Educational Video Games as a Means of Promoting Interpersonal Skills

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In game-based learning, games are used to improve student engagement, motivation, and learning. Because games can accommodate different learning styles, they can make education more inclusive and accessible. Some educational games promote collaboration. To develop interpersonal skills, children must form relationships through socialization with other children. Video games can interfere with socialization, thereby limiting development of interpersonal skills. Educational games, however, can promote learning. According to Nicola (2017), such games can "provide engaging environments for problem solving and meaning-making, and ... create spaces for collaborative learning, both within and around the game." Game developers, schools, employers and other groups have reframed games as tools that can customize learning, boost productivity, and measure results. Perceptions of games as productivity-eroding distractions persist, but with new educational game designs, plus targeted marketing from game developers, many schools and employers now welcome some kinds of games.

Review of Research

Categories of participants include gamers, game companies, and advocates and critics of game-based learning. According to Khalis (2017), augmented reality games "require players to have good social competence." Gentile (2011) found that many gamers engage in compulsive behavior. Stresses, such as poor grades, may promote game addiction because gameplay can offer external validation (Gentile 2011). Proponents of game-based learning, however, contend well-designed games have much more to offer. According to Gee (2007), "digital games can have the power in principle to immerse learners in authentic environments and support them through meaningful activities."

A blend of conventional and game-based educational techniques can improve learning. Games can be designed to promote critical thinking, decision analysis, and problem solving. For some students, collaborative gameplay can improve interpersonal skills. Camilleri and Camilleri (2017) found that digital game-based learning promotes two-way communication, because "students are usually motivated to review their knowledge and exchange their knowledge with one another." One student reported that it "helped me to step out of my comfort zone" and "build a better relationship with my classmates." Another said, "I learned how to be critical and reflective" and "how to evaluate high quality content." The researchers contend that learning through digital gameplay can help students "actively engage with their peers" and "share their knowledge and insights with others," thereby fostering an environment in which they engage, respect, and value each other's ideas (Camilleri & Camilleri, 2017).

Since the coronavirus pandemic, many businesses have welcomed E-learning systems that promote internal "knowledge flow" (Giannakos, Mikalef, & Pappas, 2022). According to Giannakos, Mikalef, and Pappas (2022), E-learning offers "opportunities for improving organizations' learning flow and ... improving employees' outcomes." They argue that one E-learning system, called eQL, supports "networking opportunities for employees" better than "face-to-face formal training" (Giannakos, Mikalef, & Pappas, 2022). In practice, however, results have varied (Yoo & Huang, 2016).

Researchers have investigated the influence and implications of game based education. Whitton and Maclure (2017) admit that in educational settings, game-based learning "is by no means uncontroversial even among educational researchers"; indeed it is "a site of contestation and polarized opinion." Cerankosky (2010) found that video games can hinder children's learning and social development; boys who had a game system "immediately spent more time

playing video games and less time engaged in school activities." Ensmann (2021), however, suggests that digital games can reach audiences that schools miss. Educators who adopt digital game-based learning techniques can open new growth opportunities for learners. Camilleri and Camilleri (2017) contend that together, "traditional and digital learning resources may provide the right arena for the advancement of quality education."

Game-Based Learning in Companies

In recent years, game-based learning has gained popularity in companies as a way to engage employees in learning and to make training more effective. The same technology that keeps people glued to a screen for hours can be used as a tool to provide engaging learning experiences. Employees can retain information better and increase their motivation to participate in training activities. Jessica Trybus, founder and CEO of Etcetera Edutainment, a company that uses video game technology to develop safety training programs, asserts that "the underlying principles of video game design parallel the learning process" (Bloom 2009). By incorporating game-like activities into employee training programs, companies can make learning engaging and effective. Bloom (2009) argues that when an individual learns new content, there is a growth of cumulative difficulty. The learner is guided by rewards and consequences. According to Trybus (2009), video games are designed so that you learn how to do everything and people are motivated by positive feedback. The difference between game-based learning and traditional learning is the role of the learner. Through traditional learning, a passive role is put upon the individual, where they sit and read through presentations, lectures, and videos. Trybus (2009) indicates that this way of learning provides a lack of flexibility and limited engagement. "It provides little motivation and no mechanism to ensure that the employees are engaged in the

process." Game-based learning in the workplace provides an opportunity to provide a safe, interactive environment for employees to develop their skills and behaviors. Since games can provide immediate feedback, it will help employees learn effectively and retain information better.

GBL can be a more cost-effective solution for employee training than traditional training-based programs. Business can develop scalable and accessible learning experiences that can be delivered to employees. Critics, however, argue that e-learning proponents raise concerns about its effectiveness as a teaching tool. Although there may be some hesitation within businesses to adopt game-based learning, some companies have indulged in the approach and have experienced positive outcomes. With the potential benefits of GBL, companies will expect to see increased investment in this area through the development of sophisticated GBL programs for the workplace.

