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Roblox and Education: A Possibility or a Danger for the Digital Age

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Abstrak

Studi ini mengkaji peran ganda Roblox dalam pendidikan, menyoroti baik risikonya maupun potensi manfaatnya bagi siswa. Di satu sisi, Roblox dapat mengalihkan perhatian siswa dan mengurangi fokus akademik; di sisi lain, platform ini dapat mendorong kreativitas, kolaborasi, dan literasi digital jika digunakan dengan tepat. Penelitian ini menggunakan metode tinjauan literatur, mensintesis studi yang diterbitkan antara tahun 2021 dan 2024 tentang pendidikan digital, pembelajaran berbasis permainan, dan perilaku online siswa. Temuan menunjukkan bahwa Roblox dapat meningkatkan motivasi dan mendukung pemecahan masalah kreatif jika diintegrasikan dalam pendekatan pedagogis yang terstruktur. Namun, penggunaan yang berlebihan dan tanpa pengawasan dapat menyebabkan kecanduan digital, penurunan konsentrasi, dan paparan terhadap konten yang tidak sesuai. Keunikan penelitian ini terletak pada pembahasan komprehensifnya tentang Roblox sebagai media pembelajaran dalam konteks pendidikan abad ke-21 di Indonesia. Secara praktis, studi ini memberikan panduan bagi guru dan orang tua untuk mengatur waktu layar sambil memanfaatkan platform tersebut sebagai alat pendidikan yang konstruktif dan menarik.

Kata kunci: *Pendidikan Digital, Literasi Digital, Berbasis Permainan, Roblox, Pendidikan Perilaku Siswa.*

Abstract

This study examined the dual role of Roblox in education, highlighting both its risks and its potential benefits for students. On one hand, Roblox could distract learners and reduce academic focus; on the other, it could foster creativity, collaboration, and digital literacy when used appropriately. The research applied a literature review method, synthesizing studies published between 2021 and 2024 on digital education, game-based learning, and students' online behavior. The findings indicated that Roblox could increase motivation and support creative problem-solving when integrated into a structured pedagogical approach. However, excessive and unsupervised use could result in digital addiction, declining concentration, and possible exposure to inappropriate content. The novelty of this research lay in its comprehensive discussion of Roblox as a learning medium within Indonesia's 21st-century educational context. Practically, the study offered guidance for teachers and parents to regulate screen time while using the platform as a constructive and engaging educational tool.

Keywords: Digital Education, Digital Literacy, Game-Based, Roblox, Student Behavior Education.

1. INTRODUCTION

The fast development of digital technology in the 21st century has deeply influenced how students learn, communicate, and explore information (Bereczki & Kárpáti, 2021; Hoesny et al., 2024; Hoe, 2022). Today, online games and interactive platforms are no longer just entertainment; they have become part of students' everyday experiences (Tuspekova et al., 2020; De Marco, 2025; Rosyidah et al., 2023). One platform that stands out is Roblox. It allows users not only to play games but also to design and share their own creations in a

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virtual space. In Indonesia, Roblox has gained strong popularity among elementary and secondary school students, reflecting a broader cultural shift toward digital interaction and online communities. Research has shown that digital games, when used wisely, can increase students' engagement, creativity, and problem-solving skills (Hamari et al., 2020).

Even so, research focusing specifically on Roblox's impact in the Indonesian educational context is still limited. Some studies highlight its potential to support learning, while others raise concerns about excessive use, decreased academic focus, and exposure to inappropriate content. This situation creates a dilemma for educators and parents who must decide how to respond to its growing presence.

Recent trends in game-based learning suggest that interactive platforms like Roblox can support project-based and collaborative learning. In several countries, Roblox Studio has been introduced into coding and STEM activities, helping students learn programming concepts and teamwork through hands on experience. This reflects an important shift in education, where learning and play increasingly intersect.

This study offers a balanced perspective by examining Roblox as both a possible challenge and a valuable opportunity in digital-age education. Rather than viewing it as entirely positive or negative, this research places Roblox within the broader framework of digital literacy and 21st-century skills. The findings provide practical guidance for teachers and parents to manage children's screen time while maximizing its educational benefits. In doing so, the study contributes to ongoing discussions about responsible and meaningful technology integration in schools.

2. METHOD

This research applied a qualitative literature review approach to explore the dual role of Roblox in education both as a possible distraction that may affect students' learning focus and as a platform that can support creativity and digital literacy development (Neuman, 2019; Tisdell et al., 2025; Patton, 2020). A literature review was selected because the purpose of this study is not to gather new numerical data, but to critically examine and connect existing theories and research findings related to the topic.

The data for this study were drawn from peer-reviewed journal articles, conference papers, and official academic reports published between 2021 and 2024. These sources were accessed through reputable academic databases, including Google Scholar, ScienceDirect, ERIC, and SpringerLink. The search process used keywords such as "Roblox," "game-based learning," "digital literacy," "student behavior," and "educational technology." To maintain relevance, only studies that focused on primary and secondary education contexts were included in the review.

