International Journal of Computer and Information System (IJCIS)
Peer Reviewed – International Journal
Vol : Vol. 07, Issue 01, March 2026
e-ISSN : 2745-9659
https://ijcis.net/index.php/ijcis/index

Game-Based Learning with Roblox for EFL or ESL Learners: A Systematic Literature Review

Tira Nur Fitria
Institut Teknologi Bisnis AAS Indonesia
Email: tiranurfitria@gmail.com

This research reviews and synthesizes existing studies on the use of Roblo as a game-based learning platform for English as a Foreign Language (EFL) and English as a Second Language (ESL) learners. This examines how Roblox has been implemented in language learning contexts, what language skills and competencies it supports, and what pedagogical strategies are most commonly applied. This study reviewed and synthesized previous research across different educational contexts. The selected studies gatehered from 2022 to 2025 and examine Roblox's applications in STEM education, English language learning, higher education, religious studies, and broader skill development. The reviewed studies show that Roblox is a game-based learning platform across diverse educational contexts. Research published between 2022 and 2025 highlights its applications in STEM education, English language learning, higher education, religious studies, and broader skill development. In STEM fields, Roblox has been shown to support engineering, science, mathematics, and financial education through immersive simulations that enhance conceptual understanding, problem-solving, and analytical skills. In language learning, both learners and teachers view Roblox positively for improving vocabulary, reading comprehension, teamwork, and cultural exchange, although grammar accuracy continues to pose challenges. Beyond academic learning, Roblox fosters creativity, collaboration, innovation, and 21st-century skills, while also raising concerns regarding safety, overuse, and accessibility. Its versatility is further reflected in studies on religious education, promotional media, and metaverse schools, demonstrating broad potential across disciplines. Recent research also emphasizes the role of artificial intelligence in Roblox, particularly in enhancing game development, personalization, and learner engagement. Taken together, these studies suggest that Roblox is an effective platform for interactive, gamified, and collaborative learning, though careful pedagogical, technological, and ethical considerations are needed for its optimal implementation.

Keywords: English Language Teaching (ELT), Game-Based Learning, Roblox, Systematic Literature Review (SLR)

I. INTRODUCTION

The 21st century is marked by rapid digital transformation that reshapes how people communicate, work, and learn. The advancement of the digital era has significantly transformed how people interact, access information, and engage with knowledge. In this digital era, learners are surrounded by technological tools that influence their daily activities, including how they acquire and use languages. Education is no longer confined to traditional classrooms; instead, it adapts to digital modes that foster flexibility, interactivity, and global connectivity.

Education is one of the sectors most influenced by digitalization, as teaching and learning now extend beyond physical classrooms and traditional methods. Learners today are categorized as "digital natives" who are accustomed to interactive technologies, social media, and virtual environments in their daily lives. Consequently, educational practices must adapt to this new generation by integrating technology-driven approaches that align with their interests and learning behaviors. For language learning in particular, the digital era provides unprecedented opportunities for learners to immerse themselves in authentic communication and interactive environments that support their linguistic growth.

The integration of digital technology into education has created opportunities for more engaging and effective learning experiences. From online learning platforms to interactive applications, technology supports teachers in designing student-centered approaches that encourage collaboration, creativity, and critical thinking. Particularly in language learning, digital technologies provide learners with access to authentic resources, real-time communication, and personalized practice.

Digital technology has become an integral part of modern education, offering tools and platforms that make learning more flexible, interactive, and accessible. One of the most prominent examples is e-learning or online learning, which allows students to access learning materials, join virtual classes, and communicate with teachers and peers without being physically present in the classroom (Fitria, 2024). E-learning platforms such as Moodle, Google Classroom, and Zoom support blended and fully online instruction by providing features like discussion forums, digital assignments, and real-time video conferencing (Fitria, 2020). In EFL and ESL education, online learning enables learners to practice language

skills through multimedia resources, interactive exercises, and global communication opportunities. This shows how digital technology not only supports traditional teaching but also creates new pathways for personalized and student-centered learning.