Game-Developers and Gamers

Developers have shown a growing interest in game-based learning (GBL) as an area of growth and innovation. They see the potential in GBL as a way to use their expertise in game design to promote positive social outcomes. Some have embraced game-based learning as a natural extension of their work, seeing it as a way to advocate the use of games to enhance learning results. Developers often work closely with educators and instructional designers to design games that are catered to promote learning objectives. However, critics argue about the effectiveness of game-based learning as a teaching tool. They characterize it as a novelty that may not be well-suited to traditional education settings. Some developers may be concerned

about the possibility that digital games can distract individuals or create unrealistic expectations for learning.

Game developers have also shown an interest in GBL as a tool for training employees and promoting skills development in the workplace. They see the potential of GBL as a way to use their skills and expertise in game design to develop effective training programs for companies. Some game developers have created game-based learning for companies. They work closely with training professionals to create games that are specifically designed to promote the acquisition of new skills or knowledge. Dan White, game developer and CEO of Filament games, contends that as gamers, they enjoy having the freedom to make their own choices. Having a sense of control and autonomy was an exciting and novel concept. White believes that good gameplay and good learning are complementary rather than opposition forces. He mentions that while playing a game, you realize you're not yourself. This drives kids' imagination and makes them think creatively (Filament games).

However, there are others who may be skeptical about the effectiveness of GBL in the workplace. Their concerns revolve around the potential for games to be seen as trivial by employees or managers, and may be hesitant to invest money and resources in GBL programs. In spite of the differences in opinions, many game-developers are actively exploring game-based learning as an area of innovation. With the high demand for engaging learning experiences, GBL will continue to be a critical area of collaboration between game developers, educators, and instructional designers.

Gamers have differing opinions about game-based learning. It depends on the types of games they play and their personal experiences. Some view game-based learning as a positive approach to education. Those who have experienced the benefits of learning through games have

an enthusiasm for this learning approach. They believe that games have the possibility to engage learners and promote a different understanding of concepts in subjects that may be perceived as dull. They contend that games can involve a lot more social interaction between individuals, making them engaged and focused. Dr. Nick Taylro, North Caroline State communications professor, and other researchers noted that after surveying gaming lovers at gaming events, "gamers were often exhibiting many social behaviors, such as talking, drinking, and chatting online. Gaming didn't eliminate social interaction, it supplemented it" (Stampler 2014). Other gamers, however, are more skeptical about this learning approach. They argue that games may not be an effective way to learn as they do not provide a realistic representation of the real world. Some contend that games are sometimes viewed as a form of escapism and should be used in education. Although these differing stances on GBL can vary, it is important to consider their roles in the development of game-based learning. Their experiences can help create an innovative approach to education and ensure that students are provided with the resources to succeed.

Game-Based Learning in Education

Game-based learning has become increasingly popular in education as a way to engage students and enhance learning outcomes. In game-based learning, students play games that are designed to promote the acquisition of knowledge or skills. One of the main advantages of game-based learning is that it can be motivating and highly engaging for students. Society today has shown how students are accustomed to technology from the way they grew up using electronics (Shtepura 2018). Many educators are currently seeking new learning methods, such as GBL, to keep students' attention (Sarkar et al., 2017). Research has presented that game-based

learning improves classroom interactions between learners (Duncan, 2020). Musselman (2014) contends that “game-based learning is a compelling and viable instructional practice”.

It provides students with immersive and interactive learning experiences that encourages them to explore and experiment. This can be beneficial for students who struggle with traditional teaching methods or those who may be disengaged from the learning process. Incorporating technology within classrooms, particularly when made inclusive for all students, contributes to the enhancement of academic performance, assessment outcomes, and facilitates successful progression in school (Persinger, 2016). Douglas (2022) conducted a study of an exploration of at risk students' experiences and engagement with game-based learning. One participant described GBL as “extra practice on an assignment or module in a different form,” and another participant said GBL was “a fun way of learning” (Douglas 2022). When the students were asked about their experiences with GBL, Douglas (2022) noted that the “participants frequently spoke about winning the game as being the goal. A participant “emphasized the importance of winning the game stating, “If we won we felt good about it. The goal was to win. We were trying to win”. They also discussed the goal of winning, arguing that their “goal was to win and pick right answers. Right answer meant you were doing well” (Douglas 2022). The idea of winning corresponds with the methodology of game-based learning, where students participate in digital exercises to achieve goals and win. (McCosker 2015)

Game-based learning can also promote the development of a range of skills, including critical thinking, problem-solving, communication, and collaboration. It can be designed to give students opportunities to enhance these skills in a fun and interactive manner, which would help them develop the confidence and competence to apply these skills in real-world scenarios. According to Yahya et al. (2011), educational strategies, such as student-centered learning and

problem-based learning should be used more. They provide students with ample opportunities to develop their soft skills while engaging in the learning process. Yasmin et al.(2021) further suggests that undergraduate students need to acquire soft skills to tackle the demands of the competitive job market. Fejas, Ros-McDonnell, and Bajor (2015) conducted a feedback analysis of soft skills in a GBL environment. Many students enjoyed the activity and would recommend his/her classmates to participate in it. They reported the acquisition of significant personal skills, such as negotiation, decision making, teamwork, and stress management. In addition, they learned essential work-related competencies, such as performance evaluation, organization, and planning. (Fejas, Ros-McDonnell, and Bajor 2015).

