



ONLINE GAME-BASED INSTRUCTION AND PERFORMANCE OF LEARNERS: A LITERATURE REVIEW

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ABSTRACT

In the aftermath of the COVID-19 pandemic, several academics have shared their work on teaching and learning in a variety of ways. A number of institutions, colleges, and universities have begun to phase out face-to-face instruction. Since Information technology (IT) and the Internet have had an impact on people's lives, it offers something different in the educational field. For this new normal setup of education, online distance learning becomes relevant in the teaching and learning process. Because of rapid technical improvements and the COVID-19 issue, distance education has become more accessible. This crisis has provided us the opportunity to better understand how online distance learning will be employed. However, there are drawbacks to online education, such as distractions and a lack of interest, which is why teachers employed online game-based instruction to address this issue. This exploratory work intended to examine a number of papers that explain the online game-based instruction, and to see if there is a significant impact on learners' performance when utilizing it. Will this be beneficial or will it aggravate the situation? The goal of this literature review is to shed light not only on the advantages of online game-based instruction, but also on its positive impact on learners' performance. Moreover, to investigate the life experiences of public-school teachers in terms of how they will continue to be successful teachers and how they may assist their students despite their distances.

Keywords: benefits, instruction, online game-based, performance of learners

INTRODUCTION

The current COVID-19 pandemic has posed significant obstacles and has impacted educational institutions, and no one knows when it will cease. Every country is currently putting in place plans and processes to contain the virus, but the number of illnesses continues to rise (Schleicher, A. 2020). In the educational context, the new normal should be considered in the formulation and execution of the "new normal educational policy" in order to maintain and offer excellent education despite lockdown and community quarantine. (Tria, J. Z. 2020). Distance learning, which is conducted online, has replaced face-to-face learning in schools. During the epidemic, the usage of online learning moved education into the digital age (Hatta et al., 2020). It compels our students to study at home and assigns our parents to the role of para teachers (Anwar et al., 2020). However, students were found to be unprepared to balance their work, family, and social lives with their study lives in an online learning environment. Thus, students find online instruction to be tedious and uninteresting. Online learning also has a significant problem with personal attention (Dhawan, S. 2020). As a result of the unexpected outcome of this pandemic catastrophe, certain changes in the teaching and learning process have occurred (Palomino et al., 2020). Teacher competencies in both pedagogy and technology should be enhanced. This transition to the new normal, from the four corners of the classroom to the frontiers of virtual reality, every learning institution needs to assess how successful online learning is in offering quality education and outcomes-based education to students (Tria, J. Z. 2020). The question here is how to produce and provide high-quality education in the face of adversity, like the COVID-19 epidemic, and to what extent we will be prepared if a similar crisis strikes in the future. As a teacher, we must use proper teaching tools to do so. In order to accommodate the changing demands of learners, teachers must recognize the need to update their teaching abilities, techniques, and tactics (Budur, T. 2020). Game-based learning is another innovation in learning technology. Academic attainment, motivation, and classroom dynamics can all benefit from games. (Wang, A. I., & Tahir, R. 2020).

Playing is an important aspect of a child's growth that we should not deprive them of because it is a part of their rights, a necessary component of life, and aids in their learning. (Garcia et al., 2018). The power of play can help young children acquire a variety of skills. Playing and learning are both natural parts of a child's daily routine. When children are asked what they enjoy doing the most, they unanimously respond that they enjoy playing (McGregor et al., 2019). Nowadays, almost all learners spend much of their time utilizing or playing games on the internet. This concept could be used by teachers to persuade kids to realize the value in playing while studying. In the midst of the COVID-19 issue, the usage of online game-based instruction in the educational field contributes to student academic performance. (Ismail et al., 2018). According to (Motala, S., & Menon, K. 2020), teachers who took part in game-based learning workshops said that using games and activities online improved their students' understanding and enjoyment, as well as their ability to focus and stay involved, even when the activities were difficult. Furthermore, teaching online will assist us in delivering what is ideal for the learners during the COVID-19 pandemic, as well as guiding them toward 21st century abilities that were appropriate throughout the said breakout. (Xin Xie et al., 2020). Teachers should familiarize even better the use of online platforms or applications for they are increasingly needed to assist students to engage in learning and stay motivated. The relevance of how to use game-based teaching and learning will benefit both students and teachers, for the game-based learning has been shown to improve memory abilities and foster a good attitude toward learning, as well as its ability to link learners and assist them in developing self-constructed learning. (Khan et al.,

2017). Unfortunately, there is even a myth that playing online games will solely have a negative impact on students' academic performance; however, this is not always the case, since there are certain benefits to online gaming for students. (Ponce, A. J. P. 2019). Learners' motivation, engagement, social influence, and active performance can all be boosted by using online game-based instruction (Zainuddin et al., 2020).

