The art of graphic design in video games: beyond the visual

Video Oyunlarında Grafik Tasarım Sanatı: Görselliğin Ötesinde

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Abstract

In video game development, the significance of graphic design cannot be overstated. This article explores the multifaceted contributions of graphic design to the gaming experience, emphasizing its impact on player immersion, narrative enhancement, and overall game success. Key areas of focus include visual concept creation, user interface design, in-game graphical elements, and branding and marketing materials.

Through comprehensive analysis, this paper highlights the crucial role of graphic design in shaping the aesthetic appeal, functionality, and marketability of video games. Findings reveal that good graphic design is essential for player retention and engagement, with poor graphics often leading to negative experiences. The study also underscores the importance of concept and interface design in influencing purchasing decisions and enhancing visual and immersive quality. Additionally, brand identity and advertising are significant factors in a game's popularity and reach.

The results emphasize the need for collaboration between graphic designers and game developers to create engaging and visually captivating gaming experiences, ensuring all elements—from characters and environments to user interfaces—work together for a seamless player experience.

Keywords: Gaming, Visual Design, Video Game Development, User Interface Design, Environmental Graphic Design.

Özet

Video oyunu geliştirmede grafik tasarımın önemi yadsınamaz. Bu makale, grafik tasarımın oyun deneyimine çok yönlü katkılarını incelemekte ve oyuncuyu oyuna bağlama, anlatı geliştirme ve genel oyun başarısı üzerindeki etkisini vurgulamaktadır. Odaklanılan temel alanlar arasında görsel konsept oluşturma, kullanıcı arayüzü tasarımı, oyun içi grafik öğeler ve markalaşma ve pazarlama materyalleri yer almaktadır.

Bu çalışma, kapsamlı bir analiz yoluyla, grafik tasarımın video oyunlarının estetik çekiciliğini, işlevselliğini ve pazarlanabilirliğini şekillendirmedeki önemli rolünü vurgulamaktadır. Bulgular, iyi bir grafik tasarımın oyuncuların oyunda kalması ve oyuna bağlılığı için gerekli olduğunu, kötü grafiklerin ise genellikle olumsuz deneyimlere yol açtığını ortaya koymaktadır. Çalışma ayrıca konsept ve arayüz tasarımının satın alma kararlarını etkilemedeki ve görsel ve sürükleyici kaliteyi artırmadaki öneminin altını çiziyor. Buna ek olarak, marka kimliği ve reklam, bir oyunun popülerliği ve erişiminde önemli faktörlerdir.

Sonuçlar, karakterler ve ortamlardan kullanıcı arayüzlerine kadar tüm unsurların kusursuz bir oyuncu deneyimi için birlikte çalışmasını sağlayarak ilgi çekici ve görsel olarak büyüleyici oyun deneyimleri yaratmak için grafik tasarımcılar ve oyun geliştiricileri arasındaki işbirliğine duyulan ihtiyacı vurgulamaktadır.

Anahtar Kelimeler: Oyun, Görsel Tasarım, Video Oyunu Geliştirme, Kullanıcı Arayüzü Tasarımı, Çevresel Grafik Tasarımı.

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Introduction

Video games, increasingly popular with advancing technology, have become significant commodities by integrating art, design, science-technology, and marketing strategies (Okur & Kızıl, 2022). Graphic design plays a crucial role in this integration, impacting player immersion, narrative enhancement, and overall game success. It encompasses visual concepts, user interfaces, in-game graphical elements, and branding materials.

Graphic designers collaborate with various disciplines like typography, photography, and illustration, designing everything from visual identities to marketing materials. Mastery of communication skills, creative thinking, and problem-solving is essential.

The significance of visual elements in video games cannot be overstressed. Well-crafted graphics create a positive first impression and establish the ambiance for a gratifying gaming encounter, while poor design can detrimentally affect the overall perception of the game's caliber. This highlights the importance of prioritizing graphical refinement for an immersive experience.

Effective graphic design significantly enhances a game's navigational aspects, making menus, icons, and controls intuitive and enjoyable. Game aesthetics is an expression of the game experienced as pleasure, emotion, form-giving, etc (Mortensen, 2015). Players merit a fluid gaming experience devoid of undue time expenditure in deciphering operational mechanics. Hence, game designers are compelled to accord primacy to the formulation of easily navigable and aesthetically pleasing game interfaces.

In marketing, graphic design captures the gaming demographic's attention and builds anticipation. Developers must invest in skilled graphic designers to create compelling trailers and engaging content, ensuring visibility in a saturated market. Graphic design is integral to a game's marketing strategy, influencing the potential success or failure of the game.

Research questions / hypothesis

The main scope of this study is to answer the fundamental question of the study provided below.

How does graphic design influence player engagement and immersion in video games?

In order to answer the main question of this research, sub-questions will be examined and answered to expand the scope of the study.

1. What is the relationship between interface design and player satisfaction in video games?
2. How do visual concept designs impact the commercial success of video games?
3. What role does graphic design play in the branding and marketing of video games?
4. How has the evolution of technology influenced the development of graphic design in video games?