The integration of digital technology in education has shifted the paradigm of teaching and learning from teacher-centered to learner-centered approaches. Online learning platforms, mobile applications, and interactive multimedia resources have enabled students to access learning materials anytime and anywhere. In the context of EFL and ESL education, digital technology facilitates exposure to authentic language input through videos, podcasts, and online communities. Moreover, it provides teachers with innovative tools to design collaborative tasks, monitor progress, and offer personalized feedback. This technological shift has enhanced accessibility, flexibility, and inclusivity in education, making language learning more dynamic and engaging. The emergence of digital technology has marked a new chapter in education, introducing advanced tools and approaches that hold the power to transform traditional teaching and learning practices (Damaševičius & Sidekerskienė, 2024).

Artificial Intelligence (AI) plays a significant role in shaping modern education. AI-powered systems enable adaptive learning, automated feedback, and personalized instruction tailored to learners' needs. In EFL and ESL contexts, AI supports speech recognition, writing assistance, and interactive chatbots that help learners practice communication in real-life scenarios. These developments highlight how AI enriches the language learning process by making it more individualized and efficient. AI is revolutionizing education by enabling adaptive and personalized learning experiences (Fitria, 2021a, 2021b, 2023c). AI-driven applications such as chatbots, automated feedback systems, and speech recognition tools are increasingly integrated into language classrooms. For instance, AI can analyze learner performance, identify areas of weakness, and provide tailored exercises to address specific needs. In EFL and ESL learning, AI facilitates real-time communication practice and supports skill development in writing, speaking, and listening. These technologies not only improve learning efficiency but also foster learner autonomy by offering immediate feedback and opportunities for self-paced study. AI thus plays a vital role in bridging the gap between traditional teaching and individualized learning pathways.

The emergence of the Metaverse introduces new dimensions for immersive learning experiences. As a virtual space that blends augmented reality (AR), virtual reality (VR), and interactive 3D environments, the metaverse allows learners to engage in simulations and collaborative tasks beyond physical boundaries. For language education, the metaverse offers opportunities to practice authentic communication in virtual settings, enhancing social interaction, creativity, and cultural awareness. Metaverse is creating a prominent technology trend with the ability to combine reality–virtual in a 3D environment, with many features suitable for education (Nguyen & Ngo, 2024). Metaverse technology can support several aspects of online classrooms with realistic senses, personalized teaching models, realistic 3D identities, interactive communication, virtual reality (VR) technology, and gamified learning (Chen, 2024).

The concept of the metaverse has introduced a new paradigm in education, offering immersive and interactive 3D environments where learners can engage in authentic experiences (Fitria et al., 2022). Through the combination of virtual reality (VR), augmented reality (AR), and online social platforms, the metaverse enables learners to explore simulated environments that replicate real-life situations (Fitria, 2023b). In language education, the metaverse provides opportunities for role-playing, collaborative projects, and cross-cultural communication within safe and engaging virtual spaces. Learners can practice English in authentic scenarios such as shopping, traveling, or attending events, which enhances not only their linguistic skills but also their social and cultural competencies. As a result, the metaverse is increasingly recognized as a powerful medium for experiential and meaningful language learning.

The evolution of applications for the Metaverse in various sectors, especially gaming, has created the possibility of using the Metaverse for education (Braguez et al., 2023). The rise of the Metaverse has sparked significant interest in the field of education. Among its key platforms,

Roblox engages millions of young users, leading to inquiries about how it can be optimized as an effective learning environment (Han et al., 2023).

The metaverse connects social media to virtual reality and augmented technologies (Fitria et al., 2022; Phakamach et al., 2022). The metaverse is a network of 3D virtual spaces focused on social interaction, built using advanced technologies. It offers students an immersive learning environment that enhances engagement in the classroom, making the learning process more dynamic and enjoyable (Kabilan, 2023). The metaverse and gamification are closely connected in transforming learning experiences. The metaverse offers immersive 3D virtual environments where learners can interact and engage, while gamification applies game-like features such as rewards, levels, and challenges to increase motivation. When combined, they create interactive and engaging educational spaces that make learning more meaningful and enjoyable.