Online game-based instruction is an active learning strategy in which students are guided through an enjoyable learning experience through the use of games. Critical thinking is engaged and problem-solving skills are strengthened as a result of playing the games provided by their teachers. (Yang, et al., 2017). In addition to this, teachers' growing opinions about effective teaching practices were shaped by their findings that play experiences encouraged students to think critically. The sociability and play inherent in the games they played were gateways for most students to improve their attention and focus, boost persistence, and eventually inspire them to complete their task "because learning should be pleasurable." (Pinder, P. J. 2018).

The purpose of this study is to learn more about how this tool will assist teachers in continuing to be successful teachers and it was also intended to see if using the gamification tool resulted in any differences in academic achievement or student engagement (Robosa et al., 2021) (Göksün, D. O., & Gürsoy, G. 2019).

Reviewing a variety of papers will aid in identifying gaps in the existing knowledge regarding the online game-based instruction and learners' performance. Furthermore, doing this research will serve as a foundation for future research on related problems.



NATURE AND BENEFITS OF ONLINE GAME BASED LEARNING

Online Game-based instruction is a method of teaching that uses many types of games, as well as the strategies and mechanics that go with them, for instructional reasons. It promotes a learner-centered approach that encourages students to experiment, fail, and take on challenges in a safe setting (Dadure et al., 2021). Additionally, games are likely to reaffirm the students' commitment to the learning process. (Plump, C. M., & LaRosa, J. 2017). Students can also explore circumstances produced by their teachers on their own with the help of game-based learning platforms such as Kahoot!, Quizizz, and Wordwall, these are the items that, despite the distance from our students, can help us to capture their attention. Here are three examples of online game-based platforms that teachers might utilize to engage their students while giving a lesson online.

1. Kahoot! is a game-based learning platform that may be used to assess students' knowledge, review their work, or provide a respite from regular classroom activities, it is one of the most popular game-based learning systems (Wang, A. I., & Tahir, R. 2020). (King, A. 2017) stated that Kahoot! is "Bringing pleasure into learning, for any subject, for all ages". Additionally, many studies on the impact of utilizing Kahoot since its inception in 2013 have been published, stating that it is one of the most popular game-based learning systems that we are using nowadays.

2. Quizizz is a game-based learning assessment tool that has a number of advantages, including the ability to check students' understanding while simultaneously increasing student engagement (Harefa, N., Sinaga, M., & Silaban, S. 2020). Teachers, as the central figure in the educational process, must gain new skills to stay up with technological advancements (Nojen, E. 2021).
3. According to (Damayanti et al., 2020) Wordwall is an online game that offers a number of benefits, including: first, variety of games are available, second, teachers and parents can create their own games by considering the materials to be taught, the age of the students, and other factors, third, no cost to use, fourth, learners will be challenged to do some entertaining tasks and receive their points immediately after completing them; and lastly the games can be printed in case students do not have access to the internet.

With the advancement of technology, students should not be limited to traditional classroom learning (Degirmenci, R. 2021). (Dadure et al., 2021) found out that the continued advancement of interactive technologies has fuelled the expansion of online game-based learning. Students are motivated to increase their knowledge and learning experience by using online game-based learning tools. Any interactive platform must combine learning with fun and enjoyment. Moreover, according to (Akour, et al., 2020) game-based learning retains skills and knowledge for longer than traditional learning approaches. Furthermore, an effective learning approach involves pupils entirely in their work. Physically disabled pupils can use the game-based learning tool to demonstrate their intellectual aptitude.

For the first time ever, online platforms such as Google Classroom, Zoom, virtual learning environments, social media, and other group forums such as Telegram, Messenger, WhatsApp, and WeChat are studied and tried for teaching and learning. Even after face-to-face teaching resumes, this can be explored further, and these platforms can provide extra materials and coaching to learners. These are the learning platforms via which we can make online game-based instruction more accessible to students (Pokhrel, S., & Chhetri, R. 2021).

PERFORMANCE OF LEARNERS USING ONLINE GAME BASED INSTRUCTION

As a result of the disastrous Covid-19 pandemic and the imposition of national lockdown in many nations, teaching and learning around the world has migrated from traditional classrooms to online (Mseleku, Z. 2020). Because games show active action, the learning process may be structured to be as exciting as games; game-based instruction has been deemed the finest teaching approach for inducing students' learning motivation. It is thus an optimal learning method. By incorporating games into learning scenarios, children can not only have more fun, but they can also be more motivated to learn because of the challenge and excitement of the game (Chen, Y. C. 2017). Games, may break the ice between learning goals and teaching strategies, as well as to ease the seriousness of teaching, allowing learners to freely develop creative thinking in the learning process (Wronowski et al., (2020) (Chen, Y. C. 2017). There are companies in the educational and technology fields that are developing free tools and solutions to help and support teaching and learning in a more interactive and engaging way (Karya & et al., 2021). Teachers and students have been able to teach and study in new ways that would not be possible in a regular classroom environment thanks to the new normal education setup. (Pokhrel, S., & Chhetri, R. 2021). To make the teaching process more entertaining and efficient, many tactics and approaches are developed. (Nojen, E. 2021).