Effective graphic design in video games leads to increased player engagement and immersion. A well-designed interface positively affects player satisfaction and usability in video games. Innovative visual concept designs contribute to the commercial success and popularity of video games. Strong graphic design elements in branding and marketing significantly enhance the visibility and appeal of video games. Technological advancements have facilitated more complex and visually striking graphic designs in video games, enhancing the overall gaming experience.

Effective graphic design in video games leads to increased player engagement and immersion in the game. A well-designed interface positively influences player satisfaction and usability in video games. An example of this is 'Super Mario.' Nintendo achieved significant success by bridging generations with the release of 'Super Mario' in 1985. The evolution of Mario character graphics, driven by technological advancements from 1985 to 2017, has undeniably contributed to this success. The evolution of graphics in Mario: the transition from 2D to 3D graphics (Figure 1).
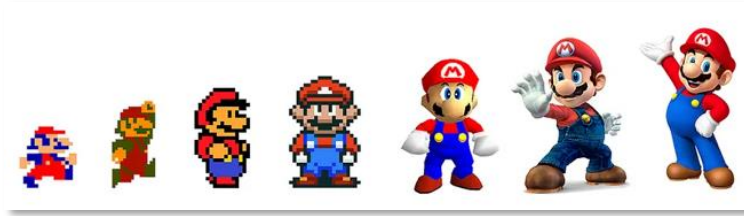
Figure 1. The Design Evolution of the Mario Character (Atre, 2019)

Strong graphic design elements in branding and marketing significantly increase the visibility and appeal of video games. Technological advancements have facilitated the creation of more complex and visually striking graphic designs in video games, enhancing the overall gaming experience. Innovative visual concept designs have contributed to the commercial success and popularity of video games. Therefore, the reflection of this technological development and process in the 'Super Mario' series can be seen as having a significant impact on the game's commercial success (Figure 2). Over the years, the development of the game's visual designs has reached a large player base.

Figure 2. Super Mario Worldwide Unit Sales (Richter, 2017)

Literature Review

Graphic design plays a crucial role in game design, which requires increasingly complex and visually striking designs. In video games, not only visual analysis but also elements such as sound effects, motion graphics, music, and animation need to be created in a holistic manner, keeping up with technological innovations and following the latest trends. In the last 25 years, where technological advancements have accelerated, graphic design has constantly been evolving and renewing itself with the possibilities and conveniences brought by technology in software and hardware. The reflection of this development in graphic design can be seen in video games, from pixelated graphics in arcade games of the 1980s such as Tetris to 90s Sonic: The Hedgehog to 2000s 3D graphics like Fry Cry 2 to today's record-breaking games such as Elder Ring (Figure 3). As visual quality has improved, visual concept designs have developed from 2D analyses to 3D animations, offering brand new experiences for gamers.

Figure 3. Tetris (Olcay, 2014), Sonic (Games Asylum, 2022), Far Cry 2 (Ubisoft Official Store, n.d.), Elder Ring (Wirecutter, 2022)

While graphic design and video game design may be seen as separate disciplines, they are actually interconnected and mutually beneficial fields. As Kaleci and Tepe stated in their research, most games have similar themes, with a hero overcoming obstacles. The hero beats the game by overcoming these challenges. But what really sets games apart are the environments, characters, and animations. So, focusing on designing these elements well is crucial for making a great game (2017). According to Wu "From the practical side of environment design, graphic design principles such as visual hierarchy, foreground and background relation, center of interests and visual clarity are particularly important because audiences are prone to experience environment design as a holistic experience" (2012). In the game industry, graphic designers are responsible for various tasks throughout the design process, including character and environment design, interface design, and logo design. They also contribute to the overall game development process by providing feedback and ideas. Graphic design plays a crucial role in shaping the visual experience of interactive narratives in video games. Innovations in this field continually enhance storytelling, immersion, and overall player engagement. Similar to programming, video game art has become a specialized field, encompassing roles such as concept artists, storyboard artists, 3D modelers, environmental artists, texture artists, visual effects artists, UI artists, animators, technical artists, and art directors (Rogers, 2014). Each role contributes uniquely to the creation of game characters, environments, cinematics, and visual effects, with the art director overseeing the project's overall artistic vision. Continuous practice and mastering the basics are emphasized regardless of the specific art position of interest. The purpose of this article is to minimize the confusion between these two concepts, define their relationship, clarify their common ground, and emphasize the role and importance of graphic design in video game design by discussing its responsibilities.

The video game development and design process

Video games created by the collaboration of computer engineering with art, design, science and technology have become a dynamic product. They consist of concepts, characters, environments, interfaces, and in-game graphics. A video game can be defined as an entertainment technology that processes the player's commands into digital signals, which are then sent back to the player through the screen. The interface, audio, and tactile capabilities have made competitive and challenging video games more popular (Okur, 2017).

Video game genres can be described as a defining characteristic of the game's overall nature. Initially, games consisted of simple and limited movements and options, but they have now been replaced by more complex structures that provide players with greater movement, freedom, and interaction.

Video game genres can be broadly classified into four categories:

1. Simulation games that imitate physical world activities.
2. Strategy games that require the gathering, processing, interpretation, and access to information through the game interface.
3. Action games that emphasize player performance.
4. Role-playing games that identify the characteristics of the player's avatar.