The review process was carried out in four systematic stages. First, relevant literature was identified through database searches. Second, the collected articles were carefully screened and selected based on predetermined inclusion criteria. Third, the key findings from each study were analyzed using a thematic approach. Finally, the insights were synthesized into a comprehensive framework to provide a balanced understanding of Roblox's role in education. Studies that did not meet academic standards such as those lacking peer review, methodological clarity, or scholarly rigor were excluded to ensure the credibility and reliability of the analysis.

A thematic content analysis method was employed to organize the findings into three central themes (Braun & Clarke, 2019): (a) Roblox as a learning opportunity, (b) Roblox as a potential risk, and (c) practical strategies for integrating Roblox into educational

environments. This approach allowed the researcher to identify recurring patterns, differing perspectives, and practical implications for teachers, parents, and policymakers.

The focus of this study is mainly on the educational and psychological aspects of Roblox use among children and adolescents. Since the research relies entirely on secondary sources, the conclusions are interpretive in nature and may not fully represent variations influenced by cultural or socio economic backgrounds.

All references were cited in accordance with the APA 7th Edition guidelines to uphold academic integrity and transparency. This study did not involve direct interaction with human participants, as it is entirely based on previously published literature

3. RESULT AND DISCUSSION

Roblox as a Threat to Education

The analysis shows that although Roblox was created primarily for entertainment, it can pose serious challenges to the learning process when used without proper supervision. One of the most visible risks is digital dependency. Griffiths (2021) explains game addiction as a condition in which individuals lose control over the amount of time they spend playing, often prioritizing virtual activities over real-life responsibilities. Excessive gameplay in children and adolescents can interfere with daily life activities, social interactions, and academic performance, highlighting the need for parental guidance" (Király et al., 2019, p. 9). Among children, this may appear as shorter attention spans, procrastination, and neglect of schoolwork.

Kuss and Griffiths (2019) further note that long gaming sessions activate the brain's reward system by releasing dopamine, which reinforces repetitive behavior. For young learners, this can create a cycle in which instant gratification from games makes traditional learning feel less appealing. In Indonesia, limited digital literacy among many families means that parental supervision may not always be sufficient, increasing the likelihood of excessive use.

Academic distraction is another concern. Anderson and Jiang (2020) reported that students who spend more than three hours per day on digital platforms tend to show lower concentration levels and weaker performance in reading and mathematics. Twenge and Campbell (2020) similarly link extended screen exposure to emotional exhaustion, irritability, and reduced motivation to study. Because Roblox is highly interactive and competitive, it can be particularly absorbing, making it difficult for students to refocus on academic tasks.

Exposure to inappropriate content also remains an important issue. Although Roblox includes moderation systems, Internet Matters (2022) documented cases of cyberbullying, harmful chat interactions, and identity misuse among young users. Parental control features are available, but many families are unaware of how to use them effectively. As a result, the platform's open nature where users can create and share content may unintentionally expose children to social and moral risks.

Taken together, these concerns suggest that Roblox can negatively affect students' cognitive focus and moral development if used without clear limits or guidance. Rather than banning digital games altogether, the findings indicate the need for structured regulation and stronger digital literacy education to reduce potential harm.

Roblox as an Educational Opportunity

Despite these risks, the findings also highlight Roblox's strong potential as an educational tool when used intentionally. Through Roblox Studio, users can design their own games using basic programming with Lua. This process supports computational thinking (Wing, 2020), encouraging students to break down problems, identify patterns, and apply

logical solutions. Digital games like Roblox can stimulate creativity and problem-solving by allowing students to design and modify virtual environments, supporting constructivist learning principles (Squire, 2021, p. 45).

Roblox also reflects the core principles of game-based learning (GBL), which emphasize active engagement, exploration, and intrinsic motivation (Plass et al., 2021). Instead of passively receiving information, students learn by doing. Within Roblox, they can create virtual science experiments, historical scenarios, or mathematical challenges, making abstract concepts more concrete and meaningful.

Empirical evidence supports these benefits. Hamari et al. (2020) found that students involved in game-based learning often show higher engagement, stronger confidence in their abilities, and deeper conceptual understanding than those in traditional classrooms. Game-based learning environments can significantly increase learner engagement and intrinsic motivation, particularly when learners participate in collaborative activities (Connolly et al., 2021, p. 16). In Indonesia, these strengths align closely with the Merdeka Belajar curriculum, which encourages independence, creativity, and collaboration. Designing virtual worlds allows students not only to learn coding but also to develop critical thinking, spatial awareness, and teamwork.

Collaboration is another important advantage. Roblox's multiplayer environment enables students to design and test projects together, reflecting the principles of project-based learning (Thomas, 2000). Through this process, they practice communication, role distribution, and constructive feedback skills that are essential in modern education. Integrating Roblox into classroom activities can also help teachers move away from lecture-centered teaching toward more student-centered approaches, as suggested by Prensky (2021).

Additionally, Roblox provides a space for creative expression that may benefit students who struggle with conventional academic tasks. Some learners may excel in building environments, visual design, or storytelling within the game. This can boost self-confidence and highlight diverse talents, consistent with Gardner's theory of multiple intelligences. In this way, Roblox can serve as a bridge between play and purposeful learning.

