VIDEO GAMING INDUSTRY

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ABSTRACT

Gaming is now a bigger industry than movies and sports combined. Its creation has become more complex so is its cost of creation. Traditional games are now replaced by video games, which has a direct effect on how internet users utilize their spare time. The video game industry has always been about innovation. New technology, new controls, and new experiences are to be expected. The evolution of visual effects augmented reality and virtual reality technologies are dramatically changing both the creation and consumption of films, videos, games, and more. The market is expected to rise in the future due to the use of smartphones and other electronic devices. This research paper focuses on the evolution of the video gaming industry along with addressing the market share, future prospects, and acceptance by the people.

Keywords: Gaming industry, future of video gaming, digital, technology.

INTRODUCTION

Video game creation has become increasingly complex, and the cost of creating a game to run on one of the major consoles has risen with this greater complexity. Video games have steadily risen in popular years. And with people looking for new ways to socialize and stay entertained during pandemic, the trend has only accelerated. Gaming is now a bigger industry than movies and sports combined. The gaming wars of today are just heating up. The battle over console gaming is being waged by Microsoft Xbox, Sony PlayStation and

Nintendo Switch. These platforms are pushing the absolute boundaries of technology by offering gamers state-of-the-art graphics, speeds, and processing powers.

Gaming industry is fast expanding around the world. The global video game market size was estimated at USD 195.65 billion in 2021 and is expected to reach USD 220.79 billion in 2022. It is expected to expand at a compound annual growth rate (CAGR) of 12.9% from 2022 to 2030. The global players in 2022 will be around 3.24 billion players with Asia leading way in the gaming market 1.48 billion players followed by Europe (715 million players).

Video game industry has always been about innovation. New technology, new controls, and new experiences are to be expected. The evolution of visual effects (VFX), augmented reality (AR) and virtual reality (VR) technologies is dramatically changing both the creation and consumption of films, videos, games, and more.

As the world moves more and more to time spent on mobile phones, streaming services, and mobile phone game playing will become an important arena for revenues, and large tech companies will look to leverage their current framework to get involved.

Technical innovations, expanding market demographics, and an increase in video game-related merchandise have all contributed to the video game industry's new scope. Tech giants Google, Meta, and Apple have all made plans to enter the gaming industry. The video game industry is Encompassing a range of electronic entertainment mediums where players use input devices to interact with audiovisual (and sometimes tactile) feedback, video games have emerged as a global cultural force.

LITERATURE REVIEW

- ➢ **Grand View Research (2022**), video game market size, share & trends analysis report by device (console, mobile, computer), by region (North America, Europe, Asia Pacific, Latin America MEA), and segment forecasts, 2022-2030.
- ➢ **Lucintel (2019),** with opportunities in smartphones, laptops, PCs, and consoles, the global video game industry appears to have a bright future. Artificial Intelligence in Video Games E-Sports and Multiplayer Games. Facial Recognition-Based Games Wearable Gaming Cloud Gaming Strategic Considerations for Key Players in the Video Game Market.
- ➢ **December 2021 By David Panhans,** Povilas Joniškis, Farah Tamer, and Fabien Saunier, focused on Gaming & esports is a vibrant and fast-growing sector, powered largely by the of 3 billion enthusiasts around the globe. With its substantial revenue potential, the high-quality jobs it creates, and its reputational benefits, Gaming & present rich opportunities for industry and national governments.
- ➢ **MCKINSEY & COMPANY,** Video games grow up Why everyone should try gaming at least once because it's the future, it makes money it's key to understanding the internet or tech space it's fun. The future of video entertainment: Immersive, gamified, and diverse.
- ➢ **ACCENTURE 2014,** The pulse of gaming: gaming disruption Game companies need capabilities that provide captivating content, intelligent game design, and rapid engineering to adapt to consumer insights. Together, the evolving and diversifying customer base, richer and more diverse content, the rise of digital delivery and proliferating business models are driving significant industry disruption, particularly for well-established gaming companies. As game companies continue to be pressured by increasing consumer demands, the rise of digital endpoints and lower barriers to entry for low-cost alternatives, the need to innovate and join the revolution of disruptors is more critical than ever.
- ➢ **PWC 2022,** Game Tech and the metaverse exploring the new frontiers the COVID-19 pandemic has revealed that e-sports are a significant economic moat. Currently, with a growth rate of around 18%,1 gaming is one of the fastest-growing media industries. With the commercialisation of gaming, the industry has grown to a value of USD 155.89 billion in 2020. According to a study, mobile gaming revenue is expected to reach USD 29.6 billion in 2025 from USD 18.25 billion in 2020. The commercialisation of gaming, The gaming experience and heterotopia, Building social connections, Digital currencies and

