

Comparative Analysis of Virtual Games with Video Games: Preferences of Players Worldwide

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Abstract

The emergence of virtual reality in recent years has primarily focused on user interfaces, visual simulation, and 3D graphics. However, the community's interest in virtual reality has shifted towards the gaming industry in order to reach a larger audience. This thesis aims to study the differences and similarities between virtual games and traditional video games in order to determine user preferences and opinions. Over 60 days (April 1st - May 31st, 2023), an online survey gathered 300 comprehensive responses, revealing substantial insights, and 4 interviews have been conducted with 4 volunteers from different countries.

Combining quantitative insights gleaned from the survey and qualitative richness drawn from the interviews, the study explores the multifaceted realm of user perceptions and inclinations. This combined approach crafts a nuanced perspective on gaming preferences within these distinct yet interconnected realms.

Keywords: Game players; video gaming; virtual gaming; virtual reality

INTRODUCTION

The world has recently witnessed the emergence of a new situation - the health emergency - which has resulted in the destruction of some industries while others have seized the opportunity to generate booming revenues and growth. The video gaming sector is one of the strongest and fastest-growing industries, with the global gaming sector worth increasing from \$120.4 billion in 2017 to \$235.7 billion in 2022 (PwC; 2022).

The usage average of this industry is increasing rapidly, with the United States having the highest number of video game users. Approximately, in 2022, 74% of households in the US have at least one member who plays video games, with 76% of individuals under the age of 18 and 67% of adults playing video games, according to video game data. Even 7% of individuals over the age of 65 are playing video games. Similar averages can be found in Europe, Asia, and even Africa, due to globalization. For instance, in 2022, approximately 50% of German people are video gamers, about one in three people in China play video games, and 186 million gamers have been found in Sub-Saharan Africa (PwC; 2022).

In the midst of this growth, a philosophical view influenced by Johan Huizinga's fundamental ideas sheds light on the significance of play in human culture. In his seminal work, he explores the concept of play as a foundational aspect of human culture. He contends that play is not merely an activity but a defining trait of human behavior that shapes societies, language, art, and rituals. According to Huizinga, games provide a structured and voluntary way for humans to experience and engage with the world, fostering creativity, imagination, and social cohesion. He sees games as a vital mode of human expression that bridges the gap between ordinary life and the realm of the extraordinary (Huizinga, 1938).

This sector is predicted to continue growing, with an expected value of \$321 billion by 2026, particularly with the advent of the so-called Virtual Reality. Virtual Reality (VR) is a 3D visual environment simulation created by using computer modeling and technologies, enabling a person to interact with a virtual world where objects have a spatial presence. Although virtual reality was initially used in science fiction and movies since the 20th century, it was considered something illogical and merely a dream. However, the prospect of scrutinizing virtual reality (VR) applications substantiated the paradigm shift from mere aspiration to tangible actualization (PwC; 2022).

As this industry continues its upward trajectory, philosophical inquiries inspired by Bernard Suits' "The Grasshopper: Games, Life, and Utopia" (1978) beckon to explore the motives underlying the pursuit of play. Suits introduces the concept of the "lusory attitude", highlighting the voluntary embrace of constraints within

the realm of games. This perspective resonates profoundly in the context of virtual worlds, where individuals willingly engage with artificial rules and systems to experience a unique form of reality. The intersection of Suits' contemplations with the world of gaming prompts contemplation about the ways in which gaming offers a space for individuals to navigate self-imposed challenges, revealing insights into human motivations and aspirations (Suits, 1978).

In recent years, the video gaming industry has experienced profound technological advancements. These innovations have introduced new gaming environments that supplant conventional 2D settings with immersive 3D spaces that simulate real-life environments and make the game more realistic. To access this world, users must wear VR goggles, which surround them with visuals and sounds that make the experience feel real.

In 2019, the global VR gaming market size was estimated to be worth over \$13.4 billion, and it is expected to exceed \$90 billion by 2026, particularly due to the pandemic situation worldwide (ZMR; 2023).

The potential of the VR technology market is expected to boom, particularly in Europe and North America, with an average growth rate of 35% annually in the coming years.

Given these projections, Video game companies are increasingly using this new technology to create updated versions of games, in line with the goals set for 2026. This is particularly important, given the expected global user interest. To confirm these expectations, this research examines the preferences and opinions of users and players worldwide, using the following methodology (ZMR; 2023).

Deeply integrated into these virtual worlds is the realm of ethics. In his book "The Ethics of Computer Games" (2009), Miguel Sicart suggests that games have their own moral rules, and the decisions made within these worlds prompt significant questions about how virtual and real-world ethics align. Considering Sicart's viewpoint within the gaming context invites to think about how the decisions made in virtual settings have effects beyond just the screen, touching on themes like our ability to act, our duties, and how games reflect society (Sicart, 2009).