Online game-based learning has proven to be an effective technique for enhancing student motivation and accomplishment. Student engagement is improved by using a game-based learning application. (Khan et al., 2017).

Games are an important part of children's cognitive and social skill development. Because games are challenging and complex, children must use pre-cognitive thinking skills to conquer the difficulty in games, as well as develop knowledge and interaction skills in the competition or collaboration process. Students constantly establish an objective system for affairs, actions, and entities through actual actions and perception in the development to form the conceptual structure and enhance problem-solving abilities (Hung et al., 2018).

Individuals' learning interests are linked to their personality, motivation, expressiveness, and self-concept, as well as identification, heredity, and external factors. (Harefa et al., 2020). Game-based instruction advocates developing interesting unit activities to improve teaching and learning situations and regards the key factor in students' cognitive inference process as students constantly establishing an objective system for affairs, actions, and entities through actual actions and perception in the development to form the conceptual structure and enhance problem-solving abilities. Researchers have identified the potential of educational computer games to improve students' learning engagement and outcomes; yet, facilitating good learning behaviors during the gaming process remains a significant and difficult challenge (Sung, H. Y., & Hwang, G. J. 2018).

Educators have looked into game-based learning as a way to motivate students to learn. The effective combination of education and entertainment to form game-based learning, is a potential new alternative in e-learning, thanks to network technology advancement and the popularity of broadband surroundings. The impact of digital games has been widely debated and explored in light of increased options for students to interact with digital games. (Gonzalez et al., 2020). (Meng et al., 2019) stated that using digital games in the classroom can help students learn more actively, and the learning is deeper and broader, as opposed to studying in a classroom setting. Because digital games have the ability to promote energy literacy and inspire behavior change, game-based learning has been steadily adopted in energy education as an effective learning tool. However, this assistance is not available to all students. It is necessary to investigate how human elements influence learners' reactions to digital games for educational purposes (Yang et al., 2017).

SYNTHESIS

Many people's lives were changed as a result of COVID-19. People experienced fear, trauma, despair, and anxiety as a result of the epidemic, especially those who lost loved ones. In the Philippines, Filipinos, particularly teachers, are concerned about the safety of their loved ones, and their lifestyles have been disrupted as a result of the pandemic's fears. Though the Filipino teachers have maintained an optimistic attitude in the face of the COVID-19 epidemic, they are nonetheless vulnerable to fears as the pandemic continues to spread over the world. These educators, on the other hand, are fully aware of how to deal with their educational, social, and personal concerns. Because the Covid-19 pandemic has

caused multiple challenges to various sectors of education around the world, teachers must always be prepared, flexible, effective, and efficient when teaching students in the midst of the crisis. Many academic institutions have been obliged to switch from face-to-face to online learning as a result of lockdown and other Covid-19 requirements. This transition was seen as a possible answer to our educational difficulties, this study shows that it came with several challenges for students and their academics. As a result, this article highlights some tools that we can use to alleviate the anxiety that we are experiencing in the teaching and learning process for the new normal setup of education, one of which is the use of online game-based instruction to assist both teachers and students in overcoming the challenges that COVID-19 has thrown at us. This study shows that there are benefits to using online games, it allows students to learn about crucial aspects of their education. The findings demonstrate that the use of online game platforms encouraged students to participate and learn more about their lesson. Game-based learning is useful for keeping all students engaged in large lecture courses, but additional research is needed to determine which learning tactics are most effective. Students in a big course using game-based learning maintained high involvement and tenacity in achieving course requirements, according to the findings. They also stated that using online games and activities improved students' learning and enjoyment, as well as their ability to focus and stay interested, even when the activities were difficult for them. Because there was such widespread agreement that game-based tactics were developmentally successful for early adolescents, the majority of teachers reported making modifications in their classroom practices to incorporate more game and activity-based learning. Teachers' growing opinions about effective teaching practices were shaped by their findings that play experiences encouraged students to think critically. The sociability and play inherent in the games they played were gateways for most students to improve their attention and focus, boost persistence, and eventually inspire them to complete their task "because learning should be pleasurable". Teachers, despite the overwhelming nature of their work and the obstacles they face in this time of pandemic, seek to make their online teaching and learning processes more efficient by utilizing various online game platforms. Learners, on the other hand, were inspired to master new skills through the use of online game platforms provided by their teachers. The use of online games bridged the gap between a lack of interest and a loss of attention. More research should be done on the benefits of online game-based instruction and how well students perform while using it.

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