rewards, Emergence of new virtual markets and business models In a popular play-to-earn game that is hosted in the metaverse, users can play poker, blackjack, slots and roulette and earn tokens.

OBJECTIVES OF STUDY

The objectives of the research paper are as follows –

- ➢ To study the evolution of gaming industry.
- ➢ To study the future growth prospects of video gaming industry.
- ➢ To study the future of gaming technology.
- ➢ To study the state of video gaming industry.
- ➢ To find out the perceptions of people towards gaming.

SCOPE OF STUDY

The scope of the study outlined in the research paper includes several aspects of the video gaming industry. These aspects include:

1. **Evolution of the Gaming Industry:** The research aims to explore the historical development of the video gaming industry, starting from its origins in the 1950s and 1960s to its current state. It may examine key milestones, technological advancements, and market trends that have shaped the industry over time.
2. **Future Growth Prospects:** The study intends to analyze the potential future growth of the video gaming industry. This includes examining factors such as market projections, emerging technologies, and evolving consumer preferences that may influence the industry's expansion in the coming years.
3. **Gaming Technology:** The research paper aims to delve into the advancements in gaming technology, including areas like cloud gaming, virtual reality (VR), artificial intelligence (AI), and the concept of the metaverse. It may discuss how these technologies are shaping the gaming experience and their potential impact on the industry.
4. **State of the Video Gaming Industry:** The study seeks to provide insights into the current state of the video gaming industry. It may cover aspects such as market size, market share, major players, revenue models, and market demographics. Understanding the current landscape is essential for assessing the industry's growth potential and identifying emerging trends.
5. **Perceptions of People Towards Gaming:** The research paper intends to explore the perceptions and attitudes of people towards gaming. This may involve studying the social and cultural impact of video games, their acceptance by different age groups and demographics, and any potential concerns or controversies associated with the industry.

HISTORY OF THE VIDEO GAMING INDUSTRY

The history of video games is beginning in 1950s and 1960s as computer scientists began designing simple games and simulations on minicomputers and mainframes. Spacewar! Was developed by an MIT student hobbyist in 1962 as one of the first such game on a video game display. The first home video console is the Magn Odyssey and the first arcade video game are computer space and pong. After its home console conversions, numerous companies sprang up to capture *Pong*'s success in both the arcade and the home by cloning the game, causing a series of boom-and-bust cycles due to oversaturation and lack of innovation.

In October 1958, Physicist William Higginbotham created what is thought to be the first video game. It was a very simple tennis game, similar to the classic 1970s video game Pong, and it was quite a hit at a Brookhaven National Laboratory open house.

In fact, video games did not get their true start from computer programmers, but from an engineer skilled in another major invention of the 20th century: the television set. By the 1960s, millions of Americans had invested

in televisions for their homes, but these television sets were only used for the viewing of entertainment. Engineer Ralph Baer was certain this technology could be used to play games.

In 1966, while working for Sanders Associates, Inc., Baer began to explore this idea. In 1967, assisted by Sanders's technician Bob Tremblay, Baer created the first of several video game test units. Called TVG#1 or TV Game Unit #1, the device, when used with an alignment generator, produced a dot on the television screen that could be manually controlled by the user. Once Baer had established how it was possible to interact with the television set, he and his team were able to design and build increasingly sophisticated prototypes.

The 1983 video game crash in the United States was characterized by a flood of too many games, often of poor or cloned qualities, and the sector saw competition from inexpensive personal computer and new types of games being developed for them. The crash prompted Japan's video game industry to take leadership of the market, which had only suffered minor impacts from the crash. Nintendo released its Nintendo Entertainment system in the United States in 1985, helping to rebound the failing video games sector.

