



# Convergence and divergence in digital game-based advertising: a systematic review of advergames and in-game advertising

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## Abstract

As gaming becomes pervasive across demographics, brands are trying to capitalize on this channel to engage with consumers in increasingly immersive ways. However, they face numerous challenges in enhancing the effectiveness of these advertising strategies. This systematic literature review investigates the impact of advertising strategies on consumer behavior within digital gaming environments. Using a comprehensive analysis of existing research, the study explores the integration of advertising strategies in games, highlighting the overlap and divergence between advergame and in-game advertising. Furthermore, the review examines how these approaches affect engagement and advertising effectiveness differently and influence player interaction and brand perception. This study also provides guidelines to delineate the two distinct approaches, clarifying the separate streams of research associated with advergames and in-game advertising.

**Keywords** In-game advertising · Advergame · Video games · Digital games · Advertising

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## 1 Introduction

The current scenario in which physical and digital experiences overlap encourages advertisers and marketers to seek new platforms to engage customers effectively (Ghosh et al. 2021). Although social media has been central to much of the digital marketing discussion over the past decade, video games have quietly grown in popularity with consumers, and their potential as a marketing channel has expanded globally.

According to *The Economist* (2023), the global gaming industry has experienced a rapid increase in the number of engaged gamers in recent years, reaching 3.2 billion in 2022 across all generations of gamers. In economic terms, the industry generates an annual net revenue of \$185 billion, highlighting its strategic and growing significance. Of this, advertising within video games is valued at approximately \$65 billion. This makes gaming one of the most prominent forms of entertainment that captivates millions of users worldwide every day (Vashisht and Pillai 2017), resulting in a significant opportunity for generating revenue for advertisers (Hussain et al. 2021; Herrewijn and Poels 2015). Introducing advertised content within video games may open up new opportunities for brands to engage with consumers uniquely and interactively, potentially influencing brand attitudes and purchase intentions (Ghosh et al. 2022). Moreover, the immersive nature of gaming experiences favors prolonged and repeated exposure (De Hesselle et al. 2021), resulting in complementation and, in some cases, replacement of more conventional forms of entertainment like television and movies (Van Berlo et al. 2022; Mishra and Malhotra 2021).

This has led marketers to use video games and game-like approaches in their strategy to increase engagement with their commercial messages, a process known as the “gamification of advertising” (Terlutter and Capella 2013; Chaney et al. 2018; De Pelsmacker et al. 2019). Video game manufacturers and marketers aim to maximize revenue from both video game sales and brand-related content (Welden et al. 2025). However, these two revenue streams can have opposing effects. For instance, to increase gamers’ engagement, manufacturers and marketers would typically prefer to have fewer or no ads (Rutz et al. 2019; Abbasi et al. 2021), which would, in turn, reduce revenue. In this vein, advergames and in-game advertising (IGA) are different approaches that use video games as a medium for brand promotion. Advergames are custom-made games designed to communicate a branded message, while IGA involves embedding advertisements or branded items within the context of an existing video game (Ghosh 2016; Van Berlo et al. 2023).

Brands’ increasing use of game mechanics has blurred the lines between advergames and IGA, creating significant overlap between the two formats (Mishra and Malhotra 2021). This ambiguity is also reflected in academic literature. IGA has evolved from simple ad placements to interactive, brand-centered experiences, while advergames increasingly aim for deeper integration and relevance, making them more similar to IGA (Cauberghe and De Pelsmacker 2010; Cicchirillo 2019; van

Berlo et al. 2023). Both strategies now focus on creating engaging and immersive experiences to meet players' expectations.

Notwithstanding these developments, a gap persists in the literature concerning clear distinctions between advergames and IGA (Ghosh 2016; Van Berlo et al. 2023). This is because the dynamic nature of digital marketing and innovations in game design have made it difficult to establish consistent definitions and boundaries. Although both strategies are ultimately designed to promote brands within games, their implementation and interpretation can vary considerably. Therefore, gaining a systematic understanding of these two formats is imperative.

Thus, a systematic understanding of their differences is essential for several reasons. First of all, the gaming industry's dynamic and ever-evolving nature requires a clear understanding of these forms of advertising to effectively adapt marketing strategies (Ghosh et al. 2022). Furthermore, it is crucial to explore the overlap between these two forms of advertising. As the gaming market has grown, both approaches have gained prominence and require a comprehensive review to assess their effectiveness and impact (Jin and Phua 2015). Previous research highlights the importance of examining game, individual, and social factors and their influence on consumer cognitive, attitudinal, and behavioral responses in the context of advergames (Vashisht et al. 2019). Extending this analysis to IGA can enhance our understanding of effective marketing strategies.

Finally, the unique gameplay experiences associated with advergames and IGA can significantly impact player perceptions and brand interactions (Vashisht and Pillai 2017). Therefore, conducting a systematic literature review provides practical guidance to companies seeking to develop effective IGA and advergaming strategies based on research findings. This is crucial for firms aiming to adopt these digital marketing strategies efficiently.

Considering this, we attempt to answer the following research questions:

- RQ1: What advertising strategy factors are shared between advergames and IGA approaches in digital games?
- RQ2: What advertising strategy factors distinguish advergames from IGA in digital games?
- RQ3: How do the shared and distinct advertising strategy factors of advergames and IGA affect consumer behavior and engagement?
- RQ4: How do advergames and IGA shape future research and strategies in marketing?

This study makes several significant contributions to the understanding of advergames and IGA. First, it clarifies the distinction between these two advertising strategies, offering a systematic framework to better understand their overlap and differences (Terlutter and Capella 2013; van Berlo et al. 2021b, 2023). Moreover, by exploring the effects of advergames and IGA on consumer behavior, we provide practical insights for brands looking to develop effective advertising strategies within digital games. Furthermore, the review highlights emerging trends and future directions in advergames and IGA, offering valuable guidance for marketers seeking to adopt these approaches in a rapidly evolving gaming environment. Finally, the findings offer practical recommendations for game developers and advertisers, helping

them leverage both strategies' strengths to enhance player engagement and brand interaction. These contributions not only address the current literature gap but also provide actionable insights for the industry. Finally, we suggest future research directions and discuss the study's implications for theory and practice.

