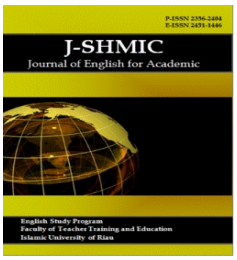

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An EFL Students' Perception Towards Game-Based Learning in Secondary School: A Descriptive Qualitative Study

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ABSTRACT

Game-based learning (GBL) is an innovative approach that involves students in identifying game elements that are relevant to the context set by the teacher. This method has proven to be effective and increasingly relevant in educational settings. This study aims to explore secondary EFL students' perceptions towards the use of Game-based learning (GBL) in secondary schools, using a descriptive qualitative research design. The main focus of this study was to investigate how Game-based learning (GBL) can effectively increase student engagement and motivation. The results showed that Game-based learning (GBL) not only serves as a learning support tool, but also promotes improved learning outcomes as well as develops students' adaptability. Based on these findings, some recommendations for the implementation of Game-based learning (GBL) in the context of secondary education are proposed, hoping to enrich future teaching strategies. This research contributes to a deeper understanding of the potential of Game-based learning (GBL) in education.

KEYWORDS
Game-Based Learning; Secondary School; EFL Learning; Perception

ABSTRAK

Pembelajaran berbasis permainan (GBL) adalah pendekatan inovatif yang melibatkan siswa dalam mengidentifikasi elemen-elemen permainan yang relevan dengan konteks yang ditetapkan oleh guru. Metode ini telah terbukti efektif dan semakin relevan dalam lingkungan pendidikan. Penelitian ini bertujuan untuk mengeksplorasi persepsi siswa sekolah menengah EFL terhadap penggunaan Game-based learning (GBL) di sekolah menengah, dengan menggunakan desain penelitian kualitatif deskriptif. Fokus utama dari penelitian ini adalah untuk menyelidiki bagaimana Game-based learning (GBL) dapat secara efektif meningkatkan keterlibatan dan motivasi siswa. Hasil penelitian menunjukkan bahwa Game-based learning (GBL) tidak hanya berfungsi sebagai alat pendukung pembelajaran, tetapi juga mendorong peningkatan hasil belajar serta mengembangkan kemampuan beradaptasi siswa. Berdasarkan temuan ini, beberapa rekomendasi untuk implementasi pembelajaran berbasis Game (GBL) dalam konteks pendidikan menengah diusulkan, dengan harapan dapat memperkaya strategi pengajaran di masa depan. Penelitian ini berkontribusi pada pemahaman yang lebih dalam tentang potensi pembelajaran berbasis Game (GBL) dalam pendidikan.

KATA KUNCI
Pembelajaran Berbasis Permainan; Sekolah Menengah; Pembelajaran Bahasa Inggris sebagai Bahasa Asing;Persepsi

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INTRODUCTION

The introduction of technology in educational contexts has changed the way students learn, with game-based learning (GBL) being one such engaging and innovative approach. Students' perception towards the use of game-based learning (GBL) in schools is an important aspect that needs to be understood to maximize the potential of this learning. In recent years, technology and interactive games have become an integral part of students' lives, and an in-depth understanding of how students respond and adapt to game-based learning (GBL) can provide valuable insights for the development of a more relevant and engaging curriculum. In common, games-based learning alludes to the imaginative learning approach inferred from the utilization of computer recreations that have instructive esteem or diverse sorts of program applications that utilize recreations for learning and instruction purposes such as learning support, instructing improvement, appraisal, and assessment of learners (Tang et al., 2009).

Game-based learning (GBL) itself has experienced many changes and developments in the current era. Fernández-Raga et al., (2023) argue that comprehensive procedures were created using the instructional design technique to execute the game-based learning (GBL) method economically. The meaning of a game-based learning or GBL application is quite diverse, and there is no one definite meaning to its truth. Generally, game-based learning (GBL) describes an approach to teaching, in this method, students identify game elements that are relevant to the game context that the teacher has set. Game-based online learning has proven to be an effective approach and is progressively becoming appropriate in educational settings as an innovative teaching method (Chang et al., 2022). According to Chang et al., (2019), game-based learning (GBL) is a learning-related interaction, that combines educational content and learning materials into digital games. These are tasks that let the students perform basic tasks or extensive approaches to problem-solving. Avdiu (2019) also argue that play-based learning encourages children to participate in active learning, intending to improve student's social skills and improve comprehension, and problem-solving skills during the learning process. Byusa et al., (2022) pointed out that the term game-based learning (GBL) is defined as understandably more difficult to translate because of the diversity of forms and contexts where it is employed. Importantly, the game is highly educational and not only enhances students' comprehension of concepts but also motivates them to learn and allows them to enjoy while grasping the subject matter.