The latter part of the 1980s and early 1990s included video games driven by improvements and standardization in personal computers and the console war competition between Nintendo and Sega as they fought for market share in the United States. The first major handheld video game console appeared in the 1990s, led by Nintendo's Game boy platform.

By the late 1990s, the internet also gained widespread consumer use, and video games began incorporating online elements. Microsoft entered the console hardware market in the early 2000s with its Xbox line, fearing that Sony's PlayStation positioned as a game console and entertainment device, would displace personal computers.

FUTURE OF VIDEO GAMES

Future of video gaming industry is become a completely immersive experience. Imagine fully encompassing make-believe worlds that you control with your mind and body. Imagine fully encompassing make-believe worlds that you control with your mind and body. Advances in technology and the rapid growth of the esports gaming community will help shape the future of gaming. Three big trends are changing the video game industry: better technology, metaverse-style environments, and new monetization models.

Cloud gaming

The rapid development of cloud gaming is hard to keep up with. The numbers we present in the article below speak for themselves. Cloud gaming is the future. Will it be able to compete with 'stationary' players such as Microsoft's Xbox.

Cloud gaming is the process of streaming a video game through an internet connection via a remote server. As part of Cloud gaming, there is no need to download a title, with a player instead being able to instantly access and play a Cloud-compatible title as long as a stable internet connection is maintained. User data is saved on secure servers in cloud gaming. The data is transmitted across secure channels, which eliminates the possibility of hacking. There is no need to save data locally because the user (including the game) is safely kept on the cloud. Gamers can play high-profile video games even on low-end devices thanks to cloud services that are very scalable. Additionally, cloud gaming removes the limitations of games that you can only play on certain consoles or PCs. Reduced expenses are one of the major benefits of cloud gaming technology. It eliminates the requirement to update the most recent gaming systems regularly. The cloud servers are extremely secure, which helps to prevent piracy. The game's content is preserved by avoiding any game tampering. Cloud gaming allows players to play several games from a single location. They will have a great time gaming because there are many titles to select from.

Virtual Reality

Virtual reality (VR) applications are evolving fast, and they are penetrating many industry sectors. From healthcare to the automotive industry, VR is changing the way things are done, and expectations for the future remain high. This is particularly true for video games. As big-time brands (Samsung, Sony HTC, Google, PlayStation, and Facebook) make their shift into the VR market, customers are still hesitant to purchase for a number of reasons. One of the major factors making consumers hesitate is the price of the equipment. Though he recognizes the limitations, Mack remains optimistic about VR's future.

"VR, I think, will remain niche, but it could potentially turn into a big niche," he said. "I think we're going to see some very impressive stuff and very compelling stuff come down the pipe in the next couple of years." Mitu Khandaker, a professor at New York University's Game Centre, is hopeful about VR's role in gaming, she said in a 2020 interview with Built In. Khandaker just doesn't think it's going to look like people alone in their homes playing through a headset, so much as a co-located experience that multiple people share in.

There are still a large number of challenges that VR gaming developers need to overcome, but as popularity and demand grow, innovation will follow. The video game industry has been changing for years and has done so at a gradual pace. VR gaming has not seen the rapid growth that they first expected, but the future is bright and will be more mainstream before we know it.

The Metaverse

Metaverse-based virtual ecosystems are the latest evolution in the gaming industry, leading gamers to experience next-level environments. Metaverse in the gaming industry can either be centralized or decentralized, although gaming companies focus more on decentralized projects since the future is decrypted. Metaverse is already bringing about in the gaming industry is the shift toward hyper-realistic, completely-immersive gaming experiences.
Metaverse, like the internet, will be used for more than just gaming. It may incorporate office work as well.
Players can have a close-to-reality experience while playing games on the Metaverse platform. Like they can interact with other players, trade in-game assets, and even experience a physical sense of touch using haptic gloves and jackets. Note that in-game items in the metaverse games carry real-world value. While Metaverse is still in its early stages, many companies have launched next-generation gaming platforms. Current trends and future forecasts of the gaming industry clue us into anything about ourselves, it's that our desire to connect far outpaces our desire to escape.

