

Chapter 10

The Next Level Emerging Trends in Gamification

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ABSTRACT

This chapter examines the evolving landscape of gamification, shaped by the convergence of artificial intelligence, immersive environments, blockchain, and social technologies. Once reliant on simple point-and-reward mechanisms, gamification has matured into a dynamic, intelligent, and decentralized ecosystem. AI and machine learning now drive hyper-personalized experiences; augmented and virtual reality enable embodied engagement; and blockchain technologies introduce verifiable rewards, digital ownership, and decentralized governance. These innovations expand gamification's purpose, from individual motivation to community building, equity, and sustainable behavior change. Emerging frontiers such as emotional AI and multimodal interfaces promise even deeper responsiveness by integrating gesture,

DOI: 10.4018/979-8-3373-3690-9.ch010

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voice, and biometric data. As gamification systems increasingly permeate education, healthcare, the workplace, and civic life, ethical design becomes imperative, prioritizing inclusion, autonomy, and well-being.

INTRODUCTION

Gamification [the use of game design techniques in non-games] has changed a lot since first appearing in the early 2000s (Ligorio et al., 2025; Liu, 2024; Triantafyllou et al., 2025; Zeybek & Saygı, 2024). In the early days, it basically depended on the primitive reward system of points, badges, and leaderboards to generate user motivation and engagement. These initial applications tended to be transactional and extrinsically motivating, wherein a record of improvement was recorded, but most often failed to generate sustained interest or subsequent engagement. These simple mechanics could not sustain customer expectations that had become more demanding and digital ecosystems that are more complex as users became more sophisticated. Gamification started to evolve in providing more meaningful, flexible, and user-oriented experiences-i.e., the proliferation of psychological knowledge with powerful technologies to generate more effective and immersive systems of engagement. (Kok et al., 2024; Rana & Chicone, 2025; Wang et al., 2024).

Gamification is in its next phase today, and perhaps this can be described as Gamification 2.0 due to the decline of controlling forces that shape the world within the technological and social spectrum (da Silva Junior et al., 2025). Personalized and adaptive gamification systems can become a reality with the help of Artificial Intelligence (AI) and Machine Learning (ML), altering themselves according to user behavior, desires, and achievement. The differences between real and digital worlds are being blurred out by Augmented Reality (AR) and Virtual Reality (VR), which enable users to engage in an immersive, embodied experience with gamified content. Blockchain-based digital assets, such as smart contracts, help improve reward systems by enhancing trust, transparency, and decentralization. It should also be noted that social media, online communities, and multiplayer design principles are transforming gamification through socio and collaborative digital environments. This transformation will help to align with social media and online communities with shared objectives on teamwork (Haoming & Wei, 2024; Lampropoulos et al., 2022; Ribeiro et al., 2024).

The focus of this chapter is to explore the new trends in gamification by providing a detailed view of state-of-the-art technologies and user expectations in the context of gamified systems design and implementations. The second section brings to the fore the application of AI and ML in the development of smart and personalized experiences. Section 3 discusses the way AR and VR develop immer-

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