## 2 Advertising in digital games

The combination of advertising and video games represents a further development of the concept of gamification, whereby typical game elements are applied to non-game contexts to encourage consumer engagement, which is an important business metric that reveals players' cognitive, emotional, and behavioral responses (Hollebeek and Chen 2014; Van Berlo and Chen 2024). In gaming, consumer engagement is also essential for boosting many critical areas, such as monetization, customer loyalty, marketing opportunities, and product development (Rutz et al. 2019). Moreover, it also favors players' consumption behavior (Abbasi et al. 2021). Therefore, advertising strategies in digital games must be able to engage consumers meaningfully. To achieve this, it is crucial to integrate such strategies into a positive gaming experience (Ingendahl et al. 2024).

In this domain, advergames and IGA are advertising strategies that use digital games to place and promote brands and products by exploiting their interactive nature (Terlutter and Capella 2013; Van Berlo et al. 2023). Both strategies have the potential to generate consumer engagement. However, they rely on different approaches to capture players' attention and influence brand perceptions, with different implications for influencing consumer behavior and purchase decisions.

Advergames are specifically designed games that convey a branded message through interactive gameplay (Joassard and Capelli 2024). They can be categorized into three different types: affective advergames, which aim to create an emotional connection with the brand; cognitive advergames, which focus on increasing brand recall through the strategic placement of brand elements; and conative advergames, which are designed to influence consumer behavior directly (Kinard and Hartman 2013; Kuo and Rice 2015; Joassard and Capelli 2024).

Advergames are particularly effective in engaging consumers, as these games successfully capture attention due to their enjoyable experience. These games' interactivity and immersive nature facilitate active participation and brand recall, which strengthens the brand–consumer relationship compared to other forms of advertising (Van Berlo et al. 2021b). Moreover, they also help to increase brand awareness and positive brand attitudes. However, to deeply engage customers, advergames need to provide a satisfactory experience (Van Berlo and Chen 2024).

On the other hand, IGA involves the integration of advertising content into existing video games, ranging from product placements and banners to content sponsorships, interstitial ads, and video ads (Terlutter and Capella 2013; Van Berlo et al. 2023; Welden et al. 2022). This approach has spread widely over the years, becoming a revenue model in free-to-play games (e.g., *Fortnite*) and the metaverse (Chaney et al. 2018; De Pelsmacker et al. 2019). Research has primarily focused on gaming product placement (Glass 2007; Lee and Faber 2007; Mackay et al. 2009), while

today, IGA strategies also involve content sponsorship, such as character customization in multiplayer games, typically through purchasing items or skins and interstitial ads, which refer to pop-ups between game sessions or levels (Welden et al. 2025). Compared to advergames, placing brands within existing games can be less immersive but still compelling, and engagement depends on how the content is integrated into the game environment. IGA's effectiveness hinges on a careful balancing act that considers player characteristics, the gaming environment, and advertising features, all while minimizing consumer resistance (Dardis et al. 2019; Ghosh et al. 2022). For instance, IGA is more effective for engaging adult consumers.

These ads are often more effective when congruent with the game environment, reducing perceived intrusiveness and potentially influencing consumer purchasing decisions (Verberckmoes et al. 2016; Hussain et al. 2022). Given the diversity of video game settings, ranging from realistic to fantastical, the concept of congruence can be challenging. Integrating branded elements into the game mechanics of advergames elicits positive affective responses from consumers. These responses, in turn, lead consumers to transfer these positive emotions to embedded brands. This results in elevated emotional engagement and more efficacious persuasion than alternative advertising formats (van Berlo et al. 2021b). Thus, they combine entertainment with branding, providing marketers a compelling channel to communicate branding (Vashisht et al. 2019).

A critical aspect of advertising games is the extent to which the game's theme is related to the brand. Research shows that a strong thematic connection between the game and the branded product significantly increases the relationship between attitudes toward the game and the brand (Peters and Leshner 2013). This alignment, especially when advergames are novel or incorporate interactive social elements, can influence player behavior and potentially increase brand consumption and advocacy (Tuten and Ashley 2016). Moreover, an advergame's effectiveness depends on its characteristics. Slow-paced games, for example, tend to result in higher brand recall, mainly when the brand is prominently placed within the game. However, this recall indicates a complex interaction between game attributes and consumer cognitive processing, as it is influenced by the consumer's level of persuasion knowledge (Vashisht and Royné 2016). Furthermore, it is crucial to understand advergames' impact on consumers' cognitive, attitudinal, and behavioral responses. This requires an in-depth consideration of individual and social factors (Vashisht et al. 2019; Van Berlo et al. 2021a; Joassard and Capelli 2024).

In conclusion, advergames and IGA present opportunities and challenges regarding consumer engagement. Advergames can be distinguished by their high level of consumer engagement and their efficacy in influencing brand perception and consumer response. In contrast, IGA represents a seamless approach, but its effectiveness is related to the quality of integration within the game context. Therefore, it is essential to maintain a balance in brand integration to avoid adverse consumer reactions. To achieve this goal, it is necessary to shed light on the characteristics that unite and distinguish both approaches and their influence on consumer behavior.

### 3 Methodology

To answer our research questions and identify research gaps and directions, a systematic literature review approach allows us to rely on a well-defined methodology (Kraus et al. 2020; Vrontis et al. 2021), profiling research related to advertising in video games. To conduct this research, we collected data from Scopus and WoS to avoid biased outcomes, focusing on articles that met our criteria (Dabić et al. 2021; Visser et al. 2021).

#### 3.1 Search strategy

We followed a systematic research protocol for data extraction and reporting to collect data, as established in previous systematic literature review studies (Tranfield et al. 2003; Kraus et al. 2022a, b, 2024; Sauer and Seuring 2023).