Artificial Intelligence

AI in gaming means adaptive as well as responsive video game experiences facilitated through non-playable characters behaving creatively as if they are being controlled by a human game player. AI in gaming is about creating more responsive, adaptive & challenging games through the use of artificial intelligence.
Increasing complexity in games with AI ensures gamers are hooked to the game. With the rise of different gaming devices gamers expect to have an immersive experience across various devices. Developers can provide a console-like experience across all platforms with AI. Most Parts of Video Games – They Feature Racing Car Games, Shooters, Or Strategy Games – All Have Different Components Powered by AI Or Related Applications. For Example, Enemy Bots or Those Neutral Characters. The Main Purpose of Using Artificial Intelligence in Gaming Is to Provide Players a Realistic Gaming Experience to Battle Against Each Other On A Virtual Platform.

Creating Artificial Environments Incorporating Virtual Reality, Augmented Reality and Mixed Reality Seems to Be the Future of The Gaming Industry. The Rise of Artificial Intelligence Is an Equally Important Step in Developing Games That Are Smarter and More Interactive, And as Close to Reality as Possible.

Gaming & Esports

Esports, short for "electronic sports," transforms online gaming into a spectator sport. The experience is similar to watching a professional sporting event, except that instead of watching a physical event, spectators watch video gamers compete against each other in a virtual environment. Esports is one of the fast-growing industry globally.

Esports is a subset of the broader gaming community it's very rare for an esports fan to identify as a non-gamer. Esports teams, representing the organization they're a part of, will compete in their video game's respective league where there are regular seasons, playoffs, and world championships. Just as basketball teams are part of the NBA and compete against each other, esports teams (typically under an organization umbrella) compete in video game leagues. League tournaments are run by companies such as Major League Gaming (MLG) or the Electronic sports League (ESL). Leagues include North America League of Legends championships series, the Call of Duty World League (organized by MLG), or the Pro League for CS: GO (organized by ESL).

Gaming and esports share a common value chain up to and including game distribution, after which esports continues through events and other consumption-driven adjacencies. It is populated by a wide variety of companies, from end-to-end players like Sony and Microsoft to niche content developers, distributors, gaming venues, and so on.
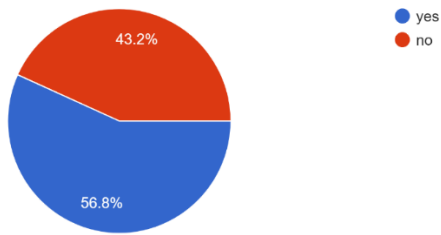
MARKET SURVEY

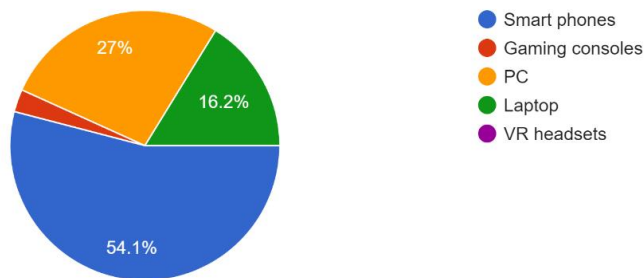How frequently do you engage in gaming activities