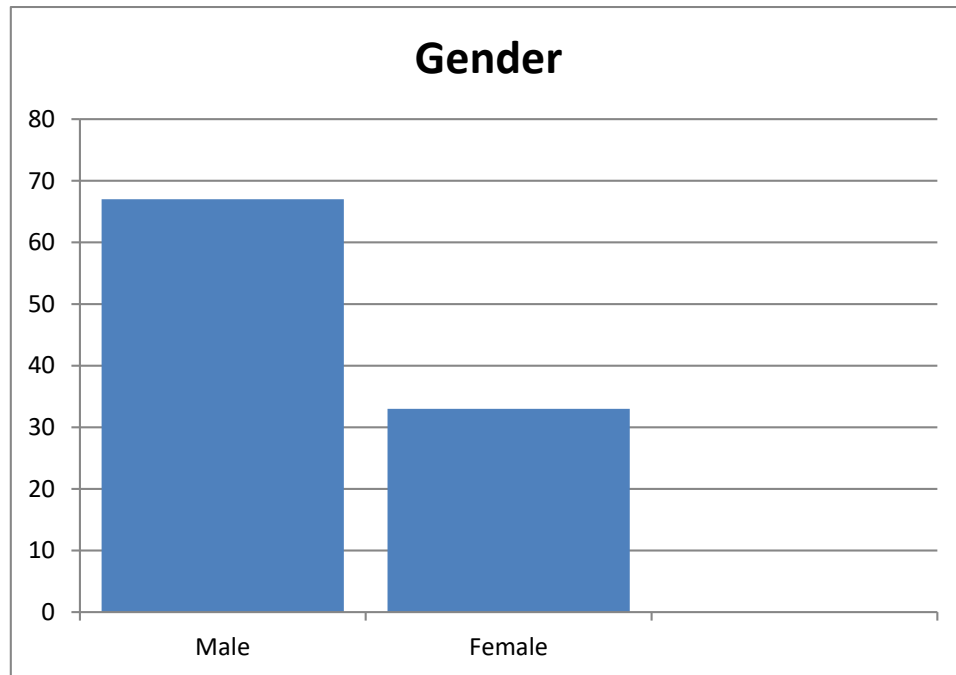
VR gaming is one of the biggest trends in the gaming industry, with some players preferring it over traditional video gaming while others still prefer the simple way of playing their favorite games. The research of this thesis aims to study the preferences of players who have tried both techniques and the reasons behind their choices. Additionally, the study seeks to investigate both the shared traits and distinctions between the two techniques of playing: virtual reality video gaming and traditional video gaming.

Therefore, the methodology chosen for this research is quantitative research that utilized surveys to gather data on the preferences and experiences of players who have tried both VR gaming and traditional video gaming. The collected data is analyzed using statistical analysis techniques to compare and contrast the preferences and experiences of players. Furthermore, qualitative research methods, exemplified by online and face to face interviews, have been integrated to delve more profoundly into the underlying factors behind players' preferences and experiences. The study aims to use a random sample of participants to ensure that the data collected is representative of the broader population of players.

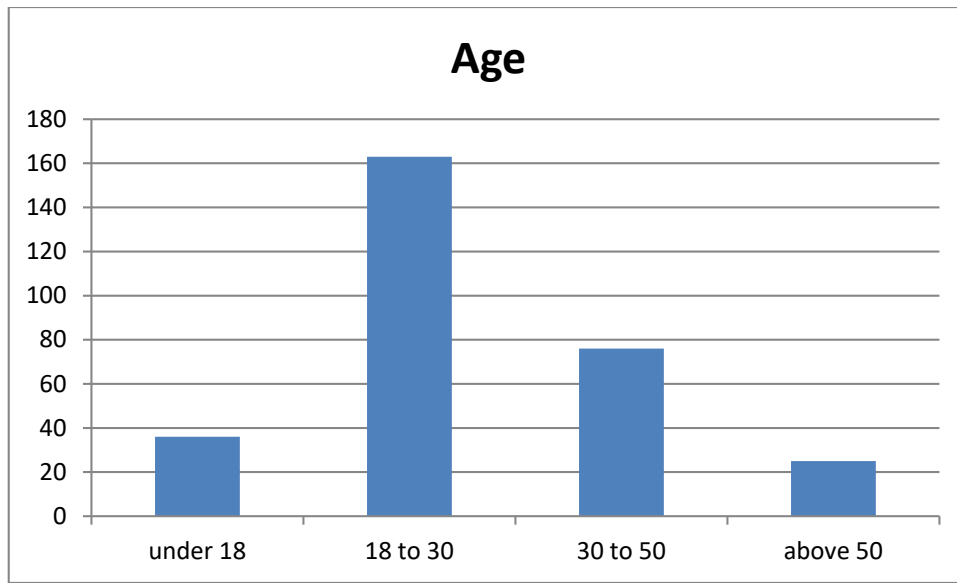
In the context of this study, "traditional video games" refer to the established genre of electronic games experienced on platforms like computers, consoles, and handheld devices. These games span diverse genres, presented in two-dimensional (2D) or three-dimensional (3D) graphics on a screen. Interaction is facilitated through standard devices like controllers and keyboards. Unlike the immersive nature of virtual reality (VR) games, traditional video games engage players primarily through visual and auditory stimuli, offering a familiarity that distinguishes them from the evolving landscape of VR gaming.