Keywords were identified based on previous work systematizing the literature (Terlutter and Capella 2013; Van Berlo et al. 2023) and a subsequent refinement and enrichment process. A robust search strategy was constructed using the Boolean OR operator to encompass a broad range of terms relevant to the research focus. The query included the following terms: “gam\* advertis\*” OR “in-game advertis\*” OR “advergam\*” OR “immersive advert\*” OR “product placement” OR “brand placement” OR advertis\* OR branded AND “digital gam\*” OR “video gam\*” OR “online gam\*” OR “gaming” OR “gamified” OR videogam\*. To ensure that no relevant studies were overlooked, the researchers conducted a meticulous search through author keywords and article names to identify other pertinent papers (Vrontis et al. 2021). This step was crucial in uncovering additional keywords that might have been missed in the initial search. Any new keyword discovered was integrated into our research query. Identifying and integrating keywords was iterative and instrumental in expanding our search scope. We then subjected these articles to a rigorous screening to ensure that only the most relevant and highest-quality studies were included in our final analysis. Finally, we extracted a total of 5093 articles.

#### 3.2 Inclusion and exclusion criteria

Specific criteria were imposed on the search to ensure the sources’ relevance and quality. Only English-language, peer-reviewed journal articles were included, consistent with the standards of previous systematic reviews in marketing (Christofi et al. 2017) and related consumer behavior fields (Terlutter and Capella 2013; Van Berlo et al. 2023). We excluded books, book chapters, conference proceedings, editorials, and other non-refereed publications, as they often lack the rigorous peer-review process necessary to ensure academic rigor and reliability. This strategic restriction aimed to identify the most relevant studies to our research focus while maintaining a multidisciplinary perspective.

We refined our research scope to focus on specific academic fields—business and management, psychology, and social sciences—to ensure a comprehensive understanding of these advertising formats’ consumer-related effects, addressing the gaps in the literature from multiple perspectives.

Furthermore, the selection process was limited to articles published in journals ranked in the Academic Journal Guide by CABS2. This criterion's objective was to consider literature from sources encompassing a comprehensive range of topics, from business to consumer behavior. This approach ensured that our review was based on rigorous academic research that reflected the latest developments and insights in the field (Kraus et al. 2021, 2023). Considering the above inclusion criteria, 1665 articles remained. Afterward, duplicate items were removed, resulting in 356 articles.

However, “advergaming” and “IGA” are often used interchangeably or conflated with broader gamification strategies, particularly in social media. This highlights the lack of a clear distinction in literature. Since our study's key contribution is clarifying these conceptual boundaries, we conducted a further selection process. Two independent reviewers manually examined the articles to ensure that only those explicitly addressing advergaming and IGA were retained in the final sample rather than broadly discussing digital game advertising.

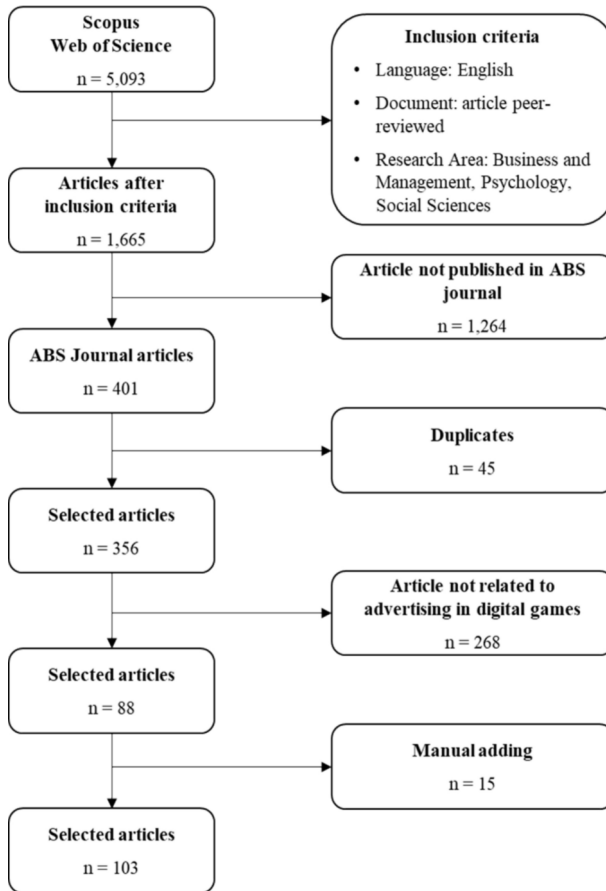
Recognizing that many studies did not meet our inclusion criteria based on titles, keywords, and abstracts, we conducted an additional manual review of selected marketing journals to identify relevant research that might have been overlooked. This rigorous filtering process resulted in a final sample of 103 high-quality articles, ensuring a focused and comprehensive analysis of advertising strategies within digital games, as illustrated in Fig. 1.

Finally, in our analysis, we carefully evaluated the articles for their coverage of key aspects of advertising in video games. Studies were selected based on their relevance to the core themes of advergaming and IGA, with a particular focus on their contribution to the understanding of consumer engagement, behavior, and the effectiveness of advertising strategies within gaming environments (Kraus et al. 2022a, b).

We categorized the studies by type of advertising (advergaming or IGA), theoretical approaches used, and research methods employed (quantitative, qualitative, mixed-methods, or conceptual). The inclusion criteria required that each study directly addressed advertising within video games, focused on consumer reactions or brand impact, and was published in a peer-reviewed journal. We excluded studies that did not focus on the advertising aspects of gaming or lacked a clear empirical or theoretical framework related to our research questions. Moreover, we acknowledge potential biases in the literature, such as publication bias—where positive findings may be more likely to be published—and variations in the gaming context that could affect the generalizability of results. We incorporated studies with diverse methodologies and theoretical perspectives to mitigate these issues, ensuring a balanced and comprehensive field review.