37 responses
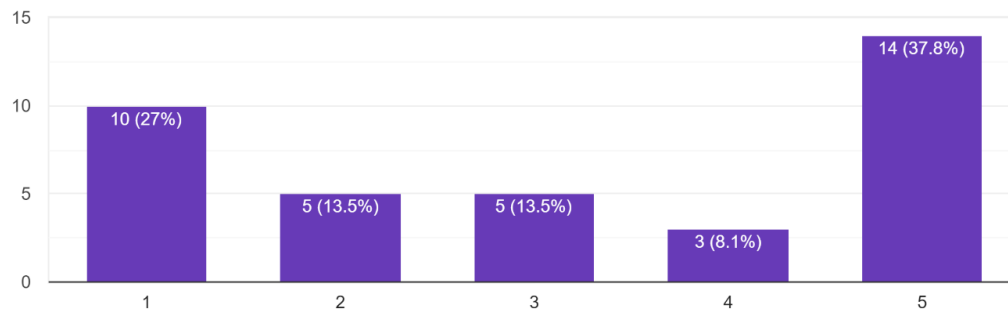
Are you familiar with esports (competitive gaming)? If yes, do you actively follow any esports teams or tournaments?
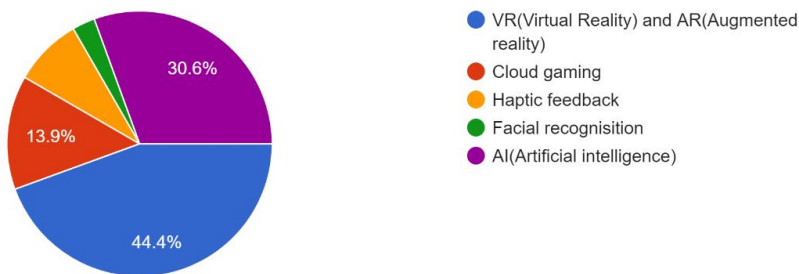
37 responses

- yes
- no

43.2%

56.8%

What devices do you primarily use for gaming ?

37 responses

- Smart phones
- Gaming consoles
- PC
- Laptop
- VR headsets

27%

16.2%

54.1%

What new technologies can be implemented to enhance the gaming experience?

36 responses

- VR(Virtual Reality) and AR(Augmented reality)
- Cloud gaming
- Haptic feedback
- Facial recognisition
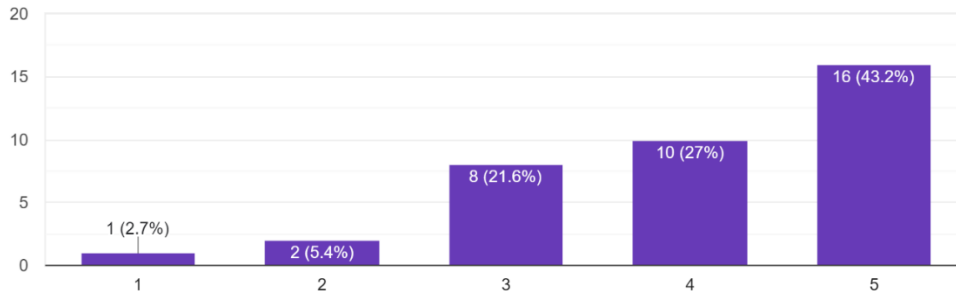- AI(Artificial intelligence)

30.6%

13.9%

44.4%

How do you perceive the future growth prospects of the gaming industry, considering the advancements in technology and changing consumer preferences?
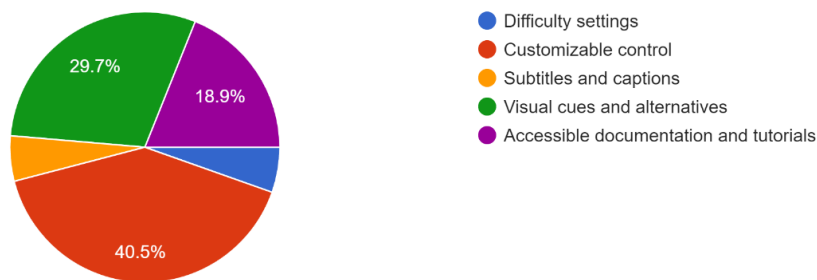
37 responses
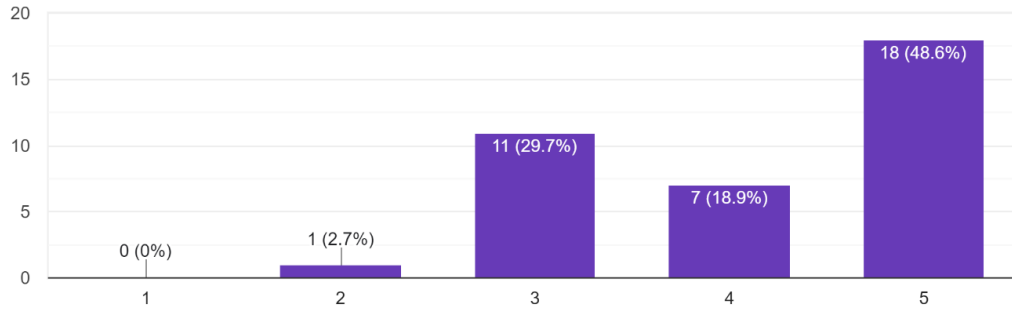
Can we create more eco-friendly gaming platforms and reduce energy consumption?

