

# Redefining Gamification: From Elements to Experiences

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**Abstract.** *This article challenges traditional approaches to gamification by advocating a paradigm shift toward viewing gamification as an immersive and transformative experience, acknowledging its potential not just as a tool for incentivizing behaviours, but as an experience that can enhance engagement, learning, and personal growth. Drawing on research in narrative gamification and personalized strategies, we advocate holistic, context-specific approaches to redefine gamification beyond simple game elements, allowing the creation of meaningful gamified experiences across domains. We recommend interdisciplinary collaboration to envision the empowering potential of diverse gameful experiences to help individuals reach their full potential.*

**Resumo.** *Este artigo desafia as abordagens tradicionais de gamificação ao defender uma mudança de paradigma, propondo que a gamificação seja vista como uma experiência imersiva e transformadora, reconhecendo seu potencial não apenas como uma ferramenta para incentivar comportamentos, mas como uma experiência que pode aumentar o engajamento, a aprendizagem e o crescimento pessoal. Baseando-se em pesquisas sobre gamificação narrativa e estratégias personalizadas, defendemos abordagens holísticas e específicas de contexto para redefinir a gamificação além de simples elementos de jogo, permitindo a criação de experiências gamificadas significativas em diferentes domínios. Recomendamos uma colaboração interdisciplinar para imaginar o potencial capacitador de diversas experiências lúdicas que ajudem os indivíduos a alcançar seu pleno potencial.*

## 1. Introduction

Gamification gained prominence as a means of improving user engagement and motivation in various domains [Nacke 2017]. However, traditional approaches to

gamification have often focused on using game elements in different strategies [Deterding et al. 2011], overlooking its potential to create immersive and transformative experiences [Palomino et al. 2019a], which results in shallow engagement and does not address the underlying values and principles that drive meaningful and lasting changes in attitudes and behaviours [Mazarakis and Bräuer 2023, Palomino and Isotani 2024]. The traditional approach to gamification neglects the transformative aspect of gamification, which would allow the unique gamified experience to effectively improve individual and communal well-being.

For example, consider a gamified educational strategy designed to teach environmental awareness and sustainability, in which students might act as caretakers of a virtual ecosystem, being responsible for maintaining its health and balance. Through gameplay, students need to learn and understand ecological principles, deal with pollution, deforestation, and climate change, and see the real-time impacts of their decisions on the virtual environment. The principles and values promoted by the gamified strategy become internalized as students engage deeply with it over time. Gamification does not just teach them about environmental science—it may change their attitudes and behaviours towards the environment in their daily lives. They begin to recycle more, waste less, and take action to protect the environment. They may even become advocates for environmental issues, spreading awareness among their friends, families, and communities. This is a transformative experience that is not just about earning points or levelling up on a gamified platform, but also about fundamentally changing one’s understanding, attitudes, and behaviours in a meaningful and lasting way.

The article proposes a paradigm shift in understanding and implementing gamification. Stakeholders are urged to perceive and design gamification as an immersive experience involving senses, emotions, and intellects. Gamification can thus become more than just a tool to motivate or change behaviour—it can foster deep and meaningful interactions as well. The key is to shift focus from the traditional, reward-based aspects of gamification towards the immersive potential of games, where players are not just extrinsically motivated by points or badges, but intrinsically motivated by the richness and depth of the experience itself. By embracing this perspective, we aim to unlock the full potential of gamification in various domains, including education, healthcare, marketing, and workplaces.

## **2. On to the Journey**

Previous research on gamification has focused primarily on element-centred approaches, emphasizing the selection and integration of game elements [Tondello et al. 2016, Kapp 2012, Deterding et al. 2011]. These approaches, however, have a crucial limitation, namely, a lack of contextual understanding and intrinsic motivation, as users are primarily motivated by extrinsic rewards and progress, rather than a genuine understanding of why they act as they do [Mazarakis and Bräuer 2023]. To address these limitations, we dive into the power of narrative and storytelling in gamified experiences, developing the Narrative Gamification Framework for Education [Palomino and Isotani 2024]. This framework integrates consolidated theories, such as Hero’s Journey [Vogler 2007], AD-DIE instructional design framework [Morrison et al. 2019], Gameful Design Heuristics [Tondello et al. 2019], Bloom’s Revised Taxonomy [Krathwohl 2002], TGEEE game elements [Toda et al. 2019], and User Experience (UX) [Norman 2004, Hassenzahl 2018],

enabling designers to create gameful environments that engage users on a deeper level. Additionally, the Gamification Journey Personalization User-type Approach, inspired by Jung's Archetypes, allows for the personalization of gamification strategies based on users' unique characteristics and preferences, optimizing their experience [Jung 2014, Palomino et al. 2019c]. Furthermore, the Gamification in Education Ontology provides a comprehensive model for organizing and connecting gamification constructs, enhancing researchers' and practitioners' understanding of the relationships between elements [Palomino et al. 2023].