RESULTS

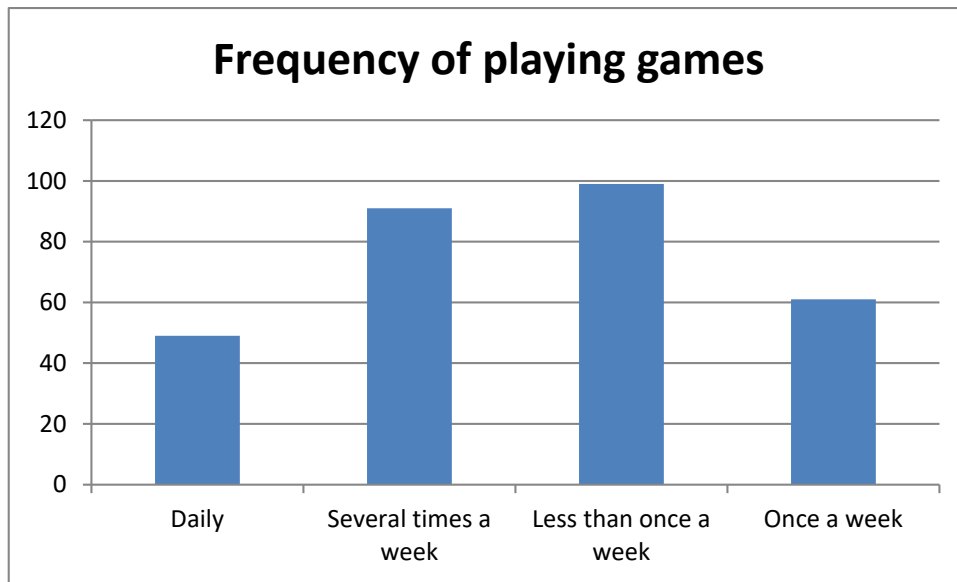
The survey data collected from 300 respondents provided valuable insights into the preferences and experiences of individuals regarding virtual reality (VR) gaming and traditional video gaming. The sample consisted of 67% males and 33% females, with the majority falling within the age range of 18 to 30 years (54%). The frequency of gaming varied, with 30% playing several times a week and 28% playing less than once a week. Among the respondents, 74% reported having tried a virtual game experience before. Those who had previous experience expressed a range of satisfaction levels, with 35.5% reporting being very satisfied and 20% extremely satisfied. Fun (79%), excitement (54%), and comfort (47%) were the dominant feelings associated with virtual gaming, although some reported negative effects such as nausea and eye strain. Notably, 70% of the respondents expressed a preference for virtual reality games over traditional video games. The primary reasons for this preference were better graphics and visuals (65%) and immersion and interactivity (45%). Moreover, a majority of the respondents (66.5%) believed that virtual reality would occupy the video gaming sector in the future. The study also revealed that 66% of the respondents were interested in trying more virtual reality games in the future. Overall, these findings provide valuable insights into the preferences and experiences of individuals in relation to VR gaming and traditional video gaming, as well as their positive outlook on the future of virtual reality in the gaming sector.