In addition, understanding students' perception towards game-based learning (GBL) is not only limited to the technological aspects, some students may have a natural affinity towards games, while others may view the use of game-based learning (GBL) as a form of mere entertainment. Therefore, an in-depth understanding of students' various perceptions opens up opportunities to develop teaching strategies that can be tailored to individual needs and preferences, creating an inclusive and responsive learning environment. The term perception refers to students' views or responses to the use of game-based learning (GBL) techniques in improving learning, engagement, and teamwork in planning subjects. This research highlights how students perceive the effectiveness of the game-based learning approach and how it affects their learning experience (Hartt et al., 2020). This research on student perceptions of game-based learning (GBL) in secondary schools can provide a basis for the development of more contextualized pedagogies and ensure that the integration of this

technology is not only accepted but also provides real benefits in achieving the set learning objectives.

Game-based learning (GBL) has arisen as one of the most advantageous instructional methods due to its focus on interactive and engaging classroom activities. Furthermore, several review studies in educational research have tried to document the different educational games utilized and their impact on student learning within school environments. This new concept of game-based more commonly called game-based learning (GBL), can be used as an alternative solution to increase students' learning motivation. According to Duncan (2020), in secondary education, the game-based learning (GBL) approach has the potential to boost student engagement. Students can study interestingly and compellingly with the help of games-based learning (GBL). Students interact with demanding and immersive scenarios in a gaming context, which fosters an atmosphere that encourages involvement and engagement. Because they are participating in enjoyable and fulfilling activities, pupils develop an innate desire to study. game-based learning (GBL) gives learning a practical and contextual dimension by allowing students to acquire essential skills through problem-solving, scenario analysis, and decision-making in addition to knowledge provision (Mao et al., 2022).

Furthermore, game-based learning (GBL) has a reputation for encouraging students' creative growth. Students frequently encounter difficult problems in games that call for original thought to solve. Engaging in games that require experimentation, exploration, and problem-solving boosts students' creativity and fosters the development of unconventional thinking abilities that are critical for both everyday life and future employment. Thus, game-based learning (GBL) not only facilitates the transfer of knowledge but also helps to generate learning experiences that are stimulating and engaging, allowing students to grow in critical thinking, creativity, and problem-solving abilities. Students' opinions and perceptions of game-based learning (GBL) have also been investigated in a few earlier research. Cinta et al., (2021) argued that students generally respond positively to learning through games, seeing it as a fun and effective way to learn. In addition, this approach combines elements of play with learning objectives. Games present an engaging and interactive challenge, creating an environment that supports students' intrinsic motivation. By utilizing game elements, game-based learning (GBL) can spark curiosity, a desire to participate, and a competitive spirit in the learning process. Students often feel more engaged and motivated as learning becomes more fun and challenging. Looking specifically at the discovery of prior findings on game-based learning (GBL), it seems that the application of game-based learning (GBL) has been widespread in secondary schools in several countries. However, there are some things to consider when implementing game-based learning (GBL). Liu et al., (2020) conducted a study on the implementation of game-based learning (GBL) and gamification. She found that the research results show an increase in motivation and interest in learning, students give more effort to assimilate the material learned and show significantly higher learning outcomes compared to the control group.

Researchers in East Asia or the Middle East also found other findings. According to Acquah et al., (2020), the purpose of this study is to examine empirical evidence examining the efficacy of digital games in second language acquisition from 2014 to 2018, with a particular emphasis on participants aged 6 to 18 years old. Further inquiry showed that game-based learning games can benefit language acquisition, affective/psychological states, contemporary competence, and participatory behaviour. This research shows that game-based learning (GBL) has an impact not only on its game features but also on the relationship

between context and learning outcomes. The results of the study, which was carried out in a formal learning setting with or without instructor support, demonstrated that it significantly improves language acquisition. Since the bulk of research findings indicate that game-based learning (GBL) promotes language acquisition, it can be successfully utilized in educational settings. Overall, the study's findings point to the effectiveness of game-based learning (GBL) as a strategy for language learning. To determine the most effective methods for integrating game-based learning (GBL) into formal learning settings, more investigation is necessary.