Video game development and design process involve teams of experts from different disciplines who work together to bring complex game structures to life. This process includes determining the game's place within its universe, defining the rules of play, and guiding the player's participation in the game world. Video game design is a collaborative effort that involves not only game developers, but also experts in design, art, science, and technology. These professionals include the lead designer, software engineers, technical

directors, programmers, level and mission designers, art directors, graphic designers and artists, sound engineers, and quality assurance team members.

Among the members of the graphic design team, there are several roles, including the art director, visual concept designer, animator, environment and location designer, texture designer, 3D model designer, 2D model designer, interface designer, storyboard designer, character designer, and packaging designer.

To better understand the role of graphic design in the complex and multi-faceted process of video game design, it is possible to categorize it into four main areas:

- Visual concept design: character, environment, and location design.
- Interface design.
- Graphic design used within the game.
- Corporate identity design.

Visual concept design

In the realm of video game design, the landscape has evolved significantly with the rise of television, movies, and video games. Don Seegmiller contends (Seegmiller, 2003), "With the advent of television, movies, and now video games, however, things have changed. The medium is visually describing the characters and environments for us as an audience. While our perceptions will still be unique, those perceptions are now closer together than they ever been".

This visual transformation takes center stage during the crucial phase of video game development known as visual concept design. Once the storyline is crafted, and the game's rules and genre are defined, the subsequent step becomes paramount. This pivotal stage involves the meticulous creation of visuals that bring the game's narrative to life. From 2D or 3D character designs to environment and location concepts tailored to the story and characters, animations, auxiliary elements, and effects—all these components are meticulously designed with a cohesive language. This integration of visual elements not only complements the established rules and genre but also plays a pivotal role in captivating the audience and immersing them in the unique world crafted by the game developers. The production of these elements in digital environments with high-quality drawings is one of the most fundamental issues related to graphic design in the game design process. A well-designed and well-managed concept design gives a positive impression of the overall identity and structure of the game to new players and engages them in the game. A player's visual choices in a game are indicators of whether the player will engage in the game and enjoy an experience. In order to control the experience, the game being used for this study was created by one of the authors (Garver, Adamo & Dib, 2018).

Concept design studies start with rough drafts. Those with high visual appeal, relevance to the subject matter, and feasibility are selected from these drafts and developed and detailed in digital environments. Decisions made after determining the subject matter and genre of the game are changed as little as possible, any small change after this stage may cause project delays and waste of time (Adams, 2014).

The concept designs of the first video games were created with simple drawings and sketches due to the software and hardware conditions of their time. Today, we can see the strong impact of technological advances in software and hardware on concept designs. As we enter the last decade, trends and demands in the video game industry have changed significantly. The reasons for this change are due to general changes in the interests of consumers and stakeholders, rapid hardware and software development opportunities, the emergence of new game platforms, and the development of new business models as a result of these developments and customer orientations (Pashkov, 2021). As a result, visual concept designs created with highly creative and unique expression forms are produced in digital environments with high-quality drawings. An example of this is Lords of The Fallen, an action role-playing game with a successful visual concept and game design. Released in 2023, the game was developed by Hexworks and published by CI Games. The same techniques were used in character designs while creating environment and location designs related to concept design. However, the environment and location designs are not animated. Effects that reflect the characteristics of the environment are used (Novak, 2012) (Figure 4).

Figure 4. "Lords of the Fallen" game environment and space, character concept designs Freeland (2023)

Released in 2023, 'Sea of Stars', an adventure and RPG game genre, is another example of a game that makes a difference with its concept designs (Figure 5 and 6). Inspired by classics such as Super Mario RPG, Illusion of Gaia, and Chrono Trigger, Sea of Stars won Best Indie Game at The Game Awards 2023, and now developer Sabotage Studio has announced that the RPG has surpassed 4 million players since its release.
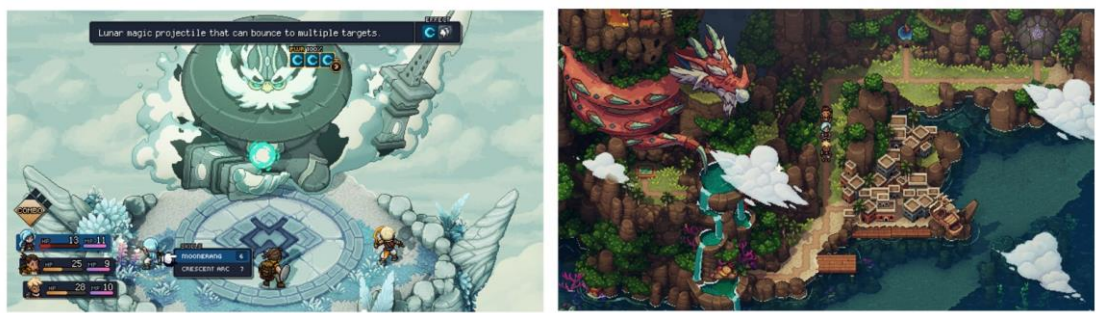
Figure 5. Sea of Star game screenshots Sabotage Studio (2023)
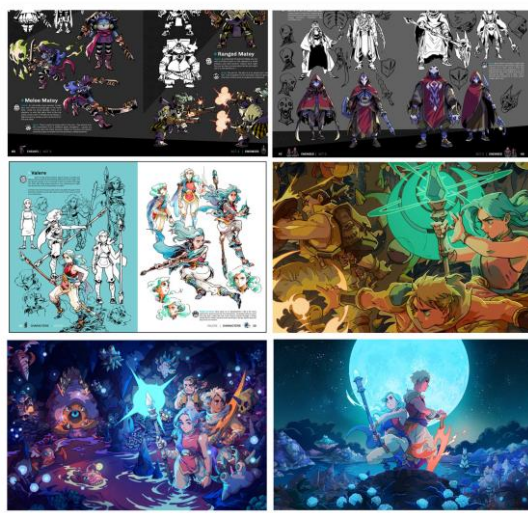
Figure 6. Visual concept sketches for the Sea of Stars game Sabotage Studio (2023)