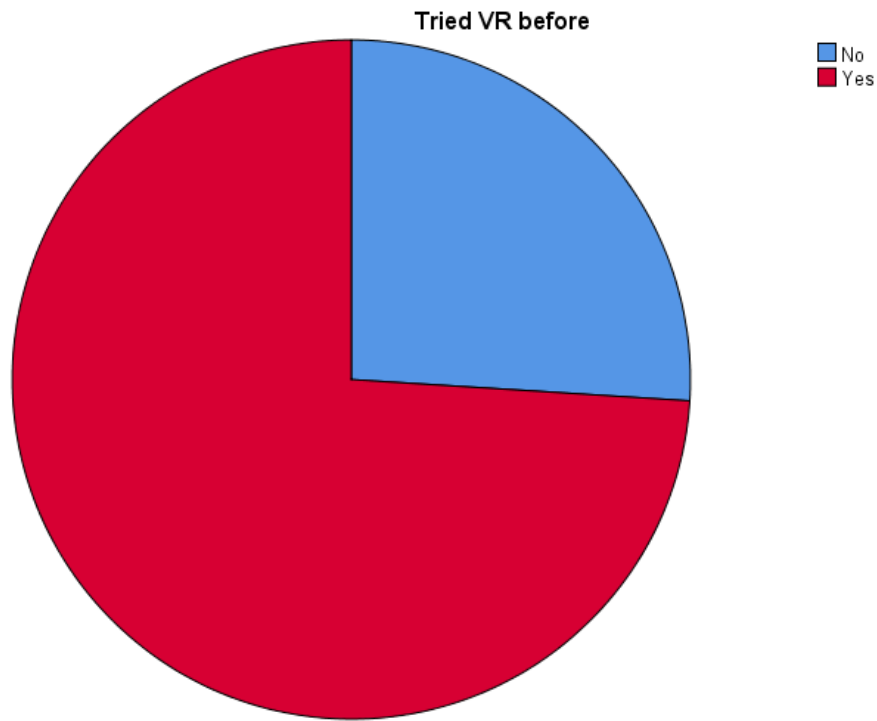
The study's participant distribution demonstrates a higher presence of males, accounting for 67%, while females represent 33%. This distribution aligns with prevailing gender trends within the gaming community.



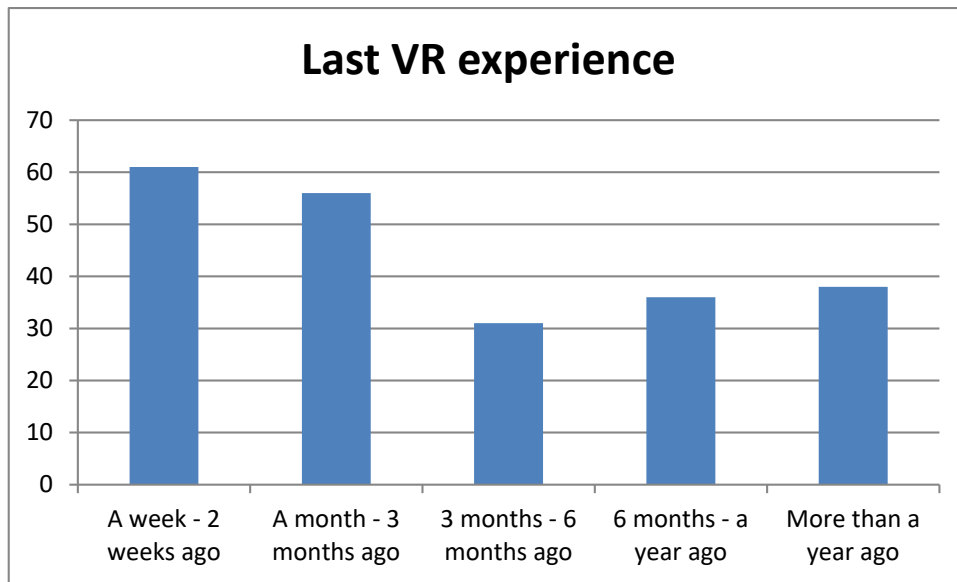
Age distribution among participants reveals that the majority, constituting 54.3%, fall within the 18 to 30 age bracket. Participants aged 30 to 50 account for 25.3%, while those above 50 and under 18 comprise 8.3% and 12% respectively. This distribution underscores a significant presence of younger participants, offering insights into preferences primarily from this demographic.



The distribution of participants' gaming frequency highlights varying levels of engagement within the study population. While a substantial portion engages in gaming on a less frequent basis, such as less than once a week (33.0%) or once a week (20.3%), a notable percentage plays games more regularly, including daily (16.3%) and several times a week (30.3%). This diverse range of gaming habits underscores the dynamic nature of participants' interactions with video games.



