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## The Impact of Online Game Users on Student Learning Achievement

**Renita Mei Lina<sup>1\*</sup>, Ine Kusuma Aryani<sup>2</sup>**

Universitas Muhammadiyah Purwokerto, Purwokerto, Central Java, Indonesia<sup>1,2</sup>

E-mail: renitameilina26@icloud.com

### ABSTRACT

The use of online games has become a significant phenomenon among students, with the potential to impact their academic performance. This research investigates the impact of online game usage on students' academic achievement, focusing on two main aspects: motivation and concentration in learning, as well as cognitive abilities. The discussion outlines key findings from related literature, highlighting both the positive and negative effects of online game usage in educational contexts. Furthermore, the discussion explores effective strategies for integrating online games into learning to enhance students' academic performance. By considering these aspects, this study provides valuable insights for educators, researchers, and stakeholders in the education sector to understand the role of online games in improving students' academic achievement.

**Keywords:** Online Games, Academic Achievement, Learning Motivation, Learning Concentration, Cognitive Abilities, Learning Integration.

### INTRODUCTION

The use of digital technology, particularly online games, has become an indispensable part of daily life for many individuals, including learners (Damayanti et al., 2023; Ramadhan, 2020). This phenomenon raises questions about how the use of online games can affect learners' learning achievement (Huang et al., 2024; Yeflach-Wishkerman, 2024). As an exciting and interactive entertainment tool, online games offer an immersive and often addictive experience to their users (Asmiati et al., 2021; Hang et al., 2023).

The use of online games among learners has become a major concern in the world of education because of their potential to influence academic performance (Fathurohim & Mulyah, 2023; Prasetya, 2021; Zandrato & Harefa, 2022). Several studies have revealed that online games can positively and negatively impact learners' learning achievement (Huang et al., 2024; Seraji & Olsadat Musavi, 2023).

On the one hand, online games can be an effective learning tool (Zhang & Zhao, 2024). Some games are specifically designed to present learning materials in an interactive and fun way, allowing learners to learn more effectively (Hang et al., 2023; López-Fernández et al., 2023; Ma & Li, 2024). In addition, online games can also improve cognitive skills, such as problem-solving, spatial skills, and critical thinking abilities (Ghasemi et al., 2024; Ryu et al., 2021).

However, on the other hand, excessive use of online games can interfere with learners' learning process (López-Fernández et al., 2023; Pogorskiy & Beckmann, 2022). Time spent

playing online games can shift the time that should be allocated to study, resulting in decreased concentration and motivation to study (Behl et al., 2022; Chowdhury et al., 2024). In addition, inappropriate or not educational content in some online games can lead to negative behavior and decrease learners' interest in lessons at school (Mancı et al., 2024; Nurjanah et al., 2024).

With the debate about the impact of online game use on student achievement, further research is needed to understand in depth how online games can be utilised effectively in an educational context. By better understanding the role of online games in learning, we can develop more appropriate approaches to integrate these technologies into the learning process and improve overall learner achievement.

## **RESEARCH METHODS**

Qualitative methods allow researchers to collect in-depth data through techniques such as interviews, participatory observation, and document analysis. For example, researchers can conduct structured interviews with learners to explore their experiences in using online games and how it affects their learning achievement. Observations can also be made to understand the interaction of learners with online games in their learning environment.

## **RESULTS AND DISCUSSION**

### **The influence of motivation and concentration of learning students**

The use of online games not only affects the motivation and concentration of learners' learning, but also creates complexity in their learning dynamics. Online games often offer an entertaining and satisfying experience, with challenges designed to provide instant rewards and immediate gratification. This can cause learners to feel interested and emotionally involved in the game, while at the same time neglecting their academic responsibilities. In addition, there are social aspects of online games that can affect the learning motivation of learners. Communities in online games often offer social support and a strong sense of affiliation, which can replace or even reduce learners' interest in social interaction in formal educational contexts. This can lead to social isolation and decreased participation in academic activities at school.

However, it is important to remember that not all impacts of using online games on learners' motivation and concentration of learning are negative. Some online games also have the potential to increase motivation and concentration in a positive way. For example, games designed specifically for educational purposes can pique learners' interest in subject matter in innovative and fun ways, increasing their intrinsic motivation to learn. In addition, online games can also provide opportunities for learners to develop skills such as cooperation, leadership, and conflict resolution skills, which can be beneficial in formal educational contexts.