During the concept design process, the graphic designer is involved in many creative processes such as 3D and 2D design, illustration, animation, motion graphics effects, and more. According to Mitchell, at every stage of game development from concept design to the finished product, designers should always ask themselves, "Will the developed visual designs be in harmony with the game's appearance and feeling?" (2012). In this sense, creating harmony and coherence among all designs in the general concept design will provide important references for the game's future auxiliary graphics and interface designs. According to Gavira, the creation of a unique universe with distinct characters showcases the role of graphic design in developing a cohesive graphic identity (2023). This involves designing appealing and consistent visual elements that make the game world immersive and engaging.

Interface design

While interface can be defined as the medium that enables interaction between the user and the digital world, interface design is the mastery of how these environments work and look. The graphical user interface is a general term used to represent all icons, windows, buttons, hypertext, and panels that are interacted with through hardware tools such as a mouse, keyboard, monitor, and remote control, instead of memorizing the commands that make up the operating system that controls the machines (Sakman, 2017).

In today's world, there is always an interface that helps us in every type of environment, from computers to mobile phones, digital billboards to ATMs.

In video games, the user interface (UI) is undoubtedly the only element that allows the player to interact with the game. This interaction is the fundamental feature that distinguishes video games from other multimedia products. The player can make decisions while playing the game and is responsible for the progress of the game (Fox, 2005). Properly organized visual components that allow the player to interact with the game tools and settings will enrich the gaming experience, facilitate it, and increase the player's success. Designers are creating intuitive and immersive UI elements that seamlessly integrate with the game world. Dynamic and context-sensitive UI adapts to different narrative situations, reducing clutter and enhancing the player's focus on the story.

Each game usually has multiple user interfaces. When you start a game, the main menu interface, which is the start-up screen, provides the opportunity to switch to other interfaces. Behind every scene or back screen where the course of each game takes place, there is always an interface that helps the player. For example, in a game like Hogwarts Legacy, there will be a Health and Mana bar, Map, Spells and guidance messages on the screen (Figure 7). It is the graphic designer's expertise to place all of these visual elements that guide and inform the players and make it possible to play the game without obstructing the player's main view. The biggest mistake made during the process is to leave the interface design until the end and separate it from the game development process (Keş and Kara, 2015). However, the interface of the game is perceived more as a priority than the gameplay itself, and it should be designed concurrently with the game creation process.

Figure 7. "Hogwarts Legacy" interface design Pixel (2022)

It is possible to summarize the importance of interface design under three main headings:

1. To increase the efficiency and effective use of the game.
2. To enhance the attractiveness of the game and ensure its preference.
3. To strengthen the brand identity.

Importance of Interface Design for Efficient and Effective Use

Interface design can enhance the efficiency and effectiveness of gameplay. Well-planned menus, toolbars, hyperlinks, and buttons appearing on the screen at the right time, in the right place, and in a hierarchical order can facilitate the player's adaptation to the game and enable them to reach their intended objectives more quickly. The terminology of the auxiliary informative menus required for the player to reach these objectives should be understandable and designed for the task at hand. The most important design element for this purpose is typography.

The user interface (UI) creates the player's experience, making the game visible, audible, and playable. It has an enormous effect on whether the player perceives the game as satisfying or disappointing, elegant or graceless, fun or frustrating (Adams, 2014).

Proper typography is simple, easy to read, and helps users navigate the interface with symbols and icons. Users are not inclined to read every letter and word, but rather quickly scan the text and recognize words by their shape, rather than their individual letters. Therefore, small letters are preferred over capitalized words for most in-game texts (Figure 8).

The choice of typeface can also influence the player's overall mood and emotions during gameplay, providing different meanings and feelings. The font used in Avatar: Frontiers of Pandora (Figure 9) should be different from the font used in Super Mario Bros. Wonder (Figure 10) to match the atmosphere of each game and provide players with a better experience.