In contrast, an interesting result from Mao et al., (2022) is participants' ages were categorized according to their educational stage: elementary school, middle school, high school, or college. The author comes to the conclusion that using game-based learning (GBL) significantly and favourably affects students' growth as critical thinkers. The amount to which game-based learning (GBL) influenced students' development of critical thinking depended on several factors, including the kind of game played, the critical thinking concepts taught, the cultural environment, the year the research was published, and the nature of the research publication. According to this meta-analysis, role-playing games used in game-based learning (GBL) had a stronger effect on students' development of critical thinking than other game kinds. Furthermore, the use of game-based learning (GBL) approaches in planning education can increase students' motivation, emotional engagement, and satisfaction in the learning process (Fuster-Guilló et al., 2019).

In addition, there are significant differences in extroverted and introverted students' interaction with game-based teaching techniques as well as in achieving enjoyment in learning. These findings support the idea that different game preferences can better suit each student's personality and learning style. In addition, Chang et al., (2021) state the time factor also affects the influence of game-based learning (GBL) on students' critical thinking. Research published in recent years showed a greater impact of game-based learning (GBL) compared to research published in earlier years. All things considered, this meta-analysis offers compelling proof that game-based learning (GBL) positively and significantly affects students' capacity for critical thought. The degree to which game-based learning (GBL) influences students' critical thinking depends on several elements, including the kind of game, components of critical thinking, cultural considerations, the year of publication, and publishing characteristics. These results offer valuable information that researchers and educators can use to design and apply game-based learning (GBL) in various learning environments.

A great deal of previous studies has focused on the application of game-based learning to secondary school education from a variety of angles. While some studies concentrate on cognitive elements, others look at motivation, engagement, and memory retention when using games to teach. According to a few earlier research, using games in the classroom helps motivate more. Eltahir et al., (2021) affirm that in games, students often feel motivated to keep trying to achieve the goals of the game, which can transfer this motivation into the learning context. Thus, Ghazy et al., (2021) emphasize that the use of games can also increase students' participation as they are actively engaged in interesting and challenging activities. Game-based learning (GBL) offers an interactive learning experience where students are actively involved in the learning process. They have control over their experience and can see first-hand the impact of their actions in the game. In addition, games are often designed with gradual levels of difficulty, which provide a challenge to players to improve their skills continually. This challenge can keep students motivated to try harder and achieve higher.

Overall, the research aims to explore an EFL student' perception towards the use of game-based interventions in secondary schools. In fact, there have been many studies on the use of game-based learning (GBL) in university settings, as well as in secondary schools. However, there is still a need to explore and find out more about students' perception of game-based learning (GBL). Therefore, this research is held to be able to become new knowledge in the world of education, where this research will focus on student perception in the application of game-based learning (GBL) in secondary schools in Indonesia, especially in learning English.

METHOD

Research design

This study aims to gain a deeper understanding of students' perception towards the use of game-based learning (GBL) and a descriptive qualitative method was used. Data were collected using semi-structured interviews. Through interviews, the researchers interact directly with the participant to obtain relevant and in-depth data. The main advantages of this method are its ability to explore a deep understanding of individual perspectives and experiences, as well as its flexibility in capturing nuances and complex contexts.

The participant in this study is Tata, aged 17, who is in grade 11 at a private high school in Yogyakarta. Tata was purposively selected because of her long experience with game-based learning (GBL) for almost 2 years, which is relevant to the focus of this study. The selection of participants was done purposively, by choosing individuals who have specific experience and knowledge related to the research topic. Tata agreed to be a research participant and signed a consent form. Interviews were conducted online via Zoom Meeting, and audio recordings were made and transcribed for analysis. Semi-structured interviews were chosen as this method allowed for in-depth exploration of Tata's experience with GBL, as well as providing flexibility to customize questions and explore themes that emerged spontaneously. This method was more appropriate than focus groups or observation as it allowed for the exploration of personal insights and in-depth reflections from participants.

