

Preface

In the current landscape of learning and performance, the use of educational games and gamification instructional strategies has received significant attention as a means of engaging learners across age groups, cultures, and contexts. Though game-based instruction is not a new concept, the more recent proliferation of recreational video games and ubiquitous adoption of personal computing technologies have accelerated the exploration and application of such games for educational purposes.

Enjoying Learning Like Gaming provides a comprehensive look at the rationale behind using games for learning, as well as detailed guidance on the features and processes of effective educational game design. The book begins by exploring the psychological and behavioral aspects of gamification, with a focus on concepts related to learner engagement and fun, along with some of the potential negative states associated with the use of games, such as addiction. The connection to learning and performance is also detailed, offering evidence regarding the potential for positive outcomes associated with the use of gamification strategies.

The book also includes an overview of what defines a game, exploring the evolution of how games have been defined and a variety of considerations in such definitions. Common features include goals, rules, and interactions. A wide array of different kinds of games have developed over the years; therefore, a classification of game types is also provided, describing the defining characteristics and purposes of each category.

The concept of “gamification” itself is examined in light of its role in education and learning. It is also helpful to understand how this approach is fundamentally connected to various kinds of economic systems, including the industrial economy, experience economy, and the related role of behavioral economics in the use of games for education and learning. Specifically, we examine theoretical propositions that underpin the use of games for learning, such as dual processing, anchoring, conformity, and punishment. The effects of using gamification are also discussed in terms of improvements in learning and behavioral change.

Awareness of the various learning theories associated with educational game design is helpful when planning game-based learning environments and in decision

making related to specific gamification strategies. The theoretical features and research related to self-determination, achievement goal theory, social learning theory, and situated learning can help guide understanding of student engagement and behavior within educational games. The role of feedback and its effectiveness in learning and performance is also critical in planning learner interactions and outcomes within game-based learning programs. Knowing how and when to integrate feedback into the activities can impact the effectiveness of learning outcomes and learner engagement.

Learners have different perceptions of gamified learning activities, which in turn drives learner behaviors within such contexts. A variety of psychological states can be experienced within game play, necessitating our understanding of possible reactions and responses within such learning environments. Feelings of control, competition, discovery, fellowship, and relaxation are only a few of the many conditions in which learners may perceive when engaged in games for learning. Awareness of these conditions, along with guidance on how to elicit (or avoid) them through design strategies, is key to effective planning for gamified learning experiences. It is also important to consider how to manage challenging player behavior within such programs as well, posed by “griefers” and rule breakers.

Development of educational games can be assisted through awareness of different gamification frameworks and their elements. Gamification platforms are also plentiful, so a checklist for evaluating which may be most appropriate is provided. So many tools and systems are available for supporting the creation of innovative and effective game-based learning programs. Descriptions of different development apps and software systems are included, as well as detailed guidance on strategies for the instructional design process related to the creation of effective game-based experiences for learners.

While research has supported the positive outcomes related to the use of games for learning, there are also some legal and ethical issues that must be considered before choosing to integrate such systems into classroom use. The acquisition of personal data for analytics can result in some privacy issues, for example. Other challenges can relate to copyright and ownership when utilizing existing materials for game production. These kinds of issues can often be avoided through sensitivity about their implications before the use of games in the classroom.

Examining how others have employed educational games can offer models for adoption within our own contexts. A variety of cases are provided from educational settings, including STEM education with virtual laboratory environments for biology, chemistry, and general science explorations. Other exemplars include computer coding environments, mathematics, and disaster relief, as well as integrated programs that teach various math concepts alongside human body systems, genetics, and evolution. Cases in the liberal arts and social sciences include language learning, politics and government, economics, and leadership programs. These examples reflect both self-directed and collaborative kinds of approaches with mechanisms for self-assessment and also teacher monitoring. Exploring these stories of gamified learning utilization will hopefully inspire the reader’s own unique and creative implementation strategies!

But, how does one get started with gamification in the classroom? There is no better way to understand the benefits and challenges of game-based learning than by becoming a player yourself. We close with guidance on how to initiate your own learning experiences so that you are well-prepared to plan effective and engaging gamified programs for your own learners. We wish you good luck and good gaming!

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