



HOW GAMES IMPACT ON LEARNING ENVIRONMENT

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ABSTRACT

Using games is commonly popular in teaching process of today. It could enhance learners' collaborative, problem solving and critical thinking skill which are the one of the 21st century's "4 C" skills. It makes the lesson fun and interactive which can attract learners' attention and improve the productivity of reaching good results. Additionally, games are a great classroom management tool that help teachers to motivate a class and to involve in the lesson. By integrating games into the lessons teachers increase overall motivation which is the key success of learning environment. Therefore, this article aims to present how games impact on teaching and learning process.

Games provide entertainment, recreation, and mental stimulation, and can also be a valuable tool for education. In recent years, the value of games in education has gained increased attention, with many educators using games to engage and motivate students in a variety of subjects. According to encyclopedic sources key components of games are goals, rules, challenge, and interaction. Games generally involve mental or physical stimulation, and often both. Many games help develop practical skills, serve as a form of exercise, or otherwise perform an educational, stimulatory or psychological role.

Games have been used as a learning tool for centuries, and in recent years, there has been a renewed interest in the use of games as an instrument of education (Gee, 2003), with video games having evolved as a source of entertainment for more than 20 years. Most obviously, huge technological developments have made it possible for designers to construct complex digital worlds with significantly better sound and graphics (Olbur, 2003). As a result of these significant technological advancements, games have been utilized in schools to engage students and make learning more interactive and fun (Gee, 2003). They are particularly effective in teaching subjects such as mathematics and science, as they can provide a hands-on and interactive way to learn complex concepts. The arts, like language and history, are also presented in engaging and interactive ways through visual sources to complement the literacy-heavy aspect of these subjects (Gee, 2003).

While games in education have the potential to enhance student engagement and motivation and improve learning outcomes, excessive use of games can lead to negative side



effects such as decreased attention span and lack of critical thinking, therefore, a balanced and appropriate use of games in education is crucial to fully utilize its advantages and minimize its lacking qualities (Gee, 2003).

There are several questions that should be discussed:

Should we use games in the classroom?

Using games in a lesson as part of teaching and learning helps to create positivity around the lesson, motivating students with their participation and creating a positive attitude towards learning. Games can also create a positive memory and experience of learning for students in the classroom.

Is playing games good for students?

Some games might improve kids' hand-eye coordination and problem-solving skills. Video games that require kids to move or manipulate the game through their own physical movement can get sedentary kids moving — but not as much as if they actually played outside or did sports.

What is game-based learning theory?

Safe practice, experiential learning and interaction are the pillars upon which the theory of game-based learning stands. Learning through games allows students to experiment in non-threatening scenarios and acquire knowledge through practice and social interaction both with the environment and their peers.

How can games be used in the classroom?

According to research, using games in teaching can help increase student participation, foster social and emotional learning, and motivate students to take risks. One study of the popular multiple-choice quiz game Kahoot found that it improved students' attitudes toward learning and boosted their academic scores. (Nguyen, 2021)

Why games are important in the classroom?

Studies show that playing games in the classroom can increase overall motivation. Students become more motivated to learn, pay attention, and participate in-class activities. They can also be a great classroom management tool, helping to motivate a class.

Advantages of games in the classroom.

One of the significant advantages of games in education includes effectiveness in increasing student motivation and engagement (Prensky, 2001). Some disciplines may be perceived by many students as being challenging, abstract, and dull. Students are supposed to learn while playing the curriculum's games, so they can enjoy the learning experience. The learning process will become enjoyable, captivating, and successful if fun is incorporated into it. An important analysis of educational games incorporates the concepts of intrinsic and extrinsic motivation as the two types of motivation. Extrinsic motivation is linked to rewards, but intrinsic motivation is the desire to do the activity for one's own purpose because they find it enjoyable and hard. These two motives may have varying effects on students' learning outcomes, for example, students who played educational games were more likely to be engaged in the learning process (Gee, 2003), and had a better understanding of the material than those who did not partake in gaming (Prensky 2003).

Games can also be used to teach problem-solving skills, critical thinking, and collaboration, with a better understanding of teamwork achieved by students, in comparison



to those who did not play the games (Gee, 2003). Games are entertaining and participatory, and students respond easily to this kind of learning environment, with a heightened motivation to learn which is integral to a beneficial education (Kirkland & O’Riordan, 2006). When played in pairs or groups, games have the effect of giving students safety in numbers. It is practically impossible to sit idly by and not become involved in games, particularly when they are interesting. They are naturally attracted together and bond in the cozy competitive setting of the game – inspired to learn through games as a social need (Kirkland & O’Riordan, 2006).

Games can help with student integration and can promote a collaborative and social learning environment. For example, strategy games can help students learn how to think ahead and plan for multiple outcomes, while role-playing games can teach communication and teamwork (Gee, 2003).

By giving students more influence over the learning process, setting clear goals, pushing them, encouraging cooperation, employing criterion-based assessments, and adding novelty to the environment, educators can learn from video games about how to improve learning settings (Olbur, 2003). In order to put students in states of "flow," well-designed learning environments make use of many of these design elements. Educational strategies like problem-based learning environments, case-based reasoning, learning through participation in communities of practice, or inquiry-based learning all put students in active roles while pursuing objectives that are important to them (Olbur, 2003).

Disadvantages of games:

Social isolation and a lack of face-to-face communication skills is prevalent in students who excessively game (Rooji et. al. 2011). As students spend more time gaming, they may have less time for social interactions with friends and family, which can negatively impact their social development. Playing games for long periods meant that students were more likely to have poor social relationships (Rooji et. al. 2011). With these lacking social skills, impulsivity and awkwardness, children would retreat back into their games – spending even more time on the practice. The claim suggests a strong reliance on video games as a source of leisure. Bullying, issues at home, or issues at school can all lead to social isolation, and children may gravitate to video games when they feel cut off from their friends. Video games satisfy a child’s need to succeed and a sense of belonging. In addition to being simpler than real relationships, video games also offer a phony form of social contact.

Games can also hurt academic performance, with students who played games for long periods being more likely to have lower grades (Rooji et. al. 2011). Students who played games for long periods were also more likely to have a lower level of academic achievement (Lemmens et. al. 2009). Gaming physically impacts academic achievement because students are too engrossed in the game to complete their assignments or prepare for class (Lemmens et. al. 2009). Gaming not only affects performance in a direct way but also increases hostility, which is frequently associated with behavioral issues at school and poor academic achievement. Playing video games takes time away from homework, social interactions, and other school-related tasks (Lemmens et. al. 2009).

In conclusion, there are various opportunities to include gaming in education. Games can be a valuable tool for improving student engagement, motivation, and learning outcomes



in the classroom. However, it is important to note that excessive use of games in education may lead to negative side effects such as addiction, lack of critical thinking, and poor academic performance. In the long run, this can affect the overall performance and progress of the students. Therefore, it is important to use games in education in a balanced and appropriate manner and to consider the potential negative effects when implementing them in the classroom.

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