

## State of Play: An Historic Review of Playful Learning Approaches in Higher Education

Abstract (150 words)

Play is an integral part of childhood education for centuries, however, in an increasingly instrumental Higher Education environment, the relationship between play and learning becomes more distant as the focus moves from intrinsic interest to learning for assessments.

Over the past fifty years there has been a movement in the use of playful approaches in Higher Education, showing increased use of gameful techniques and a gradually increasing acceptance of play. This article describes the trends over this time, based on a narrative literature review of the use of games, play, and playful techniques in the context of learning in Higher Education.

An analysis of 1090 journal articles dating from 1973 to 2022 enabled an exploration of the trends of research in play and learning in universities, focusing on role play, business simulation games, traditional play, digital play, game making, gamification, and post-digital play.

Full paper (750 words)

While play in childhood learning is accepted, it is used far less in adult education, as the focus moves from intrinsic motivation to learning for assessment (Nørgård, 2021). However, play and playfulness in higher education takes many forms and has evolved over the past fifty years. A literature review on the last fifty years of play in higher education is used here to better understand changes in approaches and terminology used, focusing on articles that use the tools, techniques, and tactics (Whitton, 2018) of playful learning in its widest sense.

The review focused on a single database, Scopus, selected because of the scale of its coverage. Included in the review were journal articles available in English published between 1973 and 2022 where the title of the article contains either “play\*” or “gam\*” and where the abstract contains “undergraduate” or “postgraduate” or “higher education”. Articles were removed that were not relevant, including those on playing music, analysis of theatrical plays, studies into gambling behaviour and sports performance, analysis of leisure games, discussions of drinking games, economic game theory, and teaching about games in non-playful ways. This left 1090 articles that were included in the analysis.

The most obvious trend in the data is the growing numbers of articles on playful learning being published each year, increasing faster than the overall growth in articles published, and showing that research interest in this area is on the ascendancy. However, there are also clear biases in the origin of the research with most articles coming from the United States and Europe, and a tiny proportion from either Africa or South America. While this may be partially the result to drawing on an English-language corpus, it is still important to highlight the US-European biases in the research literature.

To explore the trends in playful approaches used in the literature, each article was coded to identify the primary terminologies used. This analysis of terminology enabled the identification of seven forms of playful learning and trends in the literature over the past fifty years.

- **Role play**, where learners act out roles in specific scenarios (Rao & Stupans, 2012), has been commonly used across all areas of medical practice over the past fifty years, as well as in a range of other disciplines, most heavily in the social sciences.
- **Business simulation games**, in which students take on business roles and make company decisions, were the first games used in higher education (van Ments, 1995), and until the 2000s ‘simulation game’ was the most common term used to describe games for learning in the corpus.

- **Traditional play** using formats such as board games, card games, or quizzes were the second most common forms of game in the early part of the corpus and the use of the term remains steady throughout.
- **Digital play** began to dominate the research literature from the early 2000s, with the term 'serious game' first being used in the corpus in 2008 to denote a game (mainly computer games) for which fun is not the primary purpose (Westera et al., 2008). As well as video games, digital play also includes mobile games and virtual worlds.
- **Game-making** focuses on the design and development of games, particularly digital games, as a pedagogic approach, and is most commonly related to teaching computer science.
- **Gamification** is use of game mechanics (such as points, competition, quests, and rewards) in non-gaming contexts to make them more engaging (Deterding, 2012). The term 'gamification' was first used in the corpus in 2013 and is still used heavily.
- **Post-digital play** encompasses several forms of playful learning that have emerged in recent years that go beyond a core focus on video games, and includes playfulness as a pedagogy (Hancock, 2014), alternate reality games (Piatt, 2009), pervasive games (Montola et al., 2009), playing with toys such as LEGO (James, 2013), and escape rooms (Fotaris & Mastoras, 2019).

While this review enabled the identification of historic themes in the literature base, most of the research evaluates a single game or intervention. We lack the large-scale long-term impactful studies that show not just the effects of playful learning but also explore the qualitative experiences for teachers and students and the social, cultural, and political agendas of play. Too many studies have self-selecting or otherwise biased sampling; too much research is carried out by play evangelists. The use of play in higher education, more so than many other fields, still needs a rigorous evidence-base of what works and why to be taken seriously as a pedagogy and research field.

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