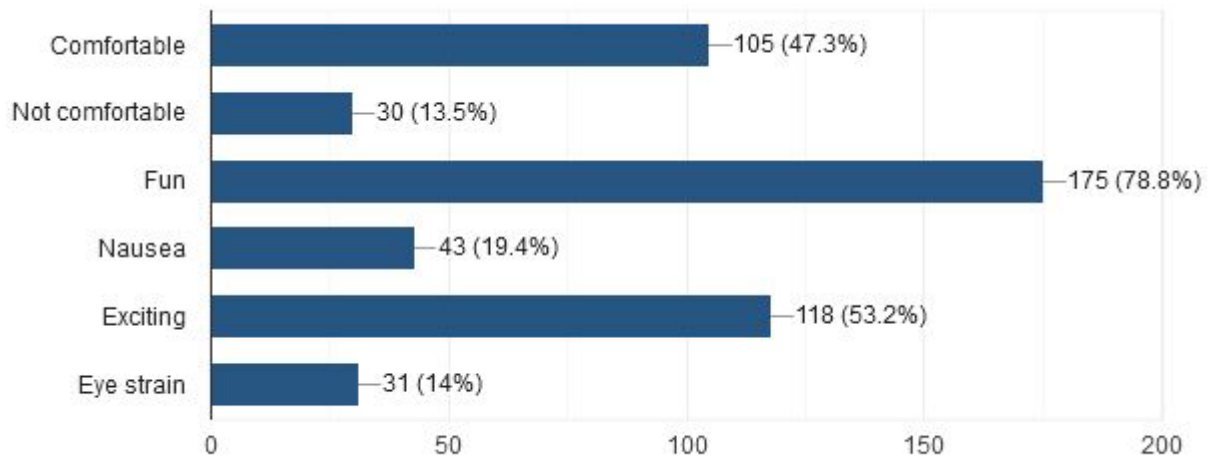
A significant majority, comprising 74.0%, have already tried VR gaming, indicating a widespread familiarity with immersive gaming experiences. However, a notable proportion, accounting for 26.0%, has yet to explore the realm of VR gaming.



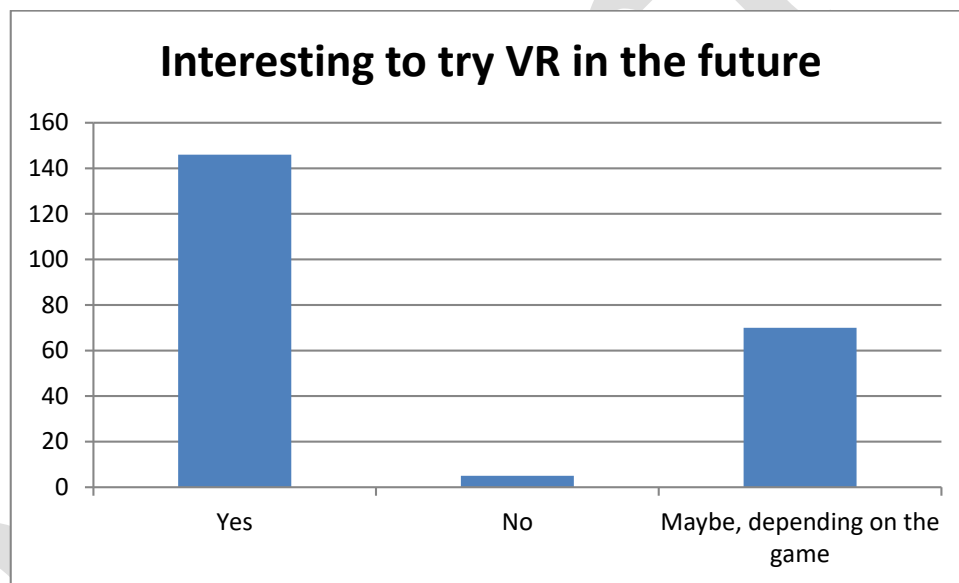
A notable portion of participants have engaged in VR gaming within the past few weeks, including both a week to two weeks ago (20.3%) and a month to three months ago (18.7%). Additionally, a significant number have experienced VR gaming within a longer timeframe, such as six months to a year ago (12.0%) or more than a year ago (12.7%).



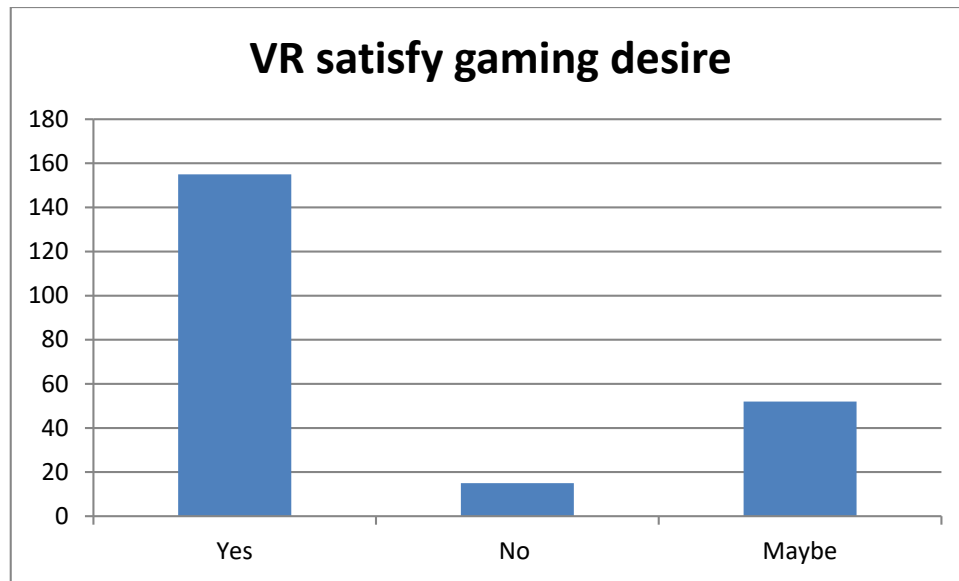
The satisfaction levels reported by participants exhibit a diverse range of sentiments. Notably, 15.0% express extreme satisfaction, while 26.3% indicate being very satisfied. On the other hand, a minority (1.7%) reports being not satisfied at all. Falling between these categories, 8.0% are slightly satisfied, and 23.0% remain neutral in their assessment.



