

## COGNITIVE BENEFITS OF ONLINE GAMING: ENHANCING MENTAL WELLNESS

By

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### Abstract

*Online gaming has grown in popularity among students in the current digital era. The number of people using online platforms for gaming has increased exponentially during the last decade. With the rapid increase in number of online games, there has been increasing concern over the excessive use of gaming and the consequences on psychological wellbeing. One of the most significant benefits of gaming is its potential to improve cognitive function. Studies have shown that playing video games can enhance attention, visual-spatial skills, and reaction time. These skills are useful not only in gaming but in other areas of life, such as driving or sports. This article aims to explore the cognitive benefits of online gaming and shed light on its potential to positively impact mental health.*

**Keywords:** *cognitive benefits, online gaming, mental wellness, communication skills, mental health.*

### Introduction

Online gaming has grown in popularity among students in the current digital era. The number of people using online platforms for gaming has increased exponentially during the last decade. A study of nearly 2,000 children found that those who reported playing video games for three hours per day or more, performed better on cognitive skills tests involving impulse control and

working memory compared to children who had never played video games (Chaarani et al., 2022). With the rapid increase in number of online games, there has been increasing concern over the excessive use of gaming and the consequences on psychological wellbeing. This article aims to explore the cognitive benefits of online gaming and shed light on its potential to positively impact mental health. Blumberg and Ismailer, (2008)

examined 122 fifth, sixth and seventh graders' problem-solving behaviour while playing a video game that they had never seen before to show that playing video games can improve cognitive and perceptual skills. As the children played the game, they were asked to think aloud for 20 minutes. Researchers assessed their problem-solving ability by examining the types of cognitive, goal-oriented, game-oriented, emotional and contextual statements they made.

### **Online Games**

Online games refer to games that are played over some form of computer network, most often the Internet. Online games can range from simple text-based games to games incorporating complex graphics and virtual worlds populated by many players simultaneously (Sardone, Scherer & Martinelli, 2009). If online games are used for entertainment activities it will have a positive impact, and all fatigue and stress can be reduced by playing games. Online games have the ability to attract students, enabling them to easily collaborate with each other using

language in easy-to-understand media. In addition, online gaming promotes a healthy and competitive environment and improves players' cognitive capacities, as it entirely depends on the user's skills and knowledge.

### **Benefits of online gaming**

There are many myths about how online games affect mental health. The truth is that playing games can help you learn how to solve complex problems and even encourage social connection through internet gaming. Possible benefits are observed in video gaming in the realm of working memory and executive response inhibition (Welker, 2022). The mind can be stimulated, and online games can improve mental health. There are many advantages in playing online games for the well-being of our mental health. One can get their mind moving and relieve tension by playing online games.

Fanetti (2011) studied on the effect of problem-solving video games on the science reasoning skills of college students. One way digital games especially videogames, could

potentially be useful if there were a flexible and inexpensive method a student could use at their convenience to improve selected science reasoning skills. Problem solving videogames which require the use of reasoning and problem solving to answer the cognitive challenges could be a promising method to improve selected science reasoning skills.

Many researchers have found out the effects of non-violent games and its positive outcomes. Green & Bavelier (2003) examined a range of visual skills that is improved and demonstrated a cognitive growth after playing an action video game. Additional studies done by Green & Bavelier (2006 & 2012) indicate that spatial skills, executive functioning, task switching, multi-tasking and visual short term memory is affected and got enhanced by video game play as well as a plethora of other cognitive skills (Boyan & Sherry, 2011).

### **Cognitive benefits of online gaming**

Video games' benefits for cognitive functions have been widely demonstrated, with a main effect on

executive functions in terms of attention, visuospatial, working memory, and mental flexibility performances. The cognitive skills enhanced by online gaming are:

- ***Problem-solving skills:*** Online games promote critical thinking and problem-solving abilities through puzzles, quests, and strategic gameplay.
- ***Memory enhancement:*** The memory benefits of online gaming, includes short-term memory improvement and long-term memory retention through complex gameplay.
- ***Attention and concentration:*** Online gaming demands sustained attention and concentration leading to improvements in these cognitive abilities.
- ***Multi-tasking abilities:*** Multiplayer online games require players to multitask effectively leading to improved multitasking skills in real-life contexts.

- **Social interaction:** Social benefits of online gaming, includes enhanced communication skills, teamwork, and a sense of community.
- **Stress relief:** Online gaming serves as a form of stress relief, providing an escape from real-life stressors and promoting relaxation.

The various psychological mechanisms underlying cognitive benefits are:

- **Cognitive flexibility:** Online gaming fosters cognitive flexibility through adaptive gameplay, promoting mental agility and resilience.
- **Positive reinforcement:** The role of in-game achievements and rewards promotes self-esteem, motivation and overall mental well-being.
- **Immersion and flow:** The immersive nature of online gaming can induce a state of flow, leading to heightened focus, enjoyment, and psychological well-being.

- **Neuroplasticity:** The potential impact of online gaming on brain plasticity, including how gameplay experiences may shape neural networks and cognitive functioning.

### Enhances Communication Skills

Many games require players to work together in teams or engage in cooperative play. This can help develop teamwork and communication skills, as well as provide a sense of community and belonging (Granic et al., 2014).

### Improves Mental Health

Finally, gaming can have a positive impact on mental health. A study published in the journal titled 'Computers in Human Behavior' found that playing video games was associated with a reduction in symptoms of depression and anxiety. The study also found that gaming was associated with an increase in self-esteem and a decrease in loneliness. Another study published in the journal *Frontiers in Psychology* found that playing casual video games can reduce

symptoms of ADHD and improve mood.

### Considerations and recommendations for online gamers

The different considerations and recommendations for online gamers are listed below:

- **Moderation and balance:** The importance of moderation in online gaming to prevent potential negative effects on mental health, emphasises the need for balance with other activities.
- **Age-appropriate content:** Recommendations for selecting age-appropriate games and monitoring screen time for children and adolescents ensure positive gaming experiences.
- **Mindful gaming practices:** For practicing mindful gaming, taking

breaks, setting boundaries, and engaging in diverse gaming experiences are suggested.

### Conclusion

Playing games isn't just about entertainment—it's a workout for our minds. Online gaming can have many benefits beyond just being a fun pastime. It can improve cognitive abilities, enhancing reasoning, memory, and perception, decision-making skills, provide stress relief, promote socialization, and improve mental health. However, it's important to remember that moderation is key. Excessive gaming can lead to negative outcomes, such as addiction and social isolation. But when used in moderation, gaming can be a valuable tool for improving our overall well-being.

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