Other studies have also stressed the importance of addressing experiences and subjective factors. [Wanick and Stallwood 2023] examined the challenges fashion brands face in social media marketing and the use of brand storytelling in the "metaverse," showcasing the sustained brand-centred story and gamification and avatar customization. [Trinidad et al. 2021] addressed technological challenges by introducing Go-Race, a narrative-based gamification suite that goes beyond traditional game elements. [Mazarakis 2021] explored current and future trends in gamification science, citing narrative and storytelling experiences as one of them. [Ortet et al. 2022] explores the potential of digital storytelling and gamification to promote participation and motivation among senior citizens. A study from [Pereira et al. 2023] successfully utilized a dystopian narrative to gamify a mandatory informatics course, enhancing student engagement and addressing technical and ethical concepts. Finally, [Andrade 2024] presents an experiment in university academic teaching that exemplifies the use of immersive technologies to simulate first-person realities. The process starts with creating a character, goes through the creation of an interactive narrative with this character, and ends with the production of an experience visualized with web browsers. Developed by students, the environments feature storytelling with the possibility of adaptive personalization.

In all studies, the importance of narrative and storytelling was emphasised in multiple domains, including fashion marketing, gamification technology advancements, and the promotion of well-being among seniors.

### 3. Gameful Experiences Dimensions

A comprehensive analysis of gamified experiences can be explored across various dimensions and may offer valuable insights into how these experiences are designed and encountered. Examining these dimensions gives us a deeper understanding of creating compelling gamified experiences. For example, the **Immersion Spectrum** ranges from highly immersive experiences that fully immerse users in a virtual environment to less immersive environments that blend game elements with real-world tasks. Similarly, the **Challenge Spectrum** evaluates the complexity of tasks, from simple or casual interactions to intricate and competitive challenges. Other critical dimensions include **Narrative Depth Spectrum**, which assesses the richness of storytelling within the experience, and the **Social Engagement Spectrum**, which measures the level of interaction and collaboration among users.

Further, the **Rewards and Feedback Spectrum** examines the balance between extrinsic rewards, such as points and badges, and intrinsic feedback, aligning with users' motivations. The **Equity, Diversity, and Inclusion (EDI) Spectrum** is crucial in evaluating how well-gamified experiences are designed to be inclusive and equitable. At the

same time, the **Agency Spectrum** reflects the degree of control users have over their actions and outcomes within the experience. The **Ethical Design Spectrum** assesses the transparency and ethical considerations of the gamified experience, ensuring that user consent and data privacy are respected. Finally, the **Sustainability of Engagement Spectrum** considers how well the experience maintains long-term user interest, and the **Learning and Development Spectrum** evaluates the extent to which the experience supports ongoing learning and personal growth.

By classifying and analyzing gameful interactions along these various spectrums, we can create personalized interactions based on user behavior and preferences, ultimately enabling the development of strategies that align with specific objectives and desired outcomes. This multi-dimensional approach provides a more holistic and inclusive understanding of gamification, addressing its immediate impacts and broader potential for fostering meaningful and sustained engagement.

#### 4. Gameful Principles

In designing and implementing gamification strategies, a paradigm shift toward perceiving gamification as an experience rather than a collection of isolated elements has significant implications. Designers can create meaningful and immersive gamified experiences that resonate with users on a deeper level by embracing an experience-centred approach.

The proposed gameful principles described below, offer a roadmap for transformative gamification experiences.

- **Scaffolded Progression:** Design the gamified experience with a gradual increase in difficulty and complexity. Provide clear pathways for progression, allowing users to build their skills and knowledge incrementally. This scaffolded approach ensures that users feel a sense of achievement and motivation as they advance through the experience [Oliveira and Hamari 2024, Rodrigues et al. 2022].
- **Meaningful Interactions:** Foster meaningful interactions between users and the gamified system and among users themselves. Encourage collaboration, cooperation, and shared goals, creating a sense of community and social connection. Design interactive elements that facilitate communication and cooperation, promoting engagement and enjoyment [Palomino et al. 2019b].
- **Emotional Impact:** Incorporate emotional elements into the gamified experience to evoke positive emotions such as joy, excitement, and curiosity. Design challenges, narratives, and feedback mechanisms that elicit emotional responses, making the experience more memorable and engaging. Emotional impact enhances the user experience and contributes to long-term motivation and satisfaction [Paradedda et al. 2024, Toda et al. 2019, Tkalčič et al. 2016].
- **Adaptive Personalization:** Implement adaptive mechanisms that tailor the gamified experience in real-time based on user preferences, abilities, and progress. Use data-driven approaches, such as machine learning algorithms, to dynamically adjust the game mechanics, challenges, and rewards to match the evolving needs of each user. Adaptive personalization enhances user engagement by delivering content and experiences that are relevant and meaningful to each individual [Rodrigues and Isotani 2024].