## 4 Findings

The qualitative coding process involved thoroughly examining each article and assessing its content to identify patterns, concepts, and insights. Prevalent themes were identified and extracted from the literature through careful analysis. Emerging themes fell broadly into two categories: IGA and advergaming. Studies on integrating advertising into the game environment were included in the IGA category. This



**Fig. 1** Systematic research strategy

theme highlights how brands are seamlessly incorporated into games, their impact on the gaming experience, and this strategy's effectiveness in maintaining player engagement while promoting brands. Advergaming, the second category, included articles that explored games designed specifically for advertising. The articles discussed the strategic design of advergaming, their ability to enhance brand awareness and form positive brand associations, and their effectiveness in engaging consumers through interactive gameplay.

The review revealed the overlap between IGA and advergaming and the key differences between them. These strategies exist simultaneously within the gaming environment, aligning objectives and areas of integration as they seek to seize players' focus, involve them with brands, and provide immersive brand experiences. However, despite these objectives being common, notable differences exist between the two approaches (Ingendahl et al. 2023). In alignment with the research questions, we organize the findings into three subsections. We begin by exploring the shared advertising strategy factors between IGA and advergaming (RQ1) that generate an overlap area, as shown in Fig. 2. We then examine the key differences between the

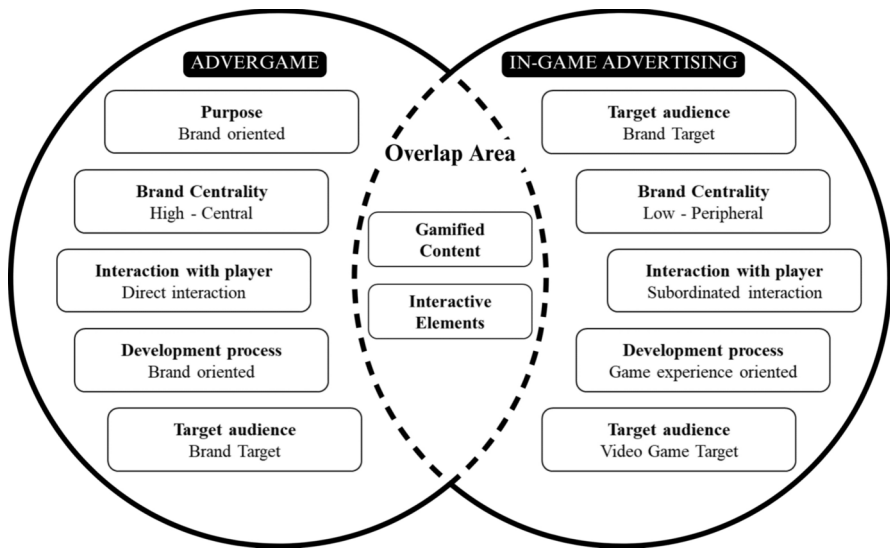


Fig. 2 - Convergence and divergence in digital game-based advertising framework—Source: Authors' elaboration

two approaches (RQ2). Finally, we analyze how these shared and distinct factors impact consumer behavior and engagement (RQ3).

#### 4.1 Overlap area between advergaming and in-game advertising

##### 4.1.1 Interactive elements

Advergaming and IGA involve seamlessly integrating branded elements into the gaming environment, beyond mere decoration, to cultivate brand visibility and enhance the player's immersive experience. This process aligns with the “gamification of advertising” (Van Berlo et al. 2022), a concept that has received increasing attention from advertisers over recent years due to its potential to engage audiences more effectively than traditional media. This generates an overlap area in which they share common characteristics.

A key characteristic that underscores the convergence between advergaming and IGA is the presence of interactive elements, which play a central role in enhancing brand engagement within the gaming environment. These elements include in-game billboards, branded products, thematic events, and interactive banners, all of which encourage players to engage with the brand rather than passively observe it. For instance, clickable banners and strategically positioned pop-up ads provide players with direct access to brand-related content, allowing them to explore product details and promotional offers or even engage in brand-sponsored challenges within the game. Similarly, in-game billboards and branded locations function as digital touch-points that blend advertising with the gaming experience, reinforcing brand presence while maintaining immersion.

In this vein, advergames and IGA offer interactive experiences for players, allowing them to engage with brands actively in the gaming environment.

Thus, these approaches' interactive characteristics allow the creation of a more immersive brand experience. Unlike traditional advertising, which is often a passive experience in physical or digital environments, IGA introduces a dynamic and participatory brand interaction that is inherently more engaging. This immersive dimension is achieved by embedding the brand within the narrative, environment, and mechanics of the game, enabling players to experience the brand in a way that feels integrated rather than intrusive. This further emphasizes their overlap. For example, branded in-game locations, virtual stores, and thematic events allow players to explore and interact with brand elements in ways that mirror real-world experiences, but with the added layer of interactivity unique to digital environments (Ahn et al. 2022; Dwivedi et al. 2023). In this sense, in-game brand encounters are seen, experienced, and actively participated in, making them more memorable and impactful. This innovative form of brand experience differentiates advergames and IGA from traditional advertising approaches, offering brands a way to engage consumers in a contextually relevant and immersive manner that enhances recall and brand perception (Bellman et al 2014; Chaney et al. 2018).

Both advergames and IGA utilize similar elements within the gaming environment, such as in-game billboards and products, to effectively convey brand messages, logos, and promotional content. This strategic use of common gaming elements emphasizes the seamless integration of brands into the virtual world, ensuring that promotional content harmoniously blends with the overall experience.

#### 4.1.2 Gamified content

A further similarity between these two strategies is the adoption of game mechanics into their ad content.

Both advergames and IGA frequently introduce gamified brand interactions, such as missions, characters, or product-based challenges, that integrate the brand into the core gameplay (Panic et al. 2013). This approach transforms advertising into an engaging activity rather than an external intrusion, fostering a more organic connection between the brand and the player. The strategic use of these interactive elements underscores how both advertising strategies leverage similar mechanics to convey brand messages, emphasizing their interconnected nature (Welden et al. 2025). Moreover, these strategies allow for the development of virtual brand stores or locations within the game, providing players with interactive spaces to engage with the brand, explore immersive environments (e.g., the metaverse), and even make virtual purchases (Ahn et al. 2022). As a result, the same element can be seen as an advergame and an IGA, creating further overlap between these two strategies.