The interview protocol was based on the following outline, with interviews lasting on average between 30 and 40 minutes:

- How did GBL help you learn English?
- What do you think about the way teachers teach using GBL?
- What are the tasks of teachers who use the GBL method?
- After you learned to use GBL in class, how did you feel?
- What did you like and what did you dislike about the class using the GBL method?

The interviews were transcribed verbatim and read multiple times to check the consistency of the codes assigned to each emerging theme according to Braun and Clark's (2006) thematic analysis. The data analysis process included the stages of familiarizing oneself with the data, coding, creating themes, reviewing themes, naming themes, and reporting the results. Coding was done manually, which allowed the researcher to better understand the data and ensure accuracy in coding the transcripts. At this stage, coding was considered complete and themes were derived by evaluating the frequency, relevance, and consistency of the codes that emerged from the data. A detailed description of the coding process and how the themes were derived increases the transparency and replicability of the research, allowing other researchers to understand and assess the methodology used in this study.

FINDINGS AND DISCUSSION

In the second language learning context, game-based learning (GBL) in middle and high schools has had a significant impact on how students learn and acquire language skills. Through the use of games as a learning method, students become more engaged and excited in their learning process. This study found that game-based learning (GBL) has benefits that are aligned with the student's perception during the lesson. There were six prominent themes generated from the data namely learning support, teaching improvement, adaptability, students' favourite subjects, classroom atmosphere, and learner evaluation. In addition, the use of game-based learning (GBL) still requires the participation and collaboration of students and teachers.

a. Game-based learning (GBL) as Student Learning Support

Game-based learning (GBL) can be an alternative to learning support for students in secondary schools. Where a game-based learning (GBL) model captivates and engages students, with a specific end goal, such as developing students' knowledge and skills. This is supported by Dai et al., (2023) who discovered that students are capable of combining various learning aids to support their progress within the game learning to problem-solve. They also found that these learning supports facilitated learners' in-game representational. Moreover, this approach comprehensively integrates game elements with learning objectives, which significantly supports students' vocabulary acquisition process. By presenting engaging and interactive challenges in a game format, students not only experience a profound increase in intrinsic motivation, but they are also actively engaged in expanding and deepening their vocabulary knowledge. This approach creates a fun and relevant learning environment, where students can practice new vocabulary in an engaging context, as well as gain a better understanding of its use in various situations. In this way, they can assimilate and apply new vocabulary effectively, making the learning process more thorough and satisfying (Hung et al., 2023). In addition, in this current era, future teachers must comprehend how students utilize educational aids to guide evidence-driven design and pedagogy in gaming:

> *"... it helped me find some new vocabulary. Sometimes in the lessons some use Indonesian and some use English. And some of the lessons that use games that use English are like connecting the words, like feeding the words, and I think this way we go deeper and understand (the meaning) whether it's in the material or the vocabulary."*

There are other findings about learning support obtained in game-based learning (GBL) research in secondary schools, namely as a means of improving students' reading and also as a way for students to have good pronunciation:

> *"Like the changes in me are more about reading, for example, the teacher is like giving questions so there will be how many points in each question, if he is wrong it means we repeat it again until it is correct. And for pronunciation, there will also be a special pronunciation game where we try to pronounce what we hear until it is correct, if it is wrong we repeat it again, repeat it until it is correct."*

Nevertheless, behind some of the successes of implementing game-based learning (GBL) at school, it turns out that some difficulties from the teachers themselves make students uncomfortable when learning is taking place:

> *"... once in a while. The difficulty is.. The difficulty is usually like finding the results when the game is finished. Supposedly after each game session there is an answer, so the results can be seen, who won, which questions were wrong, but from the teacher there is a lack of ... like not knowing how to display it, there are students who cannot join too, ..."*

To conclude, the application of game-based learning (GBL) has become a value that is quite interesting for students, as well as a medium to support their learning that can be used as learning support. However, behind the application that already has a role as a learning support, the use of game-based learning (GBL) still has several obstacles in its application either from teachers or from students. According to Astuti & Asikin (2019), this is because teachers are less involved with the development of ICT in the current era. In this digital era, Information and Communication Technology (ICT) has become an important tool for teachers in the classroom. With the use of ICT, educators may create more engaging and interactive learning environments for their students by providing them with a multitude of tools and information. Furthermore, ICT enables educators to customize the educational experience for pupils, accommodate varying learning preferences, and offer chances for cooperation and artistic expression. Additionally, teachers can use ICT to monitor student progress, give prompt feedback, and adapt their teaching methods to each student's needs. Moreover, ICT gives educators access to online training materials, chances for professional growth, and the capacity to stay current with emerging trends and technology in education (Hu et al., 2021).