- **Immersive Environments:** Create immersive environments that captivate users' attention and transport them into the gamified world. Utilize multimedia elements, such as audio, visuals, and virtual reality, to enhance the sensory experience and create a sense of presence. Immersive environments deepen user engagement and facilitate a more absorbing and impactful gamified experience [Andrade 2024, Palomino et al. 2019a, Nacke 2017].
- **Long-Term Engagement:** Design gamified experiences with long-term engagement in mind. Consider mechanisms that sustain user interest and motivation over extended periods, such as ongoing challenges, events, or periodic updates. Provide opportunities for user-generated content and community contributions, allowing users to participate and contribute to the evolving experience actively [Rodrigues et al. 2022].
- **Seamless Integration:** Integrate the gamified experience seamlessly into the users' existing contexts. Ensure that the gamified experience complements and enhances the primary activities or goals of the users rather than feeling like a separate or disjointed component. Seamless integration promotes a sense of coherence and relevance, increasing user acceptance and adoption [Palomino and Isotani 2024].
- **Design for Diverse Engagement:** Ensure that the gamified experience is accessible and meaningful to users from all backgrounds by incorporating inclusive design practices, considering diverse identities, abilities, and cultural contexts from the outset rather than as an afterthought. Create game elements that allow for customization and personalization, enabling players to see themselves reflected in the game world. Ensure that the game mechanics do not reinforce stereotypes or biases but promote equity and representation. By integrating feedback from diverse user groups throughout the design process, this principle seeks to foster a sense of belonging and empower all users, particularly those from marginalized communities, to engage and benefit from the gamified experience fully [Tomé Klock et al. 2024].
- **Gamification for Social Good:** Explore opportunities to leverage gamification for social impact and positive behaviour change. Design gamified experiences that promote sustainable behaviors, health and well-being, environmental awareness, or other societal goals. Aligning gamification with meaningful causes can be a powerful tool for fostering positive change in individuals and communities [Tomé Klock et al. 2024].

In that context, we understand that the integration of persuasive [Fogg 2002] and affective computing [Tao and Tan 2005] is fundamental. Within a gamified environment, designers can effectively guide users toward transformative experiences by using persuasive computing techniques. Additionally, incorporating affective computing principles allows the design of emotionally impactful interactions, personalized feedback, and adaptive experiences that respond to users' emotional states and preferences [Picard 2000].

Furthermore, ethical considerations must be at the forefront of gamification implementations. Privacy, inclusivity, and fairness should be carefully addressed to ensure that gamified experiences are designed with respect for users' rights and dignity. Considering ethical considerations is crucial for fostering trust and maintaining a positive user experience [Marczewski 2017].

## 5. Towards a new definition

Taking into account what was discussed, gamification could be defined as a strategic design approach that creates engaging and immersive experiences by applying **Gameful Principles**, referring to a set of guiding concepts that underpin the design and implementation of gamification strategies. These principles are manifested within **Gameful Experience Dimensions**, emphasizing transforming the user experience by using experiences that evoke enjoyment, motivation, and meaningful participation. Rather than incorporating game elements, this definition highlights the integration of gameful principles within various domains, including games, to enhance user engagement, foster motivation, and achieve transformative experiences. By embracing an experience-centred perspective, gamification creates dynamic, compelling interactions that captivate and inspire participants.

However, an essential consideration in redefining gamification as an immersive and transformative experience is the distinction between gamification, serious games, and traditional games. As we advocate for moving beyond game elements like points and badges to embrace more meaningful, personalized, and narrative-driven interactions, we confront where gamification ends, and game design begins. Drawing on Huizinga's [Huizinga 2019] foundational concept of play and its evolution in modern game design theory; we propose that gamification, mainly when framed through gameful principles, bridges serious games—designed with explicit utilitarian goals—and traditional games, which prioritize entertainment, raising a significant philosophical challenge: if gamification is used solely to enhance productivity or achieve a predefined outcome, does it compromise the essence of play, which is typically seen as voluntary and intrinsically motivated? Additionally, gamified experiences are often designed with limited user autonomy, guiding behavior toward specific goals. As such, to fully realize gamification's transformative potential, we must rethink its relationship with autonomy, allowing for more voluntary and self-directed engagement. Thus, the distinction between gamification and games becomes a crucial point of reflection as we push toward a more holistic understanding of gamification, one that balances the utilitarian with the playful and the structured with the autonomous.

## 6. Conclusion

The paradigm shift towards gamification as an immersive experience offers tremendous potential for reshaping how users connect and interact with various environments and systems rather than merely modifying their behaviours. Gamification can be made engaging, meaningful, and effective when practitioners follow gameful principles and take into account the unique needs of users. There is a need to rethink gamification beyond the mere incorporation of game elements and embrace it as a holistic and transformative process. The integration of narrative, personalized strategies, and the application of gameful principles provide a roadmap for creating immersive gamified experiences in various domains.

Therefore, we call for a change in perspective, inviting stakeholders from diverse fields to reimagine the possibilities and unlock the full potential of gamification as an immersive experience. By embracing narrative, personalization, and gameful principles, designers can create transformative gamified experiences that engage, motivate, and empower users. This essay aims to spark engagement and foster conversations within the

community and beyond, welcoming input from industry, academia, the indie world, and interdisciplinary fields. It is our combined efforts that will drive the future of gamification research and practice, pushing the boundaries of what is possible, and redefining the role of gamification in creating meaningful and impactful experiences.

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