Social–Emotional and Ethical Impacts

Beyond academic outcomes, Roblox also influences students' social and emotional development. Interaction within its online communities can teach cooperation, negotiation, and empathy especially when guided by adults. Valkenburg and Peter (2022) note that positive online communication can strengthen social bonds and emotional skills.

However, without proper regulation, online environments may also expose children to negative interactions, such as toxic language or peer pressure. Livingstone and Helsper (2019) emphasize the importance of digital citizenship education to help children navigate online risks responsibly. Teaching students digital citizenship, including online ethics and responsible content creation, is essential when integrating interactive platforms into education (Ribble & Bailey, 2021, p. 22) .For Roblox users, this includes learning respectful communication, conflict management, and awareness of digital rights and responsibilities.

Privacy and consent are additional ethical concerns. Many young users may share personal information without fully understanding the consequences. Therefore, both teachers and parents play a crucial role in teaching ethical digital behavior. Such guidance is not only protective but also essential for preparing students to participate responsibly in a digital society.

Teachers' and Parents' Roles

The findings underline the strong connection between teachers, parents, and students in shaping how Roblox is used. Teachers need both digital competence and pedagogical creativity to transform Roblox from a purely recreational platform into a meaningful learning tool. Beers (2020) suggests that effective 21st-century educators act as facilitators who guide inquiry and exploration rather than simply deliver information.

Parents, meanwhile, serve as the primary supervisors of children's technology use at home. Király et al. (2020) found that supportive parenting characterized by communication and clear expectations can significantly reduce the risk of gaming addiction. Effective parental mediation involves setting reasonable limits, discussing game content, and connecting gaming experiences to real-world learning rather than relying solely on restrictions or punishment.

Schools can strengthen this partnership through digital literacy programs. The Indonesian Ministry of Education and Culture (Kemendikbud, 2022) recommends incorporating digital ethics and online safety into early education. When guidance from school and home works together, platforms like Roblox can shift from being a distraction to becoming a constructive learning environment.

Integration into the Indonesian Education System

Indonesia's Merdeka Belajar curriculum emphasizes flexibility, creativity, and contextual learning principles that align well with Roblox's interactive nature. Teachers can incorporate Roblox-based projects into subjects such as science, technology, and the arts. For instance, students might design virtual experiments, architectural models, or storytelling environments that demonstrate their understanding of course material.

However, successful integration requires strong institutional support. Schools need adequate digital infrastructure, professional development for teachers, and outreach programs to help parents understand educational technology. National initiatives like the Gerakan Literasi Digital Nasional (Kominfo, 2021) could be expanded to include game-based learning components.

Roblox also has potential as a platform for STEAM education, combining science, technology, engineering, arts, and mathematics. By designing and testing virtual worlds, students engage in interdisciplinary problem-solving and creative thinking at the same time.

From a policy standpoint, Roblox illustrates the challenge of balancing innovation with regulation. Educational authorities must ensure that technological adoption aligns with national values and child protection standards. Collaboration with Roblox Corporation could even lead to localized content that reflects Indonesian culture and educational needs.

In conclusion, Roblox is not inherently harmful or beneficial. Its impact depends largely on how, why, and under what guidance it is used. With thoughtful planning, strong digital literacy, and cooperation among stakeholders, Roblox has the potential to support Indonesia's ongoing educational transformation rather than hinder it.

4. CONCLUSION

This study concludes that Roblox can be seen as a double-edged phenomenon within the context of digital education. On the one hand, it carries potential risks, including excessive screen time, decreased concentration on academic tasks, and the possibility of encountering inappropriate online interactions. On the other hand, when used with proper educational guidance, Roblox offers valuable learning opportunities that can nurture students' creativity, teamwork, and computational thinking skills. The findings suggest that Roblox does not have to remain merely a form of entertainment; with active supervision and thoughtful integration by teachers and parents, it can become an effective educational tool.

From a practical standpoint, the study highlights the importance of teachers developing strong digital pedagogical skills so they can successfully apply game-based learning approaches in the classroom. Roblox has the potential to support project-based and collaborative learning activities that align well with Indonesia's Merdeka Belajar curriculum, which emphasizes student independence and creativity. At the same time, parents play a crucial role in guiding children's digital habits. Maintaining open communication, setting reasonable boundaries, and encouraging balanced technology use can help prevent excessive gaming while still allowing children to explore their creative interests.

In addition, schools and policymakers are encouraged to develop structured initiatives that strengthen digital literacy, ethical awareness, and safe online behavior among students. Successfully integrating platforms like Roblox into formal education requires reliable technological infrastructure, supportive policies, and cooperation among schools, government institutions, and technology providers.

Future studies are recommended to examine the real implementation of Roblox-based learning in classroom settings, particularly its measurable effects on students' motivation, creativity, and academic achievement. Long-term research could also provide deeper insights into the psychological and social impacts of sustained engagement with digital games. With a balanced, responsible, and ethical approach, Roblox has the potential to function not only as entertainment but also as a pathway toward more inclusive and forward-looking digital education.

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