Figure 8. "Avatar: Frontiers of Pandora" interface design (Interface in Game, 2022)
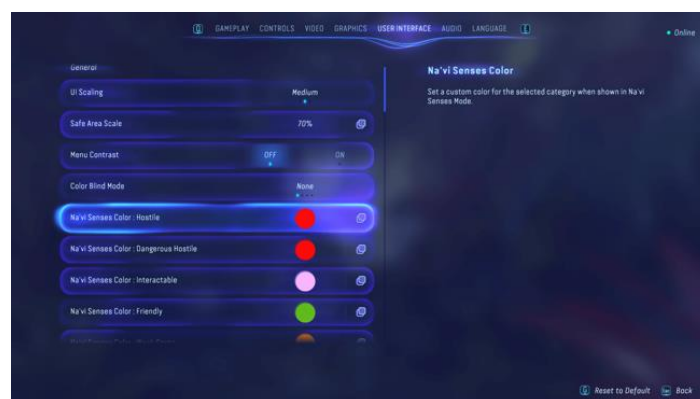
Figure 9. "Avatar: Frontiers of Pandora" interface design (Interface in Game, 2022)

Figure 10. "Super Mario Bros. Wonder" interface design (Coates Edd, 2024)

Text in games should create contrast with the rest of the video game environment. This can be challenging, especially in colorful worlds or environments with constantly changing brightness and lighting. Graphic designers are the best equipped to use design knowledge to make text visible and improve readability, from the color of the text to the transparency of the background, and through the use of shadows, gradients, and other techniques. In the game Avatar: Frontiers of Pandora, directional signs are easily distinguished and understood from the visuals (Figure 11).

Figure 11. "Avatar: Frontiers of Pandora" interface design (Interface in Game, 2022)

The target audience of the game also influences the choice of typography, just like the visual concept. Large and readable fonts that are fun and engaging should be considered for age groups who cannot read or are still learning, along with other pictograms, shapes, and illustrations, so that children can understand without having to read. Additionally, shape-based rather than text-based explanations may be preferred for users who speak different languages. In Super Mario Bros. Wonder, text elements are minimized as much as possible, and illustrations are used in headings and directions (Figure 12).
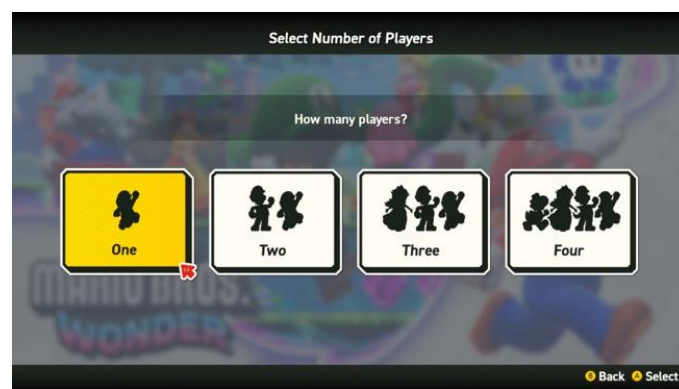

Figure 12. "Super Mario Bros. Wonder" interface design (Coates Edd, 2024)

In the readability of interface design, visual hierarchy is another important criterion. An educated/experienced graphic designer should design the correct hierarchical order of all auxiliary elements on the screen, such as font type, size, color, texture, and layout, in order to achieve a good user experience. Not only the main screen, but also the purpose and positioning of other icons and bars should be understood at a glance, so as to direct the player correctly.

Interface Design and Enhancing Player Engagement in Games

Another important criterion for readability in interface design is visual hierarchy. A trained/experienced graphic designer should design the font, size, color, texture, and layout sequence of all the helper elements on the screen in the correct hierarchical order to achieve a good user experience. Not only the main screen but also the positioning of other icons and bars should be understood at a glance, so that the player can be directed correctly.

Good interface design not only makes gameplay easier but also helps players develop a strong connection with the game. Interface design should be both distinctive and similar to the design layouts of similar games so that those who are new to the game can easily adapt. Interface designs are the first screens encountered by users, and the initial menu design has a significant impact on the player's desire to continue playing the game. It gives the first impressions about the game, meets expectations, and guides the player. The power of design language comes into play when doing all these things. Designing menus for a new game that is unique can be challenging as it requires providing an easily understandable environment and guidance.

Game design is a rare combination of challenge, competition, and interaction, and its fundamental goal is to provide fun to players. However, it is quite difficult to determine what makes a game fun (Birsen and Yıldız, 2018). A failed gamer progressing through a complicated interface in a game will become more stressed and will not be able to enjoy the game, and may even give up. Designs should cover players from all cultures and segments in the game's target audience and be able to respond to their moods.

Every game has a flow plan, and a well-designed game keeps the player within this plan. A player who progresses smoothly within the flow begins to connect with the game. Tasks given in the game flow should have clear feedback that does not leave room for uncertainty about how the action progresses toward goals. Interface design should provide the player with the opportunity to focus on the task and minimize distracting elements. Therefore, the interface design that is compatible with the game's overall concept and helps complete the task will directly affect the player's engagement in the game. For example, the signage and guidance in the game Assassins Creed: Mirage are placed in suitable positions and are of an easily perceivable size without affecting the game's general atmosphere (Figure 13).

