

THE IMPACT OF VIRTUAL GAMES ON THE MINDS OF YOUNG PEOPLE

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Abstract

Virtual games have become an integral part of the lives of young people in the digital era. With the proliferation of gaming platforms and technologies, the impact of virtual games on the minds of young individuals has garnered significant attention from researchers, educators, and parents alike. This paper aims to contribute to the ongoing discourse surrounding virtual games and their effects on youth, offering a comprehensive examination of the subject matter while highlighting areas for future investigation and intervention.

Key words: virtual games, digital experiences, influence, impacts, brain regions

Introduction

Virtual games, also known as video games, have become an ubiquitous aspect of contemporary youth culture. These interactive digital experiences encompass a diverse array of genres, platforms, and player communities, captivating the imaginations of young individuals worldwide. From immersive role-playing adventures to fast-paced multiplayer competitions, virtual games offer a dynamic and engaging form of entertainment that resonates deeply with young people.

The popularity of virtual games among youth can be attributed to several factors. First and foremost, advancements in technology have led to the development of increasingly sophisticated gaming platforms, with realistic graphics, immersive soundscapes, and responsive gameplay mechanics. This evolution has elevated the overall gaming experience, drawing in players of all ages, but particularly resonating with the tech-savvy youth demographic.

Moreover, virtual games offer a form of escapism and fantasy fulfillment, allowing players to explore fantastical worlds, assume diverse identities, and embark on epic



quests from the comfort of their own homes. This escapism is particularly appealing to young people who may seek refuge from the pressures and challenges of everyday life.

Furthermore, the social aspect of virtual gaming cannot be overstated. Many virtual games feature online multiplayer modes, enabling players to connect and collaborate with friends and fellow enthusiasts from around the globe. These virtual communities foster camaraderie, competition, and a sense of belonging, further enhancing the appeal of virtual games among young people.

Given the pervasive influence of virtual games on youth culture, it is imperative to understand their impact on the minds and well-being of young individuals. While virtual games offer myriad benefits, including cognitive stimulation, social interaction, and entertainment value, they also pose potential risks, such as excessive screen time, desensitization to violence, and social isolation.

As such, exploring the impact of virtual games on youth is crucial for parents, educators, policymakers, and researchers alike. By gaining insight into how virtual games shape the cognitive, emotional, and social development of young people, stakeholders can develop strategies to maximize the benefits of gaming while mitigating potential harms. This understanding can inform the development of educational initiatives, parental guidance, and industry regulations aimed at promoting responsible gaming practices and supporting the holistic well-being of youth in the digital age.

Materials and Discussions

With the continuous advancement of technology and the widespread adoption of the Internet, online games have become an indispensable part of modern teenagers' entertainment lives. As a new form of entertainment, online games possess unique characteristics and influence, attracting significant attention regarding their positive and negative effects on teenagers. The rich and diverse content, exquisite visual design and strong interactivity of online games make them highly appealing to adolescents. However, this has brought about a series of debates and concerns: Will online games have negative impacts on the psychological and physical health of teenagers? Will they lead to declines in academic performance, social problems, and an exacerbation of addiction phenomena?



China Internet Network Information Center defines an online game as “a game product that takes the computer as the client and the Internet as the data transmission medium. It must realize the participation of multiple users at the same time through TCP/IP protocol, and users can realize the purpose of entertainment communication through the operation of tasks, roles or scenes in the game”.

Lei Li believes that, as a new form of entertainment combined with electronic games and the Internet, online games use the Internet as an advanced communication tool to reproduce or imagine real life, which is essentially a concrete form of games (Lei et al., 2018: pp. 28-29) .

Cai Yuanyuan defines online games at two levels. Broadly understood, it refers to the electronic games that need networking, including PC online games, video console online games and interactive TV online games. The narrow sense of network game is the client/server mode, that is, the user installs the client software on the computer, logs in to a game server through the client software, and interacts with more players (Cai, 2007) .

"I never saw my real friends. I gained weight, became lazy, and spent nearly all of my time slumped over my computer," says Rosner, who played up to 18 hours a day, every day, for nearly two years.

Rosner nearly threw away a university degree in pursuit of the game. According to a study by the NPD Group, a global market research firm, his gaming obsession isn't unique. Nine out of 10 children play video games. That's 64 million kids—and some of them hit the keyboard or smartphone before they can even string together a sentence. The problem: many researchers believe that excessive gaming before age 21 or 22 can physically rewire the brain.

Researchers in China, for example, performed magnetic resonance imaging (MRI) studies on the brains of 18 college students who spent an average of 10 hours a day online, primarily playing games like World of Warcraft. Compared with a control group who spent less than two hours a day online, gamers had less gray matter (the thinking part of the brain).

As far back as the early 1990s, scientists warned that because video games only stimulate brain regions that control vision and movement, other parts of the mind responsible for behavior, emotion, and learning could become underdeveloped.

Yet despite mounting evidence about the cognitive, behavioral, and neurochemical impact of gaming, the concept of game addiction (online or not) is difficult to define.



Some researchers say that it is a distinct psychiatric disorder, while others believe it may be part of another psychiatric disorder. The current version of the Diagnostic and Statistical Manual of Mental Disorders, *DSM-V*, states that more research needs to be done before "Internet Gaming Disorder" can be formally included.

Still, experts agree gaming has addictive qualities. The human brain is wired to crave instant gratification, fast pace, and unpredictability. All three are satisfied in video games.

"Playing video games floods the pleasure center of the brain with dopamine," says David Greenfield, Ph.D., founder of The Center for Internet and Technology Addiction and assistant clinical professor of psychiatry at the University of Connecticut School of Medicine. That gives gamers a rush—but only temporarily, he explains. With all that extra dopamine lurking around, the brain gets the message to produce less of this critical neurotransmitter. The end result: players can end up with a diminished supply of dopamine.

Take a game like that away from addicted adolescents and they often show behavioral problems, withdrawal symptoms, even aggression, according to Dr. Greenfield.

But not all gaming is bad. Video games can help the brain in a number of ways, such as enhanced visual perception, improved ability to switch between tasks, and better information processing. "In a way, the video game model is brilliant," says Judy Willis, M.D., neurologist, educator, and American Academy of Neurology (AAN) member based in Santa Barbara, CA. "It can feed information to the brain in a way that maximizes learning," she says.

Conclusion

Practicing anything repetitively physically changes the brain. With time and effort, you get better at the specific task you're practicing, whether it's shooting at the enemy in a video game or hitting a baseball. Those repetitive actions and thoughts stimulate connections between brain cells, creating neural pathways between different parts of your brain. The more you practice a certain activity, the stronger that neural pathway becomes. That's the structural basis of learning.

The impact of virtual games on the minds of young people is a complex and multifaceted phenomenon that warrants careful consideration from various stakeholders.



In conclusion, the impact of virtual games on the minds of young people is influenced by a myriad of factors, including game content, duration of play, individual characteristics, and socio-cultural context. To promote positive outcomes and mitigate potential harms, collaborative efforts are needed from parents, educators, policymakers, game developers, and researchers.

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