Gamification is used for various educational purposes, at many learning levels in various environments, and in a wide variety of learning fields (Zeybek & Saygı, 2024). Gamification, or the application of game elements in non-game contexts, has become a powerful strategy in education (Fitria, 2022a). By incorporating rewards, challenges, and interactive tasks, gamification increases learner motivation, engagement, and participation. In language learning, gamified approaches foster repeated practice, meaningful interaction, and reduced anxiety, making the process more enjoyable and effective.

Gamification has emerged as an effective pedagogical strategy to motivate and engage learners by applying game mechanics in educational contexts (Fitria, 2022b). Elements such as points, badges, levels, and leaderboards transform traditional tasks into enjoyable challenges that encourage active participation. In EFL and ESL classrooms, gamification promotes repeated practice and reduces learners' anxiety by making activities feel less like tests and more like games. It also fosters a sense of achievement and competition that stimulates motivation and persistence. By integrating gamified approaches, teachers can create learning environments that not only improve language proficiency but also support the development of critical thinking, collaboration, and problem-solving skills. Show how gamification can be used in teaching to increase motivation and engagement among students.

Digital games have caught the attention of scholars across a variety of disciplines (Hsiao, 2007). The use of digital games for learning encompasses a range of pedagogical approaches and practices (Tinterri et al., 2023). Digital games serve not only as entertainment but also as valuable educational tools. They create environments where learners can develop problem-solving skills, collaborate with peers, and apply language in real-time contexts. Studies show that digital games can enhance vocabulary acquisition, listening comprehension, and speaking fluency by providing immersive and interactive learning experiences.

Digital games extend beyond entertainment to become powerful tools for education and skill development. They create immersive environments where learners can engage in problem-solving, collaboration, and communication while practicing target language skills. Research has shown that digital games enhance vocabulary acquisition, listening comprehension, and oral fluency by providing authentic contexts for interaction. Furthermore, games promote experiential learning, where learners acquire knowledge and skills through active participation and exploration. In EFL and ESL learning, digital games encourage learners to practice English in meaningful ways while maintaining high levels of engagement and motivation, making them an essential component of modern language pedagogy.

Digital technology has reshaped education by making learning more interactive and accessible, with digital games playing a key role in enhancing motivation and collaboration. Roblox, as a popular digital platform, offers immersive 3D environments where EFL and ESL learners can practice English through role-playing, teamwork, and communication.

Roblox, a user-generated online gaming platform, represents a unique form of gamified learning space. With its interactive 3D worlds and social features, Roblox enables learners to create, explore, and collaborate in immersive

environments. Roblox is a platform for virtual experiences built by the participating community (Hardy et al., 2022). For EFL and ESL learners, Roblox provides authentic opportunities to practice English through communication, collaboration, and role-playing activities. Its flexibility, creativity, and popularity among young learners make it a promising platform for integrating game-based learning into language education.

Roblox, a user-generated content platform and online gaming environment, has gained widespread popularity among young learners and educators due to its flexibility and interactive features. As a gamification platform, Roblox allows users to create and explore virtual worlds where collaboration, problem-solving, and creativity are central. In the context of EFL and ESL education, Roblox offers authentic opportunities for learners to practice English through communication with peers, role-playing activities, and participation in virtual projects. Its immersive 3D environment supports experiential learning, while its social features foster collaborative interaction and language use in real-time. Roblox's accessibility, popularity, and adaptability make it a promising tool for integrating game-based learning into language education, bridging the gap between entertainment and pedagogy.

The integration of digital games like Roblox aligns with the principles of the metaverse, where immersive, interactive virtual environments enhance learning experiences. In the context of education, the metaverse provides a shared digital space where students can collaborate, interact, and engage in experiential learning beyond the constraints of traditional classrooms. Roblox, as a metaverse-based platform, exemplifies these practices by offering 3D virtual worlds that support "learning by doing," social interaction, and creativity, which are core elements of game-based and experiential learning pedagogy.