Game-based learning can be tailored to meet the needs of individual students and learners, providing different levels of challenges, support and feedback. It allows students to work at their own pace and receive personalized feedback. However, despite these benefits, game-based learning should not be a replacement for effective teaching practices or a comprehensive curriculum. It should be implemented as a supplement to other teaching methods, and should be integrated in the curriculum in a meaningful way. It has shown promise as a tool for engaging students and promoting interpersonal skills in schools and education. As the field of game-based learning continues to evolve, we'll likely see more innovative employment of this method in the future.

Advocates and Critics of Game-Based Learning

Although game-based learning has many benefits, critics have raised concerns about this approach to education and training. They argue that the knowledge gained through game-based learning may not be transferable to real-world scenarios. Despite research showing that

game-based learning can increase student engagement (Musselman, 2014), it is not a solution for every student. Competition among peers tends to be a common occurrence in game-based learning applications. Studies have highlighted the negative aspects of competition, which can lead to increased stress levels among participants (Kristensen et al., 2015). Teachers have reported that they feel overwhelmed by the multitude of GBL learning applications available for use. They have insufficient time to familiarize themselves with their instructions and implementation (Molin, 2017). The limited time spent on professional development training for teachers in relation to game-based learning adds to this challenge (Denham et al., 2016). To address these concerns faced by educators, textbook companies have incorporated GBL strategies into their curricula (McGraw-Hill Education, 2018). Similarly, game developers have recognized the need to support teachers and students by creating video tutorials and documents to explain how to use their games in a learning environment. (Kahoot!, 2019, Quizlet, 2020).

Some critics further suggest that the emphasis on learning fun and engaging through games may come at the expense of real learning. They argue that games can distract from the learning objectives. The focus should be on providing quality instruction and content, instead of simply making it fun. While there is evidence to suggest that game-based learning can be effective, critics argue that it may not be effective for all types of learners. They suggest that a traditional classroom-based learning has proven to be more effective for most learners. It allows learners to focus on specific subjects, which may not be applicable to game-based learning. Teachers can develop lesson plans tailored to the needs of their students, and provide feedback on their progress. Learners can ask questions and receive clarifications, which may also not be possible with game-based learning. Traditional classroom-based learning also allows for a range of teaching methods, such as lectures, group discussions, and hands-on activities. These can cater

to different learning styles in comparison to game-based learning that may be limited to a specific type of learning experience. Critics further argue that traditional classroom instruction is more reliable and accessible for more students. Developing effective game-based learning programs can be expensive, which may limit accessibility for students or organizations with limited resources.

There are ethical concerns critics raise about the use of games for education or training. Games can be intentionally designed to influence behaviors that may affect the interests of the learners. Csikszentmihalyi's flow theory suggests that engagement in an activity may be hindered if there is an imbalance between skill and challenge. When the skill level of a student is too low for a game-based learning activity, they may feel anxious or stressed. If their skill level is too high, they may feel bored (Csikszentmihalyi, 1990, 2008). Students who are disengaged from the learning process are likely to display little motivation and achievement levels (Patton, 2015). Those who take an active role in their learning experience a boost in motivation and achievement (Sinatra et al., 2015). According to Csikszentmihalyi (1990), low engagement can occur if there is a mismatch between an individual skill level and the challenges presented in an activity.

These criticisms are valid, but advocates of game-based learning argue that they can be addressed through careful game design, and appropriate use of technology. Jessica Trybus, author of '*Game-Based Learning: What it is, Why it Works, and Where It's Going*' contends that when we're engaged in games, our brains are simulated and involved in the learning process, which encourages the use of problem-solving and critical thinking skills. She notes that "our minds are experiencing the pleasure of grappling with a new system." People enjoy trying to understand the game and winning (Lynch 2018). The effectiveness of game-based learning

depends on the quality of games, the instructional approach, and the needs and preferences of learners.

Conclusion

Game-based learning has shown great promise as a way for promoting interpersonal skills in students. Through these interactive learning experiences, digital games can help learners develop a range of critical skills, including communication, collaboration, and problem-solving. Although critics have argued concerns about the effectiveness of GBL, careful planning and implementation can ensure that digital games are used to maximize their potential benefits in learning. Moving forward, there is a need for further work and experimentation to understand the benefits and limitations of GBL for promoting interpersonal skills. The research should focus more on identifying the most effective types of games. It should aim to recognize the most optimal practices for integrating GBL into corporate and educational curriculums. GBL offers a valuable tool for companies, educators, and learners to enhance their skills and knowledge. Providing an engaging and immersive learning experience, digital games can help learners develop the skills to succeed in school, in the workplace, and in their personal lives. As such, game-based learning should be endorsed in organizations and businesses as part of their comprehensive educational/corporate program.

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