Such elements offer players challenges and activities associated with one or more brands that blend organically into the overall narrative of the game (Ingendahl et al. 2023). In conclusion, these carefully identified integration points highlight the shared strategies used by advergames and IGA and demonstrate their intricate overlap in seamlessly incorporating brands within the gaming experience.

## 4.2 Key differences between advergames and in-game advertising

The integration of gamified content and interactive elements in both advergames and IGA demonstrates a convergence of characteristics, highlighting the overlap between these approaches. Nevertheless, despite these commonalities, each approach is distinguished by unique attributes that differentiate it from the other. From this perspective, the uniqueness of each type of advertising lies in its purpose, brand control and integration, player involvement and interaction elements, development process and targeting, and finally, the duration of exposure within the game context. Recognizing these differences is propaedeutic to comprehending the two approaches as they shape the strategies of advertisers and game developers and the overall game experience for customers.

### 4.2.1 Purpose

Advergames are an ad strategy that serves as an immersive marketing tool designed to engage players with brands (Vashisht and Pillai 2017; Van Berlo et al. 2023). This intentional design allows for a focused storyline and gameplay experience that aligns with advertising goals. By occupying a dedicated space within the gaming realm, advergames aim to increase brand recognition and establish a lasting connection between the player and the brand through interactive and memorable gameplay (Sreejesh et al. 2021a, b). The uniqueness of advergames as promotional mediums allows advertisers to have complete creative control over customizing the gaming experience according to their brand message. Thus, practitioners can craft tailored, gamified narratives with their brand through this approach, creating a playful relationship with consumers that may evoke emotional responses.

Conversely, IGA takes a more integrated and contextual approach by seamlessly incorporating advertisements within existing video games. This approach leverages the game environment itself to deliver brand messages. In contrast to advergames, which explicitly promote brands, IGA aims to generate revenue by strategically placing ads within established games (Ghosh et al. 2022). This allows developers and publishers to monetize their creations and support ongoing development efforts. Additionally, featuring real-world brands in IGA can enhance the realism of the gaming experience for players, as is seen in sports video games that compete amongst themselves for brand licenses (Mishra and Malhotra 2021; Zagni and Baima 2023). Another example is video games featuring unique sponsored events, such as *Fortnite*. Moreover, once advertising elements are integrated within open-world game contexts, all the conditions that characterize the metaverse can be replicated (Dwivedi et al. 2022). Thus, these distinctions have significant strategic implications for advertisers and game developers. Marketers and game developers have to choose between developing a custom advergame and utilizing IGA. As mentioned, choosing to focus strategies on one approach rather than the other will depend on the orientation of marketing goals. Advergames provide a captivating and controlled experience but require significant investment. Conversely, IGA presents a chance to generate revenue while potentially accessing a wider audience through popular gaming titles (Ghosh et al. 2022). Developers and publishers can optimize their monetization strategies by com-

prehending these differences and aligning them with their own creative vision and audience expectations.

#### 4.2.2 Brand centrality

As the result of a strategic process, advergaming offers a high level of control in gaming (Agante and Pascoal 2019). From this perspective, advertisers have complete autonomy over advergaming and can shape game content, mechanics, and visual elements according to their brand identity and messaging. This extensive control also involves customizing challenges, rewards, and game elements to address specific brand values, products, or promotional initiatives. As a result, advertisers can provide a targeted audience with a unique and engaging brand experience through the advergaming (Zhao and Renard 2018).

IGA, on the other hand, gives players a sense of autonomy, improving their self-efficacy through customizing features and good game performance while providing advertisers less influence, as it is limited to the game environment (Eastin et al. 2019). Consequently, integrating brands within the game context results from game producers' and advertisers' shared intent. As game producers gain a competitive advantage by using actual brand licenses, this also enhances the gaming experience by making it more realistic for players (Vashisht and Sreejesh 2015). On the other hand, advertisers can use video games as a platform to communicate and promote their brand or product (Chaney et al. 2018). However, several factors need to be considered when integrating a brand into the game environment to pursue a satisfying game experience. These factors concern the degree of congruity between the advertising and the game theme and the players' perceived intrusiveness, as well as the advertising format, which must remain seamless and relevant to the game's theme and overall narrative (De Pelsmacker et al. 2019; Wang and Chou 2019). Thus, advertisers and game developers must collaborate to create a brand representation that enhances the player experience without causing psychological reactance in consumers. This will prevent adverse outcomes for the integrated brand (Mishra and Malhotra 2021).

The difference between advergaming and IGA is further emphasized by brand centrality, which also affects brand attitude (Ingendahl et al. 2023). Advergaming, designed explicitly for brand promotion, prioritizes high brand centrality. Every game aspect is carefully crafted to embody and reinforce the brand's identity and messaging, from gameplay elements to characters and objectives. On the other hand, IGA moderately approaches brand centrality. While the brand is integrated into the game environment, it plays a complementary role rather than being at the forefront. Subtle integration techniques like product placements and in-game billboards create a realistic and engaging game world without overshadowing or distracting from the gameplay (Jin and Phua 2015; Chaney et al. 2018).

#### 4.2.3 Interaction with players

Although interactivity is a common element in both strategies, how this interaction with players occurs distinguishes them and defines their uniqueness within the gaming experience. Advergaming is created around a specific brand to captivate play-

ers' attention and foster a positive association through interactive gameplay elements (Yoon 2019). Consequently, the gameplay experience and player engagement are built around a specific brand or product, aiming for their promotion or increasing awareness (Lee and Cho 2017). As a result, the elements that the player interacts with recall the central brand sponsor.