Metaverse technology allows students to immerse themselves in virtual worlds that resemble the real world (Haryaka & Warman, 2024). The use of the metaverse in interactive learning has become an interesting focus of exploration, along with advances in virtual reality and augmented reality technology (Khaira et al., 2024). The Metaverse represents a virtual version of the Internet, forming a single, immersive world made possible through technologies such as virtual reality (VR) and augmented reality (AR). It extends human experiences beyond the physical realm and consists of interconnected 3D virtual spaces that emphasize social interaction, though it may also expose users, including students, to inappropriate content. Roblox, as an open-source platform, utilizes the Metaverse to create interactive 3D learning environments for both online and physical classrooms, incorporating basic cybersecurity measures (Kabanda et al., 2023). Roblox is commonly regarded as one of the leading metaverse-based games, attracting a global user base of millions (Alhasan et al., 2023). The primary development tool utilized was the Roblox platform (Binhasyeesulaiman et al., 2025). The game is structured into three zones, each offering multiple difficulty levels and integrating linear equation content along with related questions, missions, and challenges such as battling monsters. To progress and unlock each zone while earning points, players are required to learn and solve linear equations. Additionally, the game is equipped to record and monitor player data, including scores and mission achievements.

Incorporating games into education through the metaverse represents a novel method to make learning more immersive and interactive for students. The metaverse, a virtual reality environment that allows users to engage with both digital spaces and one another, provides distinctive opportunities for educational gaming experiences (Garg et al., 2024).

Gamification allows the integration of games into education, making homework and assessments enjoyable for students (Abdallah & Semaan, 2023). The presence of games in the education system has grown, leading teachers to rethink their teaching strategies and transform them into interactive, engaging games that promote both learning and fun.

Roblox serves as a powerful platform to apply gamification principles in education. Gamification refers to the use of game elements—such as points, levels, challenges, and rewards—in non-game contexts like learning, making it a teaching strategy rather than a platform. Roblox, on the

other hand, is a metaverse-based gaming platform where users can create and play games. Educators can leverage Roblox to design interactive, game-based experiences that align with educational goals, transforming traditional lessons into engaging and immersive activities. In this way, Roblox provides the environment and tools for implementing gamification, while gamification remains the underlying concept. Mujar et al. (2024) describe that Roblox is an online gaming platform and creation system that enables users to design, program, and play millions of 3D games. It offers a secure and interactive environment for exploration and experimentation, fostering both learning and social interaction.

There are previous studies related to Roblox in ELT. Hung et al. (2018) conducted a systematic literature review of 50 studies published between 2007 and 2016 on digital game-based language learning (DGBLL). The review found that most studies used mixed methods, focused on immersive games such as MMORPGs, and often employed custom-built games played on personal computers. Research largely targeted English as a second or foreign language, with university students as the most common participants and learners of mixed proficiency levels. Findings consistently reported positive outcomes, particularly in learner motivation, engagement, and language acquisition. Sirvermez & Baltaci (2023) used a systematic and bibliometric review following PRISMA guidelines to analyze 52 applied studies (2010–2022) on the use of Metaverse environments in education, selected from ERIC, Web of Science, and TR Index. The findings show that the Metaverse supports immersive, interactive, and collaborative learning through simulations and gamification, enhancing student engagement and innovative teaching. However, challenges such as accessibility, technological readiness, and pedagogical integration remain, with future research needed to optimize its educational use. Kamila et al. (2025) used a systematic literature review of 30 studies (2020–2025) following PRISMA guidelines, analyzing sources from Google Scholar, PubMed, and Mendeley through content analysis. Findings show that online games enhance vocabulary, grammar, reading, speaking, listening, and learner motivation by providing immersive environments and gamification features like points, leaderboards, and feedback. However, challenges include limited access to technology, lack of teacher training, and curriculum integration issues. Overall, online games are effective for ELT when strategically implemented with teacher support.