Thus, in understanding the impact of using online games on the motivation and concentration of learning students, it is necessary to take a holistic and holistic approach. More research is needed to understand more deeply how individual, social, and environmental factors affect the way learners interact with online games and how they affect their learning motivation

and concentration. With a better understanding of these dynamics, educators can develop more effective strategies to harness the positive potential of online games in improving learner achievement and minimizing their negative impact.

### **The Impact of Using Online Games on the Cognitive Abilities of Students**

The impact of online game use on learners' cognitive abilities has been a major concern in modern educational literature. Along with the development of digital technology, online games have become one of the most popular forms of entertainment among children and teenagers. In recent years, research has begun to explore how intensive interaction with online games affects the cognitive development of learners. Study results show that engaging in online gaming can have a mixed impact on cognitive abilities, with significant implications for individual learning and development.

Most studies highlight the positive impact of online game use on learners' cognitive skills. Online games often require learners to solve complex problems, plan strategies, and make decisions quickly in a dynamic environment. By continuing to practice in the context of challenging games, learners can improve their abilities in terms of problem-solving, spatial skills, and critical thinking. For example, puzzle or strategy games can train learners to develop the analytical and strategic mindset needed to solve real-life problems.

However, it is important to recognize that not all impacts of using online games are positive. Too much time spent playing online games can also have negative consequences on the cognitive skills of learners. Several studies have found that excessive use of online games can result in decreased problem-solving and concentration abilities, as well as increase the risk of stress and anxiety. Factors such as gaming addiction and lack of balance between gaming and other activities can also contribute to a decline in the quality of learners' cognition.

Therefore, in understanding the impact of online game use on learners' cognitive skills, a holistic and integrated approach is needed. Educators and researchers need to consider a variety of factors, including the type of games played, the time spent playing games, and the individual characteristics of learners. Thus, appropriate strategies can be devised to harness the positive potential of online games in improving the cognitive skills of learners while reducing their negative impact. In addition, evidence-based and solution-oriented approaches need to be applied to develop practical guidelines for educators in integrating online games into curriculum and daily teaching.

### **Effective Strategies to Integrate the Use of Online Games**

Effective strategies to integrate the use of online games in the learning context are crucial to improving the academic achievement of learners. First of all, a holistic approach is needed, which includes an in-depth understanding of learning objectives and learners' needs. Before integrating online games into learning, it is important to determine how the game can support the achievement of the learning objectives set, both in terms of increasing understanding of concepts, developing skills, and strengthening learning motivation. Furthermore, the development of online games that are in accordance with the curriculum and learning standards

is key. Games that are specifically designed to cover relevant subject matter and tailored to the skill level of learners will be more effective in improving their learning achievement.

In addition, there is also a need for support and training for educators to integrate online games into their teaching effectively. Educators need to understand how to use online games as an effective learning tool, including how to craft engaging and relevant learning scenarios, how to monitor and evaluate student progress, and how to integrate learning outcomes from games into overall academic assessments. The training may also cover relevant aspects of ethics and awareness, such as ensuring that the games used are in accordance with the moral values and ethics of education.

In addition, collaboration between educators, game developers, and educational experts can also increase the effectiveness of using online games in learning. Through this collaboration, online games can be designed that are more innovative and relevant to learning needs, and more easily integrated into the curriculum. In addition, this collaboration can also assist in the development of supporting resources, such as usage guides, question banks, and additional activities that can enrich the learning experience of students.

Thus, effective strategies to integrate the use of online games in learning require an integrated approach, adequate support for educators, and collaboration between various stakeholders in the world of education. Only with a comprehensive and sustainable approach can we optimize the potential of online gaming as an effective tool in improving learners' learning achievement and preparing them for future challenges.

## CONCLUSION

The impact of the use of online games on student learning achievement, several significant conclusions can be drawn. First, there is complexity in the impact of online game use, where in addition to providing the potential for increased learning motivation and cognitive skill development, excessive use can also result in decreased concentration and the risk of addiction. Previous research has shown that online games can increase learners' motivation through fun and interactive learning experiences, however, they should be wary of possible shifts in focus from academic learning. In addition, in the aspect of cognitive ability, the use of online games has the potential to improve skills such as problem solving and critical thinking skills, but keep in mind that too much time spent playing online games can also interfere with the development of cognitive skills of learners. Therefore, an effective integration strategy is needed to harness the positive potential of online games in learning, with a holistic approach that takes into account learning objectives, learner needs, and the development of supporting resources.

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