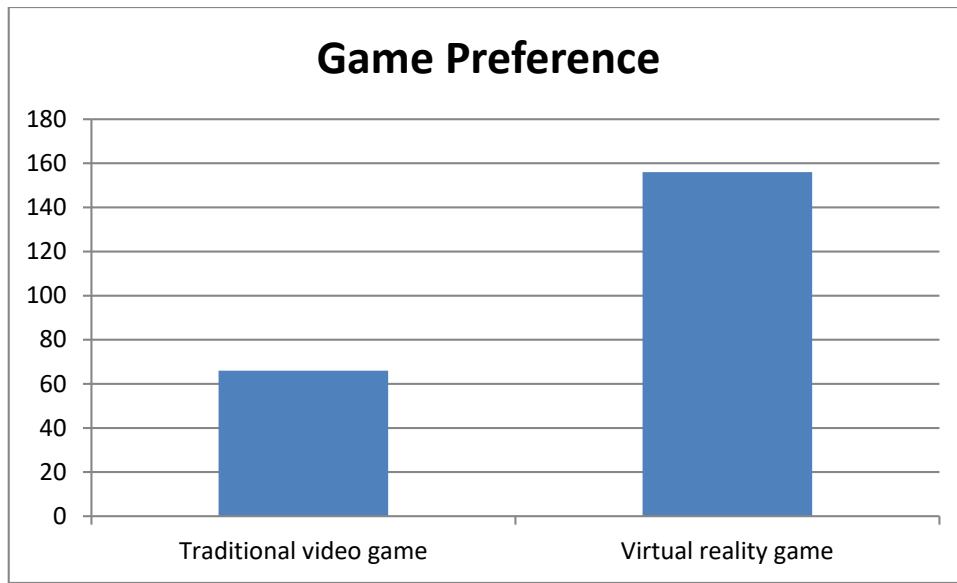
Feelings of experience



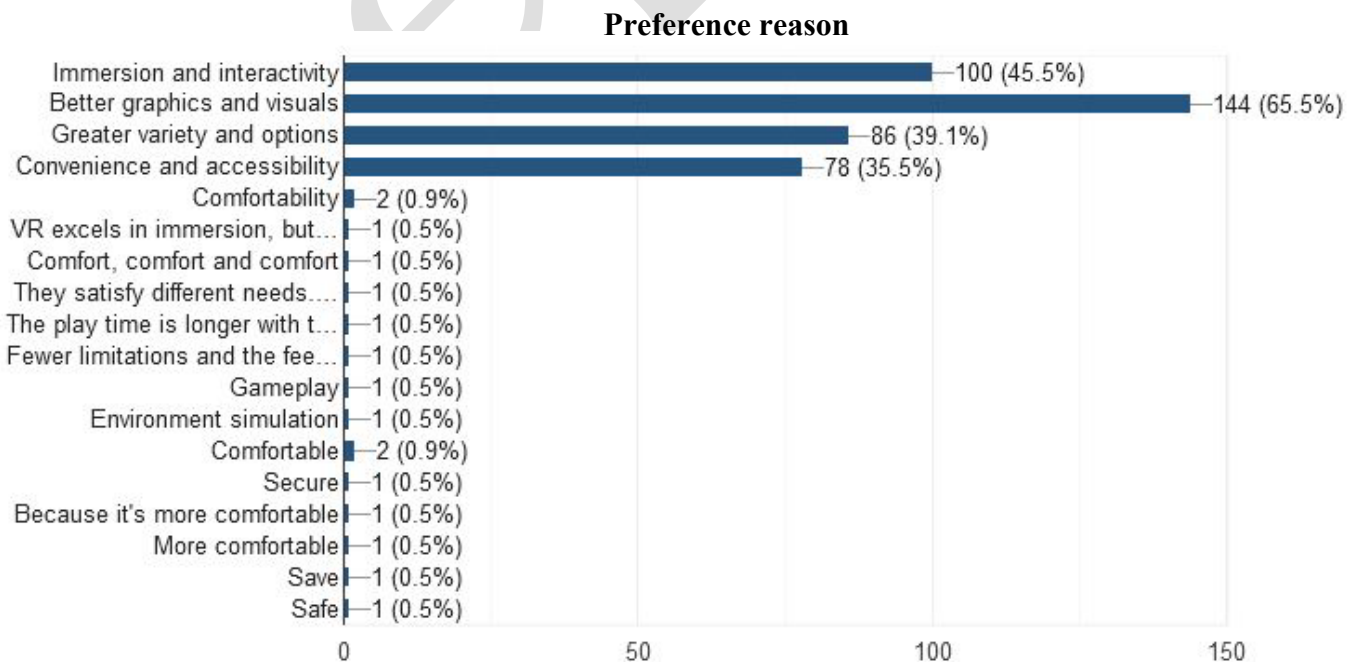
Looking forward to experimenting with VR in the future presents varied inclinations among participants. A significant portion (48.7%) expresses enthusiasm about this prospect. Conversely, a minority (1.7%) definitively rules out such endeavors. In the middle ground, 23.3% approach this possibility with a "maybe," contingent on the nature of the game.