In contrast, IGA is embedded within established video games that actively engage players. By seamlessly integrating advertisements into the game world and narrative, IGA fosters brand engagement. Since these ad elements are part of the gameplay experience, they aim to enhance overall engagement, making the ads more acceptable (Yang et al. 2006). Consequently, in IGA, the branded elements integrated into the video game environment are less prominent than in advergames (Jin and Phua 2015). From this perspective, product placement, banners, and billboards are examples of a more subtle approach than advergames. Thus, the degree of interactivity in a game may depend on specific game features and agreements between advertisers and game developers regarding the advertising aim (De Pelsmacker et al. 2019).

#### 4.2.4 Development process and target audience

As mentioned, advergames are designed to create a standalone experience focused on advertising a brand or product through game logic. Furthermore, since this approach allows advertisers total control over the game experience, the development process is designed based on a specific target and goal, such as a call to action to buy (Sreejesh et al. 2021a, b). Thus, the development process starts with the initial stages, covering elements such as game design, visuals, and the final objective. Incorporating the brand is crucial at every step to provide a meaningful experience, with advertisers having complete control to align the advergence seamlessly with the brand's image and communication (Lee and Cho 2017).

On the other hand, IGA is a joint effort between advertisers and game publishers. This approach provides an opportunity for long-term, focused exposure of embedded brands in a reward-driven environment (Steffen et al. 2013), but seamlessly to avoid disruption of the gameplay and subsequent negative responses. Thus, to pursue contextual integration, both advertisers and game publishers have to consider several elements that may affect the ads' effectiveness, such as brand congruence, type of placement, video game genre, brand centrality, arousal, and game difficulty level (Martí-Parreño et al. 2017). Furthermore, the targeting strategies for these advertising methods also highlight their differences. As advergames are focused on specific brands, the game content and design customization aim to reach a specific target previously defined in the strategy. This allows them to engage players who are interested in or like the advertised brand, fostering positive connections and loyalty (Panic et al. 2013; An and Kang 2014). On the other hand, IGA targets a game's established player base, which varies depending on the game genre, platform, or player community's demographic profile. The purpose is to reach out to a wide range of gamers already engaged in the game, regardless of their specific interest in the promoted brand or product (Mishra and Malhotra 2021; Ghosh et al. 2022). Thus, adverggames target specialized audiences who are already interested in the brand, whereas IGA seeks to

attract a broad audience of players who may not have a current interest in the brand but are already engaged.

### 4.3 Advergames and in-game advertising in consumer behavior

As outlined in the previous sections, advergames and IGA are distinct strategies, each with unique mechanisms and effectiveness. Attributes that differentiate these approaches affect consumer behavior differently due to their different psychological mechanisms. Thus, the degree of consumer engagement and perception often differs depending on the specific attributes and tactics employed in these two types of advertising strategies.

#### 4.3.1 Advergames

Advergames, which integrate brands within game mechanics, create an immersive experience that profoundly influences consumer engagement. In contrast to IGA, using branded elements within advergames can enhance consumers' understanding of the game's persuasive intent, making the game's purpose more transparent (Mallinckrodt and Mizerski 2007; An and Stern 2011).

Advergames' impact on consumers is further amplified by the seamless integration of the brand into the gameplay, where they engage directly with sponsored content. Incorporating game design elements, such as missions or collections of brand-related items, reinforces the cognitive processing of advertising content, thereby transforming the brand into an integral component of the player's overall experience. This tends to engage users on multiple levels, including cognitive processing, emotional affection, and activation, leading to higher overall engagement than static ads (Hanbazazah et al. 2022; Van Berlo and Chen 2024). This impacts players' affective and attentional processes, leading to perceptual fluency and affective transfer, subsequently influencing brand choices (Kuo and Rice 2015). This mechanism of perceptual fluency, defined as the ease with which consumers process the brand in a familiar and engaging context, contributes to enhanced brand recall, even in high cognitive load conditions, which usually lead to adverse effects (Vashisht and Chauhan 2017; Vashisht 2017). More precisely, recall is higher for brands that are placed more prominently, which represents a significant and distinctive characteristic of advergames (Van Reijmersdal et al. 2012).

Furthermore, the strength of advergames lies in their ability to induce a flow state in which players are entirely absorbed in the game experience. During flow, the focus is primarily on the game, and this total involvement facilitates an affective transfer, in which the positive emotions players experience automatically extend to the integrated brand (Ahn et al. 2022). Advergames' reliance on storytelling and engaging elements also enhances the attachment between consumers and brands. Thus, through challenges, rewards, and immersive elements, consumers develop positive associations with the brand while increasing recall and expanding brand exposure organically. However, it is essential to consider the message conveyed through advergames, as they can significantly influence consumers' responses. Low-level message construction may enhance brand memory for prevention-oriented individuals, while

high-level message construction may enhance brand memory for promotion-oriented individuals (Sreejesh et al. 2021a, b).

As a result, advergames generate lower levels of skepticism and persuasion knowledge among consumers, which decreases their willingness to use cognitive defense mechanisms and increases their likelihood of desiring the advertised brands (Sreejesh et al. 2021a, b).

### 4.3.2 In-game advertising

Conversely, IGA involves the integration of advertised content within existing games, meaning that this strategy needs to concern the characteristics of the video game environment. Compared with advergames, other video games may not be as immersive or interactive, resulting in lower levels of engagement of IGA (Sreejesh et al. 2021a, b; Zagni and Pera 2024).

Although the integration of IGAs can enhance effectiveness (e.g., brand recall and recognition), consumers' responses can be influenced by several factors, such as congruity, interactivity, and perceived intrusiveness (Mishra and Malhotra 2021; Van Berlo et al. 2023; Welden et al. 2025).

Similarly to advergames, IGA can significantly influence brand recall, but in this case, its effectiveness is shaped by various psychological mechanisms that interplay with the gaming experience. One of the most critical factors affecting recall is cognitive load. When players are deeply immersed in interactive gameplay, their cognitive resources are primarily focused on the task at hand, which can reduce the capacity to recall in-game ads. This is particularly evident when the game's cognitive demands are high, as excessive mental engagement with the game itself may limit the attention available for processing brand-related information. However, when the cognitive load is balanced, players can more easily process and retain information related to in-game ads (Vyvey et al. 2018). Similarly, both the characteristics of the game and the size of brand placements can influence cognitive load, leading to varied consumer responses. More prominent placements, for example, are more likely to enhance consumer memory than smaller ones (Yang et al. 2006; Chaney et al. 2018).

