



Building community in the classroom through jigsaw learning

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Abstract

Play is a key aspect of learning (Vygotsky, 2016; Skene et al. 2022), supporting both cognitive and skills development, and emotional and social wellbeing. However, it is often absent from tertiary education. The restructuring of childhood and reduction of play has been identified as a key driver of poor mental health among young adults (Haidt, 2025), with universities often left bearing the brunt of this youth mental health crisis (Cogan et al. 2025). Drawing on the pedagogical field of playwork, I am interested in how teachers can systematically attempt to integrate key aspects of play (joy, meaning, active engagement, iteration and social interaction) into university pedagogy. Here I describe one such attempt, through a second-year assessment in human geography, that integrates jigsaw learning and the production of a podcast to try and bring play into the university classroom.

Introduction: learning as play

Play is the organic way humans learn. Play is a universal behaviour, and describes undertaking activity that is engaging, intrinsically motivated, and voluntary, done primarily for enjoyment, recreation, or self-expression rather than for an external reward or functional outcome (Playwork Principles Scrutiny Group, 2005). Educational theorists have successfully argued for a greater inclusion of play into early years learning (Johnson et al. 2019), but it is often absent from practice in tertiary education. This is particularly the case under the 'student as consumer' model, now prevalent with marketization of higher education, which has been associated with a reduction in intrinsic motivation and consequently academic performance (Bunce and Bennett, 2021). Furthermore, young people are now documented as playing less in childhood than earlier generations, with potentially significant impacts on their holistic development (Haidt, 2025). However, theories of play have shown that play deprivation can be addressed at later stages of development, meaning play among older



cohorts can meet the same developmental needs as it does earlier in life (Brown & Vaughan, 2009).

Play in the university setting

I was interested in exploring how students in tertiary education could benefit from play, and how play could be designed into the university setting. This brings its own complexities, as university work is increasingly, by design, primarily externally motivated, non-voluntary, and based on achieving functional outcomes: despite the evidence that this approach does not best meet desired student outcomes (Bunce and Bennett, 2021). This means university work can never be understood as pure play—particularly under the dominant model of education marketization—but as teachers, can we attempt to counteract this, to make it more playful? This is what I attempted to do, drawing on a framework created by Zosh et al (2017), which outlines five characteristics of play. First, a play activity should be joyful, sparking dopamine through processes of discovery. Second, it should be meaningful, so connected to the personal experiences of the participant and their understanding of the world. Third, it should be actively engaging, offering the chance for the participant to become absorbed and focused (often called a ‘flow state’). Fourth, it should be iterative, allowing for the practice of skills, and finally it should be socially interactive, and facilitate relationship building. This provides a pragmatic categorisation to explore the potential for increasing playfulness in the classroom, through a focus on ways to embed these five elements.

Creativity and community: jigsaw learning and a podcast

I was introduced to the pedagogical benefits of play in a previous career as a playworker, for children aged four to sixteen, for which I had to undertake a playwork qualification (NVQ level 2). This stressed the importance of play for cognitive, emotional and social development, and the best methods for supervising adults to facilitate play. This training had a significant impact on my pedagogical practice. In the early 2000s, when I undertook this qualification, my training providers expressed a rising fear across the play sector that the reduction of play opportunities for the current generation of children would lead to a young adult mental health crisis over coming decades, as these children were increasingly under-resourced for the transition to adulthood. Entering university education fifteen years later, during an era of recognised youth mental health crisis (McGorry et al, 2025) I was inspired to return to playwork in search of potential solutions.



The extrinsic and structured nature of university learning meant that many of the criteria for play could not be met. However, research did exist that aimed to create a framework for successfully integrating elements of play into the more structured context of primary school learning (Zosh et al, 2017), which I felt could be potentially extended to a tertiary setting. Play deprivation theory suggests that, despite the significant differences between primary and tertiary education and our expectations of students and their needs, approaches designed for primary students could still benefit young adults (Brown & Vaughan, 2009).

Drawing on Zosh et al's (2017) work on primary education, I attempted to create an assessment that was joyful, meaningful, actively engaging, iterative and socially interactive for a second-year module in economic geography. This is an option module for around forty students, which when I inherited it had a more standard model of weekly transmission-style lectures and discussion-based seminars, with an essay and an exam as summative assessments. I designed a new assessment with the aim of trying to incorporate the five characteristics of play. This was a collective learning diary using jigsaw learning (50% of the module mark) and an individual podcast on a topic of the student's choice (50%).

Jigsaw learning is a cooperative teaching strategy where students become 'experts' on a topic and are then divided into groups to teach their expertise to others (Vives, 2025). Like a jigsaw puzzle, every student's piece of knowledge is necessary for the group to complete the assessment. In the module, the students were split into groups of three, with each student in the group taking a letter (A, B or C). Then, each week three separate readings were set for A, B and C. The students were given a series of questions about their reading to answer during independent study time. They then organised collectively as a group during weekly seminar sessions to respond to a series of prompts about a key topic. Each prompt required knowledge from all three readings for a correct answer.