b. Game-based learning (GBL) promotes Learning Improvement and Enhancement

Elsherbiny et al., (2021) proposed that teaching enhancement refers to efforts to enhance the teaching and learning within the educational environment. The use of educational technology, active learning techniques, greater teacher-student interaction, creative teaching aids, and the creation of engaging curricula are just a few examples of the many tactics and methods educators employ to enhance students' learning experiences. The discussion on how GBL enhances teaching can be reinforced with evidence and references showing that this approach has a positive impact on teacher-student interaction as well as teaching methodology. Research has shown that GBL can increase student engagement in significant ways, strengthening the relationship between students and teachers through more frequent and relevant feedback. For instance, a study by Sun et al., (2023) showed that game elements can increase students' motivation and their engagement in the learning process, which in turn makes it easier for teachers to monitor progress and provide more effective support. In addition, GBL encourages more adaptive teaching methods, where teachers can customize game tasks and challenges according to students' individual needs, thus creating a more personalized and responsive learning experience. Thus, GBL not only enhances students' learning experiences but also enriches teaching practices by providing innovative tools to improve interaction and feedback in the learning process. This is also consistent with the study's findings, which show that the use of game-based learning (GBL) is an attempt to raise the standard of instruction and learning in a way that is more cutting-edge and pertinent to the modern world:

> *" ... boring is not really... actually it's probably with games that invite us to enjoy the lesson more. The class also becomes less boring, I feel less bored and there is a new atmosphere ..."*

In addition to the satisfying feeling of a new atmosphere, this aspect of teaching enhancement also allows students to bond with their classmates. Through games, students can learn more effectively because they will be more motivated to participate and try to achieve the goals set in the game:

> ***"****It is just fun to be together with friends, looking for answers together. Sometimes it's a random question, if a friend has done the question, then we can tell each other the answer, because usually the question can be repeated..."*

In addition, according to the results of this study in improving teaching itself, lessons using games can provide a more interactive, engaging, and fun learning experience for students. The discussion regarding practical implications for teachers can be expanded to focus on how they can effectively implement GBL in diverse classroom settings. According to Persico et al., 2023 states that teachers need to consider several key factors. Such as, they should select games that are relevant to the curriculum and specific learning objectives, teachers should adapt the games to the needs and learning styles of different students, and it is important for teachers to provide constructive feedback during and after game sessions, to help students understand concepts better and identify areas that need improvement. In addition, teachers also need to monitor and assess students' progress in an effective way, using data and results from the games to design better teaching strategies. By strategically implementing GBL, teachers can create a dynamic and adaptive learning environment, which supports student engagement and improves overall learning outcomes. In learning using games, students do not just sit quietly listening to the teacher talk, but they are actively involved in the learning process through various interesting and challenging activities:

> *"... yes, I like learning while playing games, like.. so that our brain has a resting space and not too much in the lesson. We can still focus on the lesson but after that the teacher will give us games. so there will be space to think casually and take a break so that learning is not only focused and fixated on theory. "*

Using games as a learning enhancement medium for students has great potential to increase their engagement, motivation, and understanding of the subject matter. Bhat et al., (2023) assumed that by integrating games into the learning process, we can increase students' engagement, motivation, and understanding of the subject matter. In line with the results of this study, games provide an interactive learning experience where students can actively participate in the learning process. They can explore concepts that are difficult to understand through direct action in the game.

c. Game-based learning (GBL) Promote Learning Adaptability

Game-based learning (GBL) accommodates learners to adapt to greater learning. Through games' available features, game-based learning (GBL) offers learning challenges, achievements, and rewards in interesting and interactive ways. This concept of adaptability can be extended by discussing different features or examples of specific games that support students' adaptation process. For instance, games with 'level-up' mechanisms or 'progression systems' allow students to start from a basic level and gradually take on increasingly complex challenges, allowing them to adjust to a pace and level of difficulty that suits their abilities. Irzawati et al., (2023) give the example of games such as 'Duolingo' in language learning, with gamification features such as points, levels, and daily challenges, show how GBL can adapt to individual learning needs and motivate students to keep improving. As such, GBL not only provides an adaptive environment but also supports a diversity of learning styles, making the learning experience more inclusive and effective. Tata positively responds to the use of GBL as it gives her opportunities to adapt when participating in a game. Tata's account is as follows:

> *"the changes in my reading, for example, the teacher is like giving questions, there are several points .. for example from the aspects of vocabulary, pronunciation, and others. Later, if we mispronounce it, then we can adapt it ... Adapting new words or the correct pronunciation..."*

Adaptability suggests that a game offers the learner alternatives and decisions that, akin to adaptivity, are determined by the assessment of particular learner characteristics. The crucial difference from an adaptive game is that an adaptable game empowers the individual to decide which option to choose. The objective of adaptability in educational games is dual: to aid learners in self-regulating their learning and to enhance the game's effectiveness in promoting learning (Plass et al., (2020). This aligns with Tata's account:

> *"...the improvement in vocabulary, actually, not only vocabulary. For example, if there's a game that we're playing for the first time, we're not familiar with the features, maybe even some of the words in the game interface, but for me, things like this I have to try to adapt to, both from the features and the new vocabulary..."*

Adaptability in a game not only includes the aspect of providing learners with a variety of choices and alternatives, but also emphasizes the game's ability to adapt to the unique needs and characteristics of each individual. By understanding and recognizing learners' specific traits, games can be dynamically adjusted to create a more personalized and effective learning experience. This means that learners can take an active role in their learning, choosing paths and strategies that suit their learning style and level of understanding. Thus, the adaptability of games not only allows for more relevant and individual-oriented learning, but also encourages learner motivation and engagement in the learning process.

Previous findings also discuss the application of GBL in the world of lectures, which shows positive results. According to Gumbi et al., (2024) states GBL in higher education has been shown to increase active participation and academic achievement. The study reported

that GBL can improve critical and problem-solving skills among students, and strengthen collaboration and communication in the classroom. In addition, GBL in lectures also enables the application of learning theories in practice, with features such as simulations and scenario-based games facilitating contextualized and practical learning. Thus, GBL not only supports language learning at the secondary school level but also offers extensive benefits in the context of higher education, demonstrating the flexibility and effectiveness of this method in different levels of education.

While this study offers in-depth information on the use of game-based learning (GBL) in secondary education, it should be noted that it has some weaknesses. First, the sample size is small and may not accurately reflect the entire population. Another drawback is the reliance on respondents' lack of communication, which is one of the things that made it difficult for researchers to conduct more in-depth interviews with respondents. Finally, although online interviews have become a popular and efficient option for conducting interviews, there are some drawbacks to consider. Arias-Urueña & Vaghi, (2023) state that online interviews can limit the ability to clearly read facial expressions, body language, and other non-verbal expressions. Therefore, it may be difficult for interviewers to fully understand participants' reactions and comments. With the lack of face-to-face interaction, interviewees sometimes find it difficult to convey important points or grab the interviewer's attention during online interviews.

CONCLUSION

In this study, we explored the application of game-based learning (GBL) as a learning tool at the secondary school levels. The results show that the use of games in learning contexts serves not only as a supporting medium, but also as a significant method to increase student engagement and understanding. These findings provide strong support for the integration of GBL in the secondary school curriculum, both as an addition to and replacement for traditional learning methods. This research extends the existing literature by highlighting how GBL can create a more interactive learning environment, motivate students, and deepen their understanding through fun and relevant experiences. However, we acknowledge that this research has limitations, namely only involving one participant and using a descriptive qualitative study approach. To get a more comprehensive picture of the effectiveness of GBL, we encourage further research that involves more participants and explores different games and strategies quantitatively and qualitatively. Future research should also include a variety of learning contexts and subjects to test the generalizability of these findings.

The conclusion of this study confirms a major contribution to existing literature and practice by identifying the potential of GBL in improving the quality of learning in secondary schools. We encourage educators, decision-makers and policy makers to consider these findings when developing or revising curricula. By integrating GBL, they can create learning experiences that are more adaptive, interactive and effective, and meet the needs of students' diverse learning styles. The adoption and implementation of GBL in the curriculum can strengthen teaching strategies and provide long-term benefits for students in achieving academic success and future skills.

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