Another key factor is emotional involvement, which plays a crucial role in enhancing effectiveness and game experience (Zagni and Pera 2024). Players emotionally engaged in a positive gaming experience tend to transfer that engagement to IGA, enhancing brand attitude (Ingendahl et al. 2024). Additionally, the prominence of brand placements directly influences recall, with more prominently positioned brands being easier to recall than those placed peripherally or subtly within the game.

Furthermore, positive responses may be elicited when, through IGA, a brand or product increases the perception of the game's realism, as in sports video games (Jin and Phua 2015; Hwang et al. 2017). However, the level of intrusiveness and disruption play a pivotal role. Consumers may respond negatively to an IGA, as elements interfering with the gaming experience can lead to a decreased attitude towards brands and games. Consumers' motivations for playing video games include escapism, social interaction, and gratification (Cheah et al. 2022). When consumers perceive branded content as intrusive, psychological reactance occurs, causing irritation and information overload (Stewart and Pavlou 2002). Additionally, the level of con-

gruency between the advertised content and the game theme can impact consumer response. Ads that provide greater congruence with the game environment are likely more effective, as they may be perceived as less intrusive and more favorable to consumer purchase behavior. This explanation relies on the idea that consumers view advertising as a natural part of the game environment (Verberckmoes et al. 2016; Hussain et al. 2022).

Lastly, consumers' expertise in gaming may also impact their responses. Those with greater gaming expertise may respond more positively to IGA, viewing advertising as an enhancement to their experience and demonstrating improved memory and recall for both the game and associated brands (Poels et al. 2013; Ghosh et al. 2021, 2022).

In conclusion, consumers' responses and the effectiveness of IGA result from multiple interrelated factors. Unlike advergames, where there is complete control over the experience, IGA must balance brand integration and the game's overall enjoyment. Recognizing and comprehending these complex connections are crucial for advertisers and game developers to foster positive consumer reactions.

## 5 Theoretical contributions and future lines of research

This study enhances the advertising literature by clarifying the similarities and differences between advergames and IGA, shedding light on their unique mechanisms within video games. Extending previous research on advertising effectiveness in digital games (Terlutter and Capella 2013; Yoon 2019; Noorbehbahani et al. 2019; Van Berlo et al. 2023), it identifies areas of overlap and distinction, explaining their impact on player engagement, brand recall, and consumer attitudes. By highlighting the role of context and medium specificity, this research also contributes to digital marketing by demonstrating how video games can effectively support brand promotion (Kinard and Hartman 2013; Kuo and Rice 2015; Welden et al. 2023).

Additionally, this study advances the theoretical understanding of how advergames and IGA influence consumer psychology and engagement levels. Examining cognitive load, emotional involvement, and perceptual fluency demonstrates how these strategies shape consumer responses. Our findings suggest that advergames and IGA impose different levels of cognitive load due to their respective advertising strategies. Advergames require active cognitive processing, as players must interact with branded elements within the gameplay itself, leading to deeper brand engagement and higher cognitive resource allocation. Conversely, IGA operates more passively, with brand exposure depending on placement prominence and contextual congruence. When well-integrated, IGA can subtly influence memory and attitudes, but when intrusive, it may trigger cognitive overload, reducing effectiveness (Vyvey et al. 2018; Van Berlo et al. 2023). Future research should further investigate the interplay between cognitive load and advertising effectiveness, mainly through biometric methods such as eye-tracking and EEG to capture subconscious processing mechanisms. Beyond cognition, advergames and IGA also elicit distinct emotional responses. Advergames use immersive storytelling and interactive brand elements, fostering affective transfer, where positive emotions toward the game extend to the

brand (Ahn et al. 2022). IGA's emotional impact, however, depends mainly on contextual congruence. Well-integrated ads enhance realism and engagement in sports games featuring real-world brands. Conversely, intrusive placements can trigger psychological reactance, diminishing player engagement and brand perception (Ingendahl et al. 2024). Future studies should explore how emotions mediate brand recall and purchase intent, using real-time physiological measures such as galvanic skin response and heart rate variability.

Several research avenues emerge from these findings. Longitudinal studies could provide valuable insights into the long-term effects of advergames and IGA on consumer behavior, tracking how repeated exposure influences brand perceptions and purchasing decisions. Examining specific ad characteristics—placement, frequency, and interactivity—within different gaming contexts could refine our understanding of advertising effectiveness over time.

Further research should also investigate physiological and psychological responses to in-game ads and their impact on real-world behaviors, such as purchasing branded items encountered in-game. In advergames, a key area for exploration involves the role of psychological distance in shaping consumer behavior. While research has mainly focused on cognitive outcomes like brand recall, future studies should incorporate emotional and behavioral dimensions, including attitudes toward the brand and purchase intentions (Ghosh et al. 2022; Albatati et al. 2023). Examining implicit memory effects through techniques like word completion could also offer valuable insights.

In addition, research should assess how game conditions, such as immersion levels and storytelling presence, influence advergame effectiveness. Understanding these attributes would provide a more detailed view of how advergames function as marketing tools. Similarly, studies should explore IGA's cognitive and emotional effects, identifying which emotions ads trigger during gameplay and how they influence engagement (Albatati et al. 2023). Investigating different gaming contexts and methodologies could reveal how brands can create engaging and interactive ad experiences (Ahn et al. 2023; Van Berlo et al. 2023).

Integrating immersive technologies and AI presents new opportunities for enhancing IGA. These advancements could enable personalized, intelligent brand interactions, adapting in-game ads to player behaviors and preferences (Davenport et al. 2019; Baek 2023). Given AI's disruptive potential in reshaping industries and creating new opportunities (Kanbach et al. 2024; Uriarte et al. 2025), future research should explore how AI-driven and immersive experiences influence consumer engagement and advertising effectiveness.