The collective reading diary was designed to be socially interactive (with students working together); iterative (the prompts got more challenging as the weeks went on); engaging and meaningful (students had to collectively choose a current news article and link it to each topic, to keep the work grounded and relevant). It was important that each reading allowed the student to discover and teach new information to their peers (rather than reproducing lessons learned in the lecture) to attempt to create the conditions for a feeling of discovery (and the 'joyful' dopamine release connected to this). Jigsaw learning thus worked towards bringing the five characteristics of play (joyful, meaningful, engaging, iterative and socially interactive) into the classroom. After completing the diary, the students could choose any of the topics they had covered to produce an individual podcast (an audio file, through students increasingly chose to also use video). This was designed to allow the students autonomy to



choose a topic of particular interest to them (meaningful); and to be creative in the application of their knowledge (hopefully facilitating a creative process that was actively engaging).

The benefits of the jigsaw learning and podcast assessment

I ran this assessment for four years, allowing me to observe its effectiveness in the classroom across a range of cohorts. The assessment largely stayed the same, though I did add clarifying instructions and 'model answers' after the first cohort (as the assessment style was so new to them, clear and detailed instructions gave them more confidence; and listening to other people's A grade podcasts gave them an indication of the expected standard); and added guided questions for the readings after cohort two, to ensure that students were bringing the key information to their group. I also adjusted the podcast assessment so it could be read by another person, or text-to-voice AI, for students with anxiety about speaking aloud. However, few students (three over four years) chose this option. The seminar sessions, where students worked in groups, were largely self-organised, with students choosing independently how to go about completing their work. I explained to students that this self-organisation was part of the assessment, and that I wanted to see their skills at time management, and working as part of a team. They enjoyed the autonomy and independence of this. I observed students often achieved a 'flow state' in seminars, deeply engrossed in their group work discussions.

Notably, though designed to meet the principles of play laid out by Zosh et al (2017) the jigsaw learning methodology was also very good at meeting the extrinsic reward (grades) and functional outcomes (graduate attributes) that more traditional teaching methods are designed around. The collective reading diary gave students a very strong grounding in the literature, and the social dependency embedded in the group work—with peers being let down if students did not study—"forced" (in the words of one student) them to do the reading. This improved the quality of students' work, and therefore the grades received across the modules were consistently high. Communication, cooperation, organisation and emotional intelligence are all key graduate attributes (Wong et al. 2022) which the jigsaw learning assessment asked the students to demonstrate.

Finally, one unintended but positive outcome of the assessment was that as the lecturer is not engaged in transmission teaching during seminars, they instead become a facilitator—attempting to observe how group dynamics are playing out. This means the lecturer is more sensitive to students' individual situations, which are flagged through absences or missed readings, which need to be explained in all cases. This allowed me to identify a number of



students needing more general support in their degree progress through the module, many of whom were not answering administrative emails and had not engaged with pastoral staff.

Student evaluation

The module and assessment achieved very high scores in student evaluations. Student feedback particularly focused on the assessment. This is worth repeating verbatim as evidence of the benefits of the jigsaw approach. The following are student feedback comments from 2025 and 2026.

"The reading diary was really good because it actually forced me to do the reading and engage with content outside of the lectures."

"The reading diary coursework is very helpful in incentivising independent learning."

"The reading diary is a great idea as we had access to three readings while only doing one."

"The shared reading diary was a really good way of engaging with the readings without the workload being too high, and it helped me engage in the seminars more than I do in modules where there's no clear prep, and it helped distribute the workload throughout the term. I feel like I have a good knowledge of a lot of topics (particularly thanks to the reading diary), that are all relevant to day to day life and understanding of the world."

"Seminars, reading diary group work was useful. Working with others was a good way of learning."

"I loved the layout of doing little bits of work week by week... I could actually feel myself understand more as the module went on."

"It includes a lot of collaborative discussions which help my individual understanding of the content."

"This module was great in every aspect. It was my favourite module of the year because of the content, structure, coursework."

Conclusion

This paper has described an attempt to integrate play principles into university teaching through an assessment based on jigsaw learning, described how this was done, and



presented direct student feedback as an evaluation of this approach. Overall, jigsaw learning proved effective in both bringing play principles into the classroom and also meeting other graduate attributes. It created community among students and allowed academic staff (working as community facilitators rather than transmission-style teachers) to be more aware of individual student support needs.

Challenges for this method include that ideally, the class group should have students in multiples of three: when this isn't the case, one or two groups can have four students, though that means two students doing the same reading, which isn't ideal. The marking of the collective reading diary can be complex, as students have to be marked both for their individual contributions and collective work; though this isn't significantly longer as a time commitment than marking essays. Online submission can also be complicated: students must hand in three versions of an identical reading diary, with their own role (A, B or C) clearly highlighted on each to differentiate them. However, this means that Turnitin software cannot be utilised, as it assumes students have copied assignments from one another. As work is done in the classroom under supervision, reducing the likelihood of academic malpractice, this is not a significant loss, but is not ideal. Where there are student absences, this can be a challenge: in these cases, I tend to have a 'model answer' for each set of guided questions for my own reference, and I take on that student's role in the classroom discussion: Though incorporating where this has been necessary brings another complexity for marking.

Despite these challenges, my experience with jigsaw learning has been very positive, and this is an approach I would recommend to other teachers. Based on this experience, I am now looking to incorporate different elements of play into other modules. I have introduced optional, extra-curricular forest school sessions for first year students, and have experimented with bringing elements of roleplay and Augusto Boal's theatre techniques (Boal, 1973) into a third year module; evaluation of which I would be keen to share at a future CEDA conference.

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