

De Byl, P. (ed.) (2013) 'Factors at play in tertiary curriculum gamification'. *International Journal of Game-Based Learning*, 3 (2), 1–21. https://doi.org/10.4018/ijgbl.2013040101.

De Koning-Veenstra, B., Steenbeek, H.W., Van Dijk, M.W.G. and Van Geert, P.L.C. (2014) 'Learning through movement: A comparison of learning fraction skills on a digital playful learning environment with a sedentary computer-task'. *Learning and Individual Differences*, 36, 101–9. https://doi.org/10.1016/j.lindif.2014.10.002.

Dix, T. (2019) 'Sketch: "Frogger it, I'd rather be playing computer games than referencing my assignment": A Harvard referencing game'. In A. James and C. Nerantzi (eds), *The Power of Play in Higher Education: Creativity in tertiary learning*. London: Springer, 295–7.

Elsaesser, T. and Hagener, M. (2010) *Film Theory: An introduction through the senses*. New York: Routledge.

Entwistle, N. (2001) 'Styles of learning and approaches to studying in higher education'. *Kybernetes*, 30 (5), 593–603. https://doi.org/10.1108/03684920110391823.

Forbes, L. (2021) 'The process of playful learning in higher education: A phenomenological study'. *Journal of Teaching and Learning*, 15 (1), 57–73. https://doi.org/10.22329/jtl.v15i1.6515.

Gordon, G. (2014) 'Well played: The origins and future of playfulness'. *American Journal of Play*, 6 (2), 234–66. Accessed 11 August 2022. https://www.academia.edu/63392175/Well_Played_The_Origins_and_Future_of_Playfulness.

Holbrey, C.E. (2020) 'Kahoot! Using a game-based approach to blended learning to support effective learning environments and student engagement in traditional lecture theatres'. *Technology, Pedagogy & Education*, 29 (2), 191–202.

Kangas, M., Siklander, P., Randolph, J. and Ruokamo, H. (2017) 'Teachers' engagement and students' satisfaction with a playful learning environment'. *Teaching and Teacher Education*, 63 (April), 274–84. https://doi.org/10.1016/j.tate.2016.12.018.

Kemmis, S., McTaggart, R. and Nixon, R. (2014) *The Action Research Planner: Doing critical participatory action research*. Singapore: Springer Science & Business Media.

Leather, M., Harper, N. and Obee, P. (2020) 'A pedagogy of play: Reasons to be playful in postsecondary education'. *Journal of Experiential Education*, 44 (3), 1–19. https://doi.org/10.1177%2F1053825920959684.

Lengyel, P.S. (2020) 'Can the game-based learning come? Virtual classroom in higher education of 21st century'. *International Journal of Emerging Technologies in Learning*, 15 (2), 112–26. https://doi.org/10.3991/ijet.v15i02.11521.

Mick, B. (2020) 'The convergence of gaming and learning: Higher education should pivot to a game-based instruction model'. *Planning for Higher Education*, 48 (2), 20. Accessed 24 August 2022. https://www.thefreelibrary.com/The+Convergence+of+Gaming+and+Learning%3a+Higher+Education+Should+Pivot…-a0652742709.

Mulvey, L. (1999) 'Visual pleasure and narrative cinema'. In L. Braudy and M. Cohen (eds), *Film Theory and Criticism: Introductory readings*. 6th ed. Oxford: Oxford University Press, 833–44.

Randolph, J.J., Kangas, M., Ruokamo, H. and Hyvönen, P. (2016) 'Creative and playful learning on technology-enriched playgrounds: An international investigation'. *Interactive Learning Environments*, 24 (3), 409–22. https://doi.org/10.1080/10494820.2013.860902.

Rice, L. (2009) 'Playful learning'. *Journal for Education in the Built Environment*, 4 (2), 94–108. https://doi.org/10.11120/jebe.2009.04020094.

Robinson, C.E., Treasure, T., O'Connor, D., Neylon, G., Harrison, C. and Wynne, S. (2018) *Learning Through Play: Creating a play-based approach within early childhood contexts*. Oxford: Oxford University Press.

Robinson, K. (2011) *Out of Our Minds: Learning to be creative*. Chichester: Capstone.

Sinnerbrink, R. (2016) *Cinematic Ethics: Exploring ethical experience through film*. London: Routledge.

Smeed, J. (2019) 'Exploration: It's a serious business learning how to reference – playfully'. In A. James and C. Nerantzi (eds), *The Power of Play in Higher Education: Creativity in tertiary learning*. London: Springer, 307–15.

Spinka, M., Newberry R.C. and Bekoff, M. (2001) 'Mammalian play: Training for the unexpected'. *The Quarterly Review of Biology*, 76 (2), 141–68. https://doi.org/10.1086/393866.

Torres-Toukoumidis, A., Valle-Razo, A.L. and De Santis, A. (2020) 'Gamification in higher education instructors from Ecuador, Spain and Mexico'. *IEEE Andean Conference Proceedings*, 1–4. https://ieeexplore.ieee.org/document/9272156.