37 responses

What features can be added to make gaming more inclusive and accessible for a wider audience?
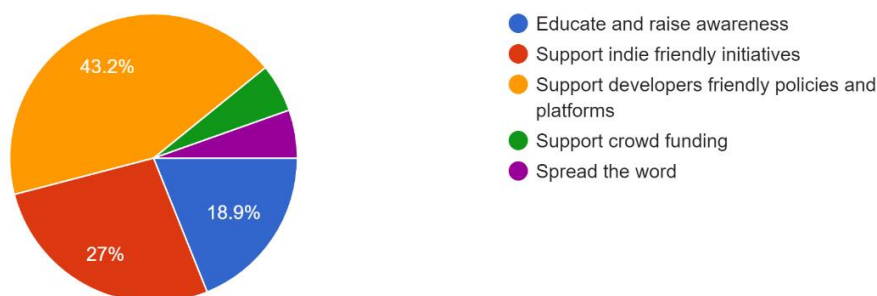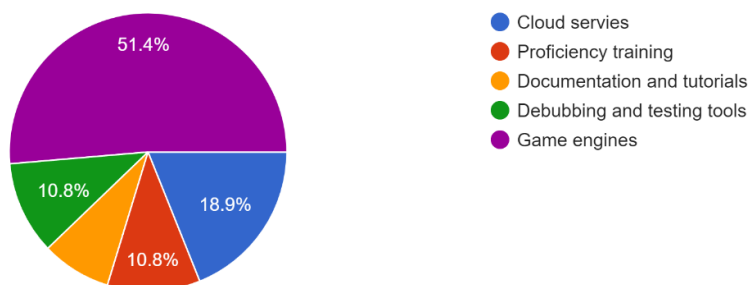
37 responses

Legend:
- Difficulty settings
- Customizable control
- Subtitles and captions
- Visual cues and alternatives
- Accessible documentation and tutorials

How can we support indie game developers and foster creativity in the gaming industry?
37 responses

- ● Educate and raise awareness
- ● Support indie friendly initiatives
- ● Support developers friendly policies and platforms
- ● Support crowd funding
- ● Spread the word

What kind of tools will be available to developers to allow them to create high-quality games for the platform
37 responses

- ● Cloud servies
- ● Proficiency training
- ● Documentation and tutorials
- ● Debubbing and testing tools
- ● Game engines

SUGGESTIONS

Augmented Reality (AR) Gaming: Combine virtual elements with the real world through AR technology. Players can interact with virtual objects and characters within their physical surroundings, offering unique and dynamic gameplay experiences.

Social Integration: Incorporate social features into gaming platforms, such as integrated voice and video chat, customizable avatars, and social media integration. This would foster a sense of community among players and enhance the social aspect of gaming.

Environmental Sustainability: Develop gaming platforms with a focus on energy efficiency and reduced environmental impact. This could involve using sustainable materials for hardware production, optimizing power consumption, and promoting eco-friendly practices within the gaming industry.

Social and Community Features: Future gaming platforms should prioritize social and community features to foster a strong sense of connection among players. This includes robust communication tools, integrated voice chat, in-game social hubs, and user-generated content-sharing capabilities. Building strong gaming communities can enhance multiplayer experiences and promote long-term engagement.

Accessibility: Gaming platforms of the future should focus on accessibility, ensuring that games can be enjoyed by a wide range of players. This includes features such as customizable controls, text-to-speech and speech-to-text capabilities, colorblind-friendly options, and support for players with disabilities.

CONCLUSION

As a conclusion, there is absolutely no doubt that the gaming industry will grow in the next few years. Rapid advancement in the technology and growth in gaming community will surely shape its future. The potential customers to the gaming industry is very energetic and putting their time to play games on their devices. The growth of the industry is expected to be much higher than the world average.

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