Finally, qualitative research remains crucial for understanding player perceptions of IGA, particularly about ad intrusiveness and acceptance. An ethnographic approach, analyzing discussions in online gaming communities and forums, could provide deeper insights into how players react to IGA, further informing best practices for ad integration (Van Berlo et al. 2023) (Table 1).

**Table 1** Directions for future research based on the SLR

Research gap themes in SLR articles	Future research questions (FRQs)
Impact of advertising in video games on consumer cognitive and emotive responses	How do emotional responses elicited by in-game advertising impact the recall and recognition of advertised brands? In what ways do player engagement levels in a game modify the impact of advertising on emotional and cognitive responses?
Adv strategies in the metaverse and immersive video games	How do consumer perceptions of brand authenticity and advergence integration differ in the metaverse compared to conventional gaming environments? How do different immersive gameplay experiences affect advertising effectiveness? How do cognitive and emotional mechanisms moderate the effect of immersive ads on consumer engagement?
Advertising strategies with Artificial Intelligence	How does integrating AI advergames and IGA within immersive games influence consumer behavior and decision-making processes? How does AI-driven personalization of in-game ads affect player experience? What is the impact of AI-customized advertising on player engagement in video games? How do personalized ads created by AI influence in-game consumer behavior? Can AI-targeted advertising improve brand recall and perception in video games?
Longitudinal aspects	How does the frequency of ad exposure in games impact consumer attitudes toward both the brand and the game over time? What are the effects of ad repetition on consumer attitude and brand perception in advergames compared to IGA?
Psychological and physiological responses	How do cognitive and emotional mechanisms moderate the effect of immersive ads on consumer engagement and purchase behavior? What role do physiological responses play in mediating the impact of ads in video games on consumer purchase intentions?

## 6 Managerial contributions

As gaming becomes a key communication channel, brands must stay agile to maintain competitiveness (Bresciani et al. 2022), aligning in-game ads with game dynamics to enhance engagement and perception (Welden et al. 2025). Disruptive ads risk negative reactions, making seamless integration essential for brand success (Tran and Strutton 2013; Verberckmoes et al. 2016; Malhotra et al. 2021).

Advertisers must focus on contextual congruence to prevent disruptions and ensure seamless brand integration, embedding ads to enhance rather than hinder the gaming experience. The effectiveness of IGA is closely linked to how well it aligns with players' core motivations, such as escapism, social interaction, and performance

enhancement. When branded content supports these motivations—whether by offering in-game rewards, exclusive content, or interactive storytelling—it can become an added value rather than an interruption.

However, there is no one-size-fits-all approach to integrating advertisements into video games. Successful implementation requires a strategic alignment between ad format, game mechanics, and player expectations. Advergaming is most effective when they embed branding directly into the game mechanics, ensuring that the brand is part of the experience rather than an external addition. This can be achieved by integrating missions, challenges, or interactive branded spaces that create a natural connection with the brand.

IGA, on the other hand, benefits from realism and contextual relevance, placing ads in natural in-game locations such as billboards in sports or racing games, product placements in open-world environments, or branding within game menus. Multiplayer video games offer valuable opportunities for brands, as their extended play sessions and sustained player engagement create a highly immersive environment. Players often invest significantly in in-game customizations, such as character skins or equipment upgrades, making branded content particularly appealing. For example, major brands like Balenciaga, Ferrari, the NFL, and Nike have collaborated with Epic Games' *Fortnite* to introduce exclusive, paid-in-game items, seamlessly integrating their products into the gaming experience. Similarly, Louis Vuitton collaborated with *League of Legends* to create distinctive character skins adorned with branded accessories such as earrings and handbags.

To maintain engagement, advertisers should avoid disruptive placements that interfere with immersion. Instead, adaptive ad formats, such as dynamic ad placements, allow brands to update in-game ads in real time based on player behavior, ensuring relevance without overexposure. AI-driven personalization can enhance this strategy by optimizing ad frequency and positioning, ensuring ads appear at the right moment to maximize visibility while minimizing disruption.

Another opportunity is participatory brand integration, where community-driven content creation is crucial. Online gaming platforms, such as *Grand Theft Auto 5*, showcase how modders introduce real-world brands into the game environment, making advertising more organic and engaging. For instance, players in this community utilize actual products (e.g., clothing) or billboards or stores in the physical world (e.g., McDonald's) to create and use virtual products. This bottom-up approach allows brands to tap into player creativity, fostering authentic and immersive brand experiences that feel less like traditional advertisements and more like a natural extension of the game world (Pera et al. 2021).

Immersive technologies further expand IGA's potential. Virtual storefronts and brand spaces in AR/VR environments allow players to interact with products in a three-dimensional space, creating an experience similar to traditional retail but within the virtual world.

Ultimately, gaming offers brands more than just an advertising space—it provides an interactive and immersive environment where consumers actively engage with brand messages. By aligning advertising with gaming dynamics, player motivations, and emerging technologies, advertisers can create compelling, non-intrusive brand experiences that resonate with digital audiences. This review serves as a resource for

practitioners navigating the evolving intersection of gaming and advertising, offering actionable insights to optimize brand integration, player experience, and commercial impact.

Beyond in-game placements, brands also have the opportunity to expand their presence through sponsorships and live event integrations. Esports tournaments and gaming broadcasts have become major touchpoints for brand visibility, allowing companies to connect with highly engaged audiences in authentic ways. Brands like MasterCard, Red Bull, Louis Vuitton, Tiffany and Co., and Mercedes-Benz have capitalized on this by sponsoring high-profile competitions for games such as *League of Legends* and *Counter-Strike 2*, as well as embedding their presence into live streams and esports coverage. These sponsorships further solidify gaming as a multidimensional marketing platform, enabling brands to seamlessly integrate into both the virtual gaming world and the broader gaming culture.

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