Previous studies have explored the role of digital games and virtual environments in education, including language learning. Hung et al. (2018) reviewed 50 studies on digital game-based language learning (DGBLL), finding positive impacts on motivation, engagement, and acquisition, but their review mainly focused on custom-built PC games such as MMORPGs, without addressing newer platforms like Roblox. Sirvermez & Baltaci (2023) examined the Metaverse in education, highlighting its potential for immersive and collaborative learning, yet their study concentrated on general educational contexts rather than specifically on English language learning. Kamila et al. (2025) reviewed online games in ELT, showing that gamification supports multiple language skills and learner motivation, but the studies reviewed were not platform-specific and treated online games broadly.

Against this background, research on Roblox as a dedicated game-based learning platform for EFL and ESL learners remains limited and fragmented. While some studies mention its potential in English learning, there has been no systematic review synthesizing its functions, supported skills, pedagogical strategies, and challenges in ELT contexts. The novelty of this research lies in providing the first systematic literature review that specifically focuses on Roblox in EFL/ESL learning. Unlike previous reviews on general digital games, the Metaverse, or online games, this study uniquely examines how Roblox has been implemented in language classrooms, what skills it supports, and how it contributes to interactive, collaborative, and gamified learning for English learners.

A systematic literature review (SLR) on game-based learning with Roblox for EFL and ESL learners serves several important functions. It synthesizes existing research to provide a comprehensive understanding of how Roblox is applied in language learning, while also identifying its key functions, such as enhancing vocabulary, reading comprehension, speaking,

listening, teamwork, and cultural exchange. The review highlights both the benefits—like increased motivation, engagement, and skill development—and the challenges, including safety concerns, accessibility issues, and limited teacher readiness. It also maps effective pedagogical strategies that educators have used with Roblox, offering practical insights for instructional design. Furthermore, an SLR provides evidence for educational innovation by showcasing how Roblox fosters interactive, immersive, and collaborative learning environments. Beyond this, it guides future research by identifying gaps, such as grammar-focused learning, long-term impacts, or the integration of AI. Finally, the findings can support curriculum developers, institutions, and policymakers in adopting Roblox as part of technology-enhanced language education.

II. METHOD

This study employs a Systematic Literature Review (SLR) as the research method. A systematic literature review is a structured approach that involves identifying, evaluating, and synthesizing existing research studies on a particular topic (Fitria, 2022a, 2022b). It differs from a traditional literature review because it follows explicit, transparent, and replicable procedures, which minimize bias and increase the reliability of the findings. The SLR method is selected because the focus of this research is not to generate new primary data but to review and synthesize existing knowledge on the use of Roblox as a game-based learning platform for EFL and ESL learners. By applying this method, the study can provide a comprehensive overview of how Roblox has been utilized in language education, assess its pedagogical value, highlight challenges faced in its implementation, and identify research gaps that can inform future investigations.

The data are collected through document analysis. Document analysis is a qualitative technique that involves reviewing and interpreting written materials to obtain relevant information (Fitria, 2023a). In this research, the documents consist of published articles in both national and international journals. National journal articles are included to capture local research perspectives and educational practices within the regional or Indonesian context. International journal articles are included to represent global perspectives and practices in the integration of Roblox for language learning. The documents are obtained from academic databases such as Google Scholar, Scopus, ERIC, and ResearchGate. Only peer-reviewed articles that discuss game-based learning, gamification, digital games, or Roblox in relation to EFL and ESL education are selected.

The data in this study are analyzed using the Miles and Huberman model of qualitative data analysis, which consists of three interactive stages. The first stage is data reduction, where information from the reviewed documents is selected, simplified, and organized so that only data relevant to Roblox in the context of EFL and ESL is retained, while unrelated content is excluded. The second stage is data display, in which the reduced data are systematically presented in forms such as tables, matrices, or thematic categories to make patterns, themes, and relationships across studies more visible. The third stage is conclusion drawing and verification, where the displayed data are interpreted to generate findings and conclusions that are continuously verified by cross-checking with the reviewed documents to ensure accuracy and validity. Through these stages, the analysis provides a comprehensive synthesis of how Roblox has been used in EFL and ESL learning, highlighting its benefits, challenges, and potential for further research.