Figure 13. "Assassins Creed: Mirage" interface design (Lopez, 2023)

Strengthening Brand Identity through Interface Design

In the following sections of the article, brand identity, which is explained in more detail, is a significant factor in the success of the game. Nowadays, every commercial product, service, and idea must have a brand identity that will determine its place in the market. The originality of the visual elements that make up this identity, such as the logo, color, and typography, and their differentiation from other similar brands are essential. In game design, the visual concept created also appears as a brand in front of the player. Using

the same visual language as the entire game is an important aspect of interface design the visual consistency between the interface design and other visual elements will strengthen the game's brand identity, establish trust with the player, and help the game stay in their mind. For example, the font selection and design of the icons used in the interface design of the Hogwarts Legacy game are highly compatible with its visual concept and corporate structure (Figure 14).

Figure 14. "Hogwarts Legacy" interface design (Pixel, 2022)

Graphic elements used in games

In addition to their role in interface design, graphic designers significantly contribute to various in-game graphics, enhancing the overall gaming experience. These graphics encompass elements such as environmental details, advertising boards, road signs, letters, notes, and decorative objects, all crucial for adding depth and realism to games, particularly in open-world versions (Figure 15). According to Okur and Aygenç "These are some of the most important elements in Graphic Design that we use in our daily lives, such as warning and direction signs and symbols. Thanks to these, the player is able to perform his actions (2017).

These in-game graphics can take the form of 2D or 3D static or animated images, representing objects, characters, or landscapes. The increasing use of in-game graphics in recent years is driven by their ability to create more realistic and immersive atmospheres within the gaming environment. Designing these graphic details is essential to crafting a captivating and authentic experience for players.

Figure 15. "Assassins Creed: Mirage" interface design (Prima Games, 2023)

Furthermore, according to Ivory graphic designers play a pivotal role in the effectiveness of commercial messages within video games. The integration of advertisements and product placements is seamlessly executed by these designers, ensuring aesthetic consistency and contributing to player immersion. Their expertise in visual storytelling and user experience design amplifies the impact of these elements, making them memorable and creating favorable impressions (2013). Ultimately, the collaboration between graphic

designers and game developers not only enhances the gaming experience but also positions video games as powerful marketing platforms.

Design and branding of marketing and promotional materials

The video game industry has evolved from a simple form of entertainment to a major industry, with each game becoming a constantly produced and consumed cultural commodity. From a global perspective, the revenue of the digital gaming industry has reached a level that rivals the market share of the film industry (Gül, 2019). In fact, due to the impact of the Covid-19 pandemic, in 2020, the video game industry generated $179.7 billion in revenue, surpassing the film and music industries, which have traditionally dominated the entertainment sector (Pashkov, 2021). Experts predict that the growth of the video game industry, which is currently in its golden age, will continue in the coming years.

The strategic role of graphic design in the marketing process becomes evident. Beyond its responsibility for the visual communication of game studios, graphic design plays a crucial role in shaping the brand identity of each game, as highlighted by Kızıl and Ergün "The advertisements are designed to not only tire the viewers, to be easily perceived, but also to gain aesthetic appreciation and interest. When these features are taken into consideration, it is easier to adopt the product and form the idea of purchasing" (Kızıl & Ergün, 2020). Their research emphasizes the significance of well-designed advertisements in not only capturing viewer attention but also fostering aesthetic appreciation and interest, pivotal factors influencing product adoption and purchasing decisions. This meticulous attention to visual appeal extends to every facet of a game's presentation, including the creation of logos, startup screens, and the establishment of a cohesive visual identity across social media accounts (Figure 16). In essence, the seamless integration of graphic design within the marketing process ensures a comprehensive and visually compelling representation of the game, reinforcing its purpose, values, and principles through a consistent brand identity.

Figure 16. Logo designs of Super Mario Bros. Wonder (Fandom, 2024), Assassins Creed Mirage (Wikimedia Commons, 2022), GTAVI (Neuman, 2023), Lords of the Fallen video games (Creative Uncut, 2024)

When a new game is released, the goal is to get as many people as possible to buy and play the game in the shortest possible time. Graphic designers create the necessary materials for promoting and marketing the game. These include the packaging design of the physical copy of the game, the design of the game page on digital platforms where the digital versions of the game will be reviewed and purchased, as well as posters to be printed or published in various media, and promotional visuals and videos to be shared on social media platforms such as YouTube, Facebook, and Instagram. Additionally, the game's official website, social media accounts, and online visibility are as important as the game's design itself. Simply using screenshots and images from the game is not enough to design these materials, and creative thinking strategies need to be developed, similar to advertising for other brand products.

The poster designs for the game GTA VI can be shown as an example of iconic and original promotional campaigns (Figure 17). The poster consists of digital 2D illustrations of scenes from the game. The title, written in bold characters that reflect the action theme and content of the game, is prominently placed in the center of the poster. Illustration depicts clues to the content that the player can expect from the game. Although GTA VI is actually a 3D game, 2D depictions were preferred instead of real screenshots to create a different image that stands out from other similar games on the market. Graphic designers are the experts who will develop and reveal similar branding and marketing decisions.

