In the era of new media, how can video game companies improve product quality and user experience through AI to expand brand awareness

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Abstract:

The research is aimed at analyzing how AI can help game companies improve the quality and user experience of their video game products in the era of evolving technology in order to broaden brand awareness. Previous research has focused on how AI provides game content that resonates with players but has not been able to link it to increased brand awareness. Relying on Technology Acceptance Model Theory and 4i Marketing Theory (Involvement, Interaction, Intimacy, Influence) combined with Identity Negotiation Theory, the study utilizes qualitative methods and designs a questionnaire about different types of people's opinions on AI-powered video game design and production. The study suggests that AI will provide more crowd-pleasing design ideas to optimize the quality of video games and allow players to fit in better. The use of reasonable AI marketing promotion and growth of word-of-mouth to finally achieve the expansion of brand awareness.

Keywords:. qualitative method, Technology Acceptance Model Theory, 4i Marketing Theory, Identity Negotiation Theory, questionnaire, AI-powered video game, brand awareness, user experience

1. Introduction

In the contemporary digital age, the role of artificial intelligence (AI) in shaping customer and user experiences has become a significant area of study. Understanding the AI experience from the customer's viewpoint is essential for enhancing user experiences in video games (Trawnih et al., 2022). Focusing on customer experiences in the AI era provides an over-view of influencing factors and a broader perspective for video game companies (Ameen et al., 2021). The specific role of AI in enhancing the customer experience highlights its potential and importance (Daqar and Smoudy, 2019). Achieving an improved user experience for AI systems is directly relevant to video game companies (Brand et al., 2023). The existing literature collectively emphasizes the significance of AI in enhancing user experiences across different

domains. However, in the specific context of video game companies, there is a need for further exploration on how to effectively utilize AI to improve product quality and user experience for the purpose of expanding brand awareness.

2. Literature Review

The study "Marketing 5.0: How to Improve User Experience with Digital Solutions" focuses on providing insights into enhancing user experience through digital solutions. It offers valuable perspectives on the overall marketing strategies in the contemporary digital landscape, which could potentially be applied to the context of video game companies. For instance, it might suggest ways to leverage digital tools to understand user preferences and behaviors, thereby informing the design and improvement of video game products (Sasisuriyaphoom and Choompolsathien, 2021). The work "Digital and Marketing Transformation in Relation to Brand Value: The Video Game Industry" specifically examines the transformation in the video game industry in terms of digital and marketing aspects in relation to brand value. This is highly relevant as it provides direct insights into how video game companies can adapt and evolve their strategies to enhance brand value. It might offer examples of successful marketing campaigns or digital innovations that have positively impacted brand perception in the video game sector (Tian et al., 2023). In "A Review of Artificial Intelligence Adoptions in the Media Industry," the author presents an overview of the adoption of AI in the broader media sector. This review could provide foundational knowledge and patterns that can be extrapolated to the specific domain of video game companies. For example, it might highlight common challenges or benefits associated with AI implementation, helping video game companies anticipate and address similar issues (Chan-Olmsted, 2019). "AI for game production" discusses the application of AI in game production. This is particularly useful as it directly addresses the core aspect of video game creation. It might offer technical insights into how AI can be integrated into the production process to improve game quality, such as enhancing gameplay mechanics or optimizing graphics generation (Riedl and Zook, 2013). "AI in consumer behavior" investigates the role of AI in influencing consumer behavior. This is crucial for video game companies as understanding how AI can shape user engagement and purchasing decisions can inform the development of marketing strategies and product features. It could provide examples of how personalized recommendations based on AI have influenced consumer choices in other domains (Gkikas and Theodoridis, 2022). "Reinforcing customer journey through artifi-

cial intelligence: a review and research agenda" explores how AI can reinforce the customer journey. This is applicable to the video game context as it could suggest ways to ensure a seamless and engaging experience for players throughout their interaction with the game and related services (Rana et al., 2022). The study "Development and Transformation in Digital Marketing and Branding with Artificial Intelligence and Digital Technologies Dynamics in the Metaverse Universe" examines the role of AI and digital technologies in marketing and branding within the Metaverse. While the metaverse context might be distinct, the concepts and strategies discussed could offer inspiration and potential applications for video game companies looking to expand their brand awareness in the evolving digital landscape. (Nalbant and Aydın, 2023).

3. Research Question

rq1: What are the different video game companies' perceptions of using and applying GenAl in designing characters?

In the era of new media, the video game industry is evolving rapidly, and character design is crucial for creating immersive and engaging gaming experiences. GenAI offers the potential for enhancing the creativity, efficiency, and quality of character creation. However, different video game companies have distinct perceptions based on their resources, technological capabilities, and creative philosophies. The utilization of AI, especially GenAI, in designing characters is an evolving area. Some view it as a revolutionary tool that boosts creativity and efficiency, allowing for diverse and unique character designs, while others have concerns like the potential loss of human artistic touch or ethical implications related to character creation. Understanding these different perceptions is significant as it can help identify best practices and potential challenges in this emerging field. This research aims to explore whether companies see GenAI as a revolutionary tool unlocking new creative possibilities or if they have concerns regarding authenticity, ethical considerations, or potential limitations. Uncovering these perceptions will provide insights into the future directions and challenges of integrating GenAI in video game character design in the dynamic new media landscape.

rq2: One of the research questions of this study is what kind of genAI technology would contribute to improving virtual characters to attract more gamers□

Previous research literature has provided some novel genAI technologies to assist the construction of the Digital World and the development of the entertainment industry. For example, Haptic Repurposing with GenAI is an innovative approach to enhance MR interactions by transform-

ing any physical objects into adaptive haptic interfaces for AI-generated virtual assets (Haoyu Wang,2024). As well as Generative Artificial Intelligence Applications (GAIAs) span a variety of media, including text, images, audio, and video. Create and customize personalized favorite content with only verbal commands (Markus Schatten, 2024).

In this regard, the questionnaire of this research is designed to gauge people's views and acceptance of AI as an auxiliary design in video games, as well as their liking for game content, to understand the part of the game that people like better, help to make reasonable improvements to the game product.

4. Methodology

This paper focuses on how game companies can use AI to enhance product quality and user experience, thus expanding brand awareness. The goal of this study is to explore the different types of people's views on AI-powered video game design and production. This research adopts the method of qualitative research. The main purpose of the study is to analyze the different views of human beings, it is necessary to conduct in-depth study and analysis of a number of cases. A study of user-centered emotional video game design also used qualitative methods of evaluation (Ng, Y. Y. N., Khong, C. W., & Nathan, R. J. ,2018). Based on the analysis of several cases, the author clarifies the similarities and differences among the cases, helps to establish the investigation framework and the research goal, and then draws the final conclusion. Therefore, qualitative research is also effective in this paper. The questionnaire method has been selected for this study because through the distribution questionnaire survey may collect many cases at random, thus intuitively analyzes the different opinions. The study is related to video games, so the questionnaire will be spread more widely across social platforms that classify games, increasing the specificity of the data and reducing the margin of error. In order to understand people of different ages and occupations who are also interested in various types of video games, the study designs a broader range of questions for the population, and from the user's perspective, around AI to help improve the content of the game, game marketing, game experience and quality to set the problem, all-round understanding of people's views on AI and game integration. The reason for the lack of quantitative research is that the goal of this research is to help improve the quality of the game. There is no substantial quantitative factual basis, and there is little correlation analysis, so it is impossible to predict the future outcome of the research problem.

5. Conclusion

In conclusion, the main goal of the current study is to determine how AI can help game companies improve the quality and user experience of their video game products in the era of evolving technology, in order to broaden brand awareness. The most obvious finding to emerge from this study is that generally, game companies use genAI technology to assist in game design, optimize game content and quality, make games more appealing to users, and upgrade the user experience in order to improve their reputation. At the same time, AI analysis of the market can help game companies better marketing, to expand brand awareness. The analysis of genAI undertaken in Previous research literature has expanded knowledge of the multifaceted applications of genAI technology. This provides a more detailed description of how game companies use this type of genAI technology to improve the quality of game products and enhance user experience. A limitation of using this kind of data is that it precludes opposing views on the application of genAI, which may have a negative impact on the brand awareness of gaming companies. In future research, it is necessary to consider the greater market differentiation which influences the effect of brand awareness expansion.

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