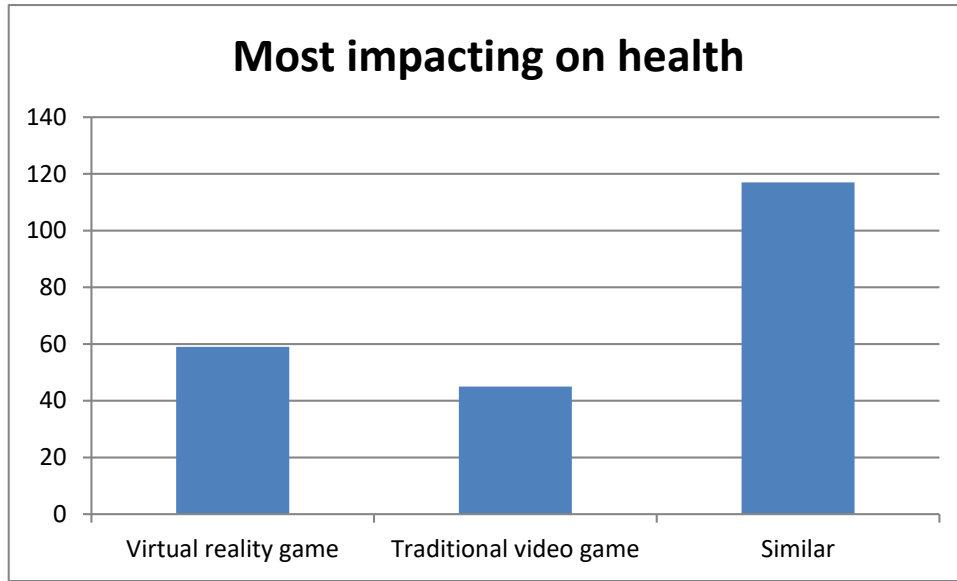


A significant majority (51.7%) finds that VR effectively satisfies their gaming interests. In contrast, a small number (5.0%) disagree with this idea. Meanwhile, 17.3% remain uncertain, indicating that the extent to which VR meets their gaming desires might depend on specific situations.

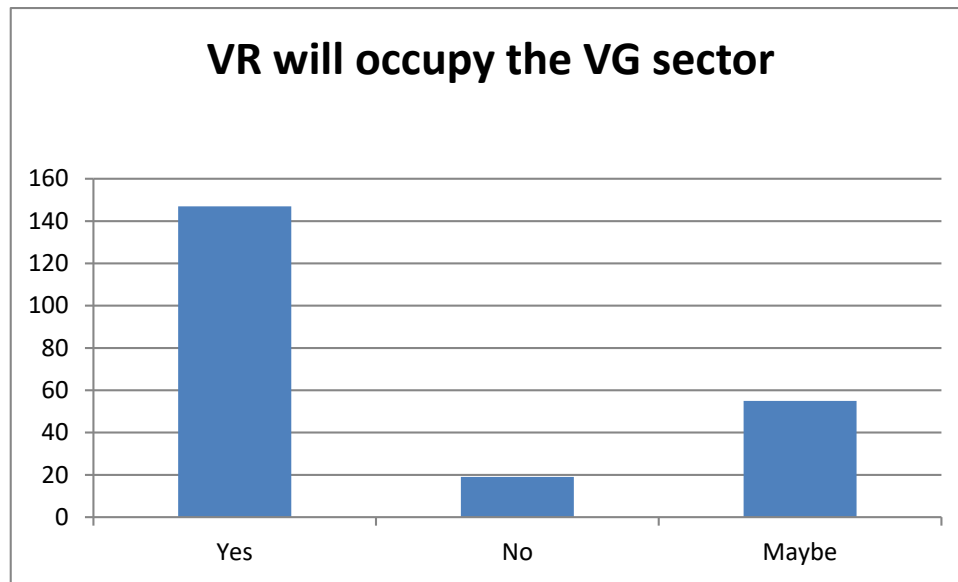


When it comes to game preference, a notable proportion (52.0%) leans towards virtual reality (VR) games. Comparatively, a smaller portion (22.0%) shows a preference for traditional video games. These percentages highlight the pronounced interest in VR gaming, while a significant number still holds on to the appeal of traditional video games.