Figure 17. "GTA VI" poster design (Wikipedia, 2023)

Graphic designers are also responsible for designing promotional products such as posters, t-shirts, and stickers that generate revenue outside of the game's sales. Even after the game has been released and reached a certain level of sales, these products continue to generate revenue for the studio for a long time. The trade of these products and the collection of enthusiasts who purchase and collect them is an important step in the branding of the game (Figure 18).

Figure 18. "Zelda: Tears of the Kingdom" Collector's Edition (Nintendo, 2024).

This keeps players interested in the game, while increasing their curiosity about future versions of the game. At the launch event of Diablo IV, the game's fans and loyal followers were brought together in an organization that was designed with designs that were in line with the game's corporate identity. This strengthened the players' commitment to the game, preserved the brand spirit, and developed a sense of belonging among the players (Figure 19).

Figure 19. "Diablo IV" Launch Event in L.A (Staff, 2023)

Methodology

In the first stage of the method, a comprehensive literature review was conducted to explore the role and importance of graphic design in video games. This review covered topics such as visual concept design, interface design, in-game graphic elements, and branding and marketing materials. The sources of information consulted included academic studies, books, articles, and case studies from reputable journals and publications. The selection criteria for the literature were based on relevance to the topic, recency of publication, and contribution to the understanding of graphic design in the context of video games. Key findings from the literature indicated that effective graphic design significantly enhances player engagement, satisfaction, and overall gaming experience.

In the second stage, an empirical analysis was carried out to assess the impact of graphic design on player engagement and satisfaction. A selection of ten video games known for their exceptional graphic design was chosen for analysis. These games included titles such as "Assassin's Creed: Mirage," "Sea of Stars," and "Super Mario Bros. Wonder." The evaluation criteria used were visual appeal, interface usability, and overall design coherence. Each game was analyzed based on expert reviews and direct gameplay observation. Visual appeal was assessed based on art style, graphical fidelity, and aesthetic consistency. Interface usability was evaluated on ease of navigation, intuitiveness, and user feedback. Design coherence considered the integration of visual elements with gameplay mechanics and narrative.

To complement our literature review and empirical analysis, a survey was conducted to gather firsthand insights on the impact of graphic design in video games. The survey included 22 questions and was distributed to a diverse group of participants, covering various age ranges and gaming experiences. The survey questions were as follows:

1. Age Range
2. Do you think the concept designs of a game affect the quality of the game during development?
3. How do you evaluate the impact of a game's concept designs on your purchasing decision?
4. How do you evaluate the impact of a game's interface design on user experience?
5. How do you find the role of interface design in in-game interactions?
6. How important is it for you that the interface design of a game is user-friendly?
7. How do you evaluate the role of interface design in guiding and conveying information within the game?
8. How do you find the contribution of interface design to the overall aesthetics and atmosphere of the game?
9. How do you evaluate the impact of visual objects used in the game on the gaming experience?
10. How do you find the contribution of visual objects within the game to the believability of the game world?
11. How do you evaluate the role of visual objects within the game in strengthening the game's atmosphere?
12. How do you evaluate the impact of a game's brand identity and advertisements on your purchasing decision?
13. How do you find the first impression given by the brand identity and advertisements of a game?
14. How much do you value the potential of a game's brand identity and advertisements to increase the game's popularity?

15. How do you find the role of brand identity and advertisements in informing you about the game?
16. How do you evaluate the success of a game's brand identity and advertisements in reaching its target audience?
17. Which graphic design elements influence your decision when buying a game?
18. How important do you think graphic design is to the overall success of a video game?
19. Have you ever decided not to play a video game due to poor graphic design? (e.g., Interface Design, Guide Graphics, etc.)
20. How do you think graphic design affects your perception of a video game's quality?
21. Do you think graphic design provides a positive contribution to storytelling in a video game?
22. Which graphic design elements do you think are the most important in video games?

Results and Evaluation

The video game industry, which is rapidly growing and developing and almost dominating the entertainment sector, is being taken to brand new dimensions with the impact of technology and is meeting with enthusiasts as a result of the professional teamwork of experts in the field. The demand, growth, and development of the gaming world have not only attracted game enthusiasts but also caught the attention of many researchers from education to design, resulting in the opening of departments in universities and the publication of various works. However, amidst such a crowd of information, the definition of video game design can sometimes change, and graphic design can sometimes be seen as being in the same pot as graphic design or sometimes as completely separate. This study was conducted to identify the stages of video game design that directly affect graphic design and to define the tasks of the graphic designer and to highlight its importance in video game design.

In video game design, the place of graphic design was discussed in four main headings: visual concept design, interface design, auxiliary graphic elements, and the creation of corporate identity, in other words, the branding and launching of the game. By exemplifying successful video game designs that earn high profits in the market, become branded, and whose enthusiasts eagerly await the new version, the contributions of the elements of graphic design to the success of the game were evaluated. Graphic designers approach game design with an expert eye in the obligations listed in these four items, using their knowledge, skills, and opinions to not only use their creativity but also to evaluate each issue in detail. In the design of every detail, from the design of visual concept to that of any small graphic element, the contribution of the game is calculated, with the aim of not only attracting attention but also helping the player. The factor that makes the graphic design discipline important today is precisely this; its ability to produce rational and aesthetic solutions to problems. Another feature that makes successful games stand out is that they are designed holistically as if they were designed by a single hand, from the logo to the promotional poster, from character design to environment design, from the selected typography to interface solutions, in every stage of the game. Because the graphic design discipline produces solutions based on the general structure and philosophy of each project. The difference between the ability of an illustrator to demonstrate their talent in character design and the approach of a graphic designer to the subject is very different and this difference is always reflected in the whole game.

Comparison and Analysis

Visual Concept Design

Literature review and survey results consistently highlight the importance of visual concept design in the video game development process. High-quality, creative, and consistent concept designs not only enhance the game's narrative and player immersion but also significantly influence players' purchasing decisions. As advances in technology continue, it will become increasingly important in the gaming industry to recognize the impact of talented graphic designers and detailed digital artwork on game quality. This is supported by findings from both the literature and the survey.

Survey Findings: The survey reinforces the idea that gamers value high-quality visual designs necessary to create an engaging and immersive gaming experience.

Technological Impact: Both the literature and the survey show that technological advances have significantly improved concept design quality. Detailed and creative designs made possible by modern technology are appreciated by gamers, as reflected in their purchasing thoughts.

Consistency and Quality: The literature's emphasis on the role of graphic designers in ensuring harmony and consistency in visual designs is also supported by survey results showing that players find consistent and high-quality concept designs very important for their gaming experiences and purchasing decisions.

Interface Design

Both the literature review and survey results highlight the important role of interface design in improving the player experience. Properly organized visual components and intuitive user interface elements facilitate interaction and gaming success.

Survey Findings: The literature review highlights the importance of well-planned menus, toolbars, and readable typography, and aligns with survey results highlighting the need for user-friendly designs. Smooth guidance and information transfer are key to helping players understand and enjoy the game.

Brand Identity: Consistent visual elements and a harmonious interface design contribute to strengthening the brand identity, as noted in the literature review. This point is indirectly supported by survey results where participants value designs that increase understanding and enjoyment, contributing to a positive perception of the game's brand.

In-Game Visual Designs

In-game visual designs play a crucial role in strengthening the believability and atmosphere of the game, as stated in both the literature and survey findings. Players feel more connected and involved in a game that uses well-designed visual elements.

Survey Findings: Both the literature review and survey results highlight the importance of in-game visual designs in enhancing the overall gaming experience. Detailed and realistic graphic elements contribute significantly to creating an immersive atmosphere.

Environmental Details: The literature review highlights that in-game graphics, including environmental details and decorative objects, add depth and realism, making the gaming environment more immersive. This is consistent with the survey results in which participants stated that visual objects improved their gaming experience.

Branding and Corporate Identity

Both the literature review and survey results highlight the strategic role of graphic design in shaping brand identity and influencing purchasing decisions.

Survey Findings: Well-designed ads and consistent branding are crucial to capturing the audience's attention and increasing interest.

Brand Components: The literature highlights various components of branding, such as logos, splash screens, and social media presence, which aligns with survey results showing the importance of brand identity in influencing player purchases.

Community Engagement: Creating promotional materials and engaging with the community through launch events and promotional items are key strategies to maintain player interest and loyalty. Survey results support this, showing that strong brand identities and advertising are important for increasing game popularity.

Conclusions

In conclusion, the role of graphic design in video game design is multifaceted and indispensable, encompassing four main areas: visual concept design, interface design, auxiliary graphic elements, and the creation of corporate identity or the branding and launching of the game. By examining successful video game designs that have achieved high profits in the market, become branded, and garnered enthusiastic followings, we can appreciate the significant contributions of graphic design elements to a game's success.

Graphic designers bring an expert eye to these aspects, using their knowledge, skills, and creativity to evaluate and enhance each detail. Their work is not just about attracting attention; it's about aiding the player and providing rational and aesthetic solutions to problems. What sets successful games apart is their holistic design approach, as if crafted by a single hand, from the logo to the promotional poster, from character design to environment design, and from typography to interface solutions. This cohesive approach is a hallmark of the graphic design discipline, which focuses on solutions that align with the overall structure and philosophy of each project.

The distinction between an illustrator's ability to showcase talent in character design and a graphic designer's approach to the subject is profound, and this difference is always reflected in the entirety of the game. In summary, graphic design plays a crucial role in the video game design process, but it is not synonymous with video game design itself. Instead, video game design is the result of teamwork among expert teams, with graphic designers being an essential part of this collaborative effort. Their contributions are vital in shaping the visual and interactive aspects of video games, ensuring that players are not only engaged but also deeply immersed in the gaming experience.

Future academic research in these areas can provide valuable insights into the evolving role of graphic design in video game development. By focusing on emerging technologies, cross-cultural preferences, psychological impacts, interdisciplinary collaboration, and ethical considerations, researchers can contribute to the advancement of the field. Additionally, exploring accessibility, sustainability, and educational applications can broaden the positive impact of graphic design in the gaming industry and beyond, leading to more innovative, inclusive, and engaging gaming experiences.

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