III. FINDINGS AND DISCUSSION

3.1 Findings

Roblox (https://www.roblox.com) is an online platform and game creation system that allows users to design, share, and play games created by other users in immersive 3D environments. It combines elements of social networking, user-generated content, and digital gaming, making it both a creative tool and an entertainment space. Roblox is especially popular among young learners but is also expanding to wider audiences, providing opportunities for collaboration, role-playing, and interactive learning.

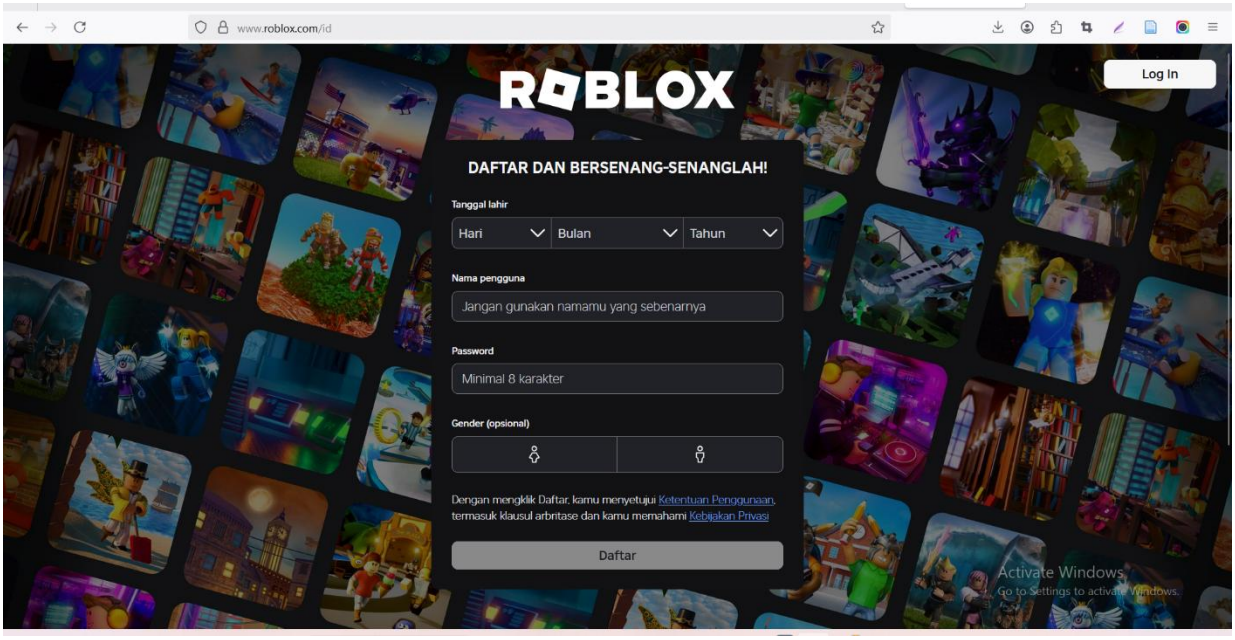

Figure 1. Homepage of Roblox
Source: https://www.roblox.com/id

The homepage of Roblox serves as the central hub for users to explore and engage with the platform's vast array of interactive experiences. Upon logging in, users are presented with a dynamic interface that features a carousel of trending and recommended games, personalized based on their activity and preferences. The layout is designed to facilitate easy navigation, with sections highlighting popular games, friends' activities, and ongoing events. Additionally, the homepage provides access to the user's profile, settings, and the Roblox catalog, offering a comprehensive overview of the platform's offerings. This user-centric design ensures that both newcomers and seasoned players can seamlessly discover and enjoy the diverse experiences Roblox has to offer.