In terms of their perceived impact on health, the largest share (39.0%) considers both options to be similar. However, a notable number attribute health impact to virtual reality (VR) games (19.7%), while a smaller group associates it with traditional video games (15.0%). This indicates that opinions vary regarding the potential health effects of different types of gaming experiences.



The prospect of virtual reality (VR) dominating the video gaming sector is met with diverse opinions. A significant portion (49.0%) believes that VR will indeed claim a substantial presence in the industry. On the other hand, a smaller fraction (6.3%) holds a contrary view, while 18.3% express uncertainty with a "maybe."

DISCUSSION

The research delves into the distinct preferences that gamers exhibit, segregating them into two primary categories: those who find gratification in virtual reality (VR) gaming and those who are inclined towards traditional video games. These two groups exhibit contrasting inclinations, shaped by various factors that influence their gaming experiences.

Fans of VR gaming are drawn to its unique immersive quality, which guides them into a virtual realm, facilitating gameplay that feels markedly different from traditional formats. On the contrary, proponents of conventional video games opt for the familiarity of established gaming methods, appreciating the straightforward approach they offer.

The perception of health impacts diverges among gamers. While some perceive VR gaming as a physically engaging endeavor that contributes positively to their well-being, others assert the benefits of traditional

gaming, highlighting its capacity to provide entertainment without the need for extensive physical involvement.

In contemplating the future path of the gaming world, different opinions arise. Some gamers anticipate a rise in VR gaming's appeal, recognizing its capacity to transform the industry. On the flip side, doubts persist among certain circles, questioning how widely VR will be embraced.

Ultimately, the variances in players' preferences are underpinned by a myriad of influences, encompassing technological innovations, the level of engagement, and individual predilections. This study serves as a compass, shedding light on the intricate reasons underlying the choices individuals make in the gaming sphere. As the gaming realm continues to evolve, this research offers valuable insights into the dynamics of player preferences and their evolving relationship with gaming technologies.

CONCLUSION

This thesis has delved into the realm of virtual reality (VR) gaming, unraveling its intricate significance within the dynamic tapestry of the gaming industry's evolution. As we peer through the lens of technological progress, the enduring relevance of VR gaming comes into sharper focus, inviting continued exploration and innovation that resonates far beyond the confines of screens and controllers.

In contemplating the trajectory of the gaming landscape, there were diverse perspectives that mirror the enigmatic allure of virtual realms. Some gamers envision VR gaming as a harbinger of transformation, a potent force capable of reshaping the very essence of the industry. This echoes the sentiments of gaming visionary Shigeru Miyamoto, who once remarked, "Video games are bad for you? That's what they said about rock-n-roll."

Yet, amidst the tide of anticipation, echoes of skepticism reverberate in certain quarters, questioning the extent of VR's ascendancy. These doubts are reminiscent of the philosophical musings of Johan Huizinga, who eloquently explored the profound essence of play in the human experience. As navigating this realm of uncertainty, the words of Huizinga remind us that "play is older than culture, for culture, however inadequately defined, always presupposes human society, and animals have not waited for man to teach them their playing."

In the symphony of gaming preferences and experiences, VR technology emerges as a captivating crescendo. Its immersive allure, akin to the eloquent brushstrokes of an artist, paints a canvas of possibilities that transcend

conventional paradigms. This echoes the philosophical underpinnings of Miguel Sicart, who poignantly asserted that "game designers are engineers of soul." VR gaming, with its intricate blend of technology and artistry, forges a path that invites us to peer deep into the labyrinth of human emotions and desires.

As the sun sets on this study's exploration, a quote by Jane McGonigal calls out like a beacon, guiding us into the uncharted territories of gaming's future: "Games are the only force in the known universe that can get people to take actions against their self-interest, in a predictable way, without using force."

In conclusion, this thesis uncovers the layers of VR gaming's profound impact and beckons us to ponder its potential to reshape not only the gaming industry but the very fabric of human experiences. It is a realm where skepticism and anticipation intertwine, where technological prowess and philosophical depth converge, offering a glimpse into the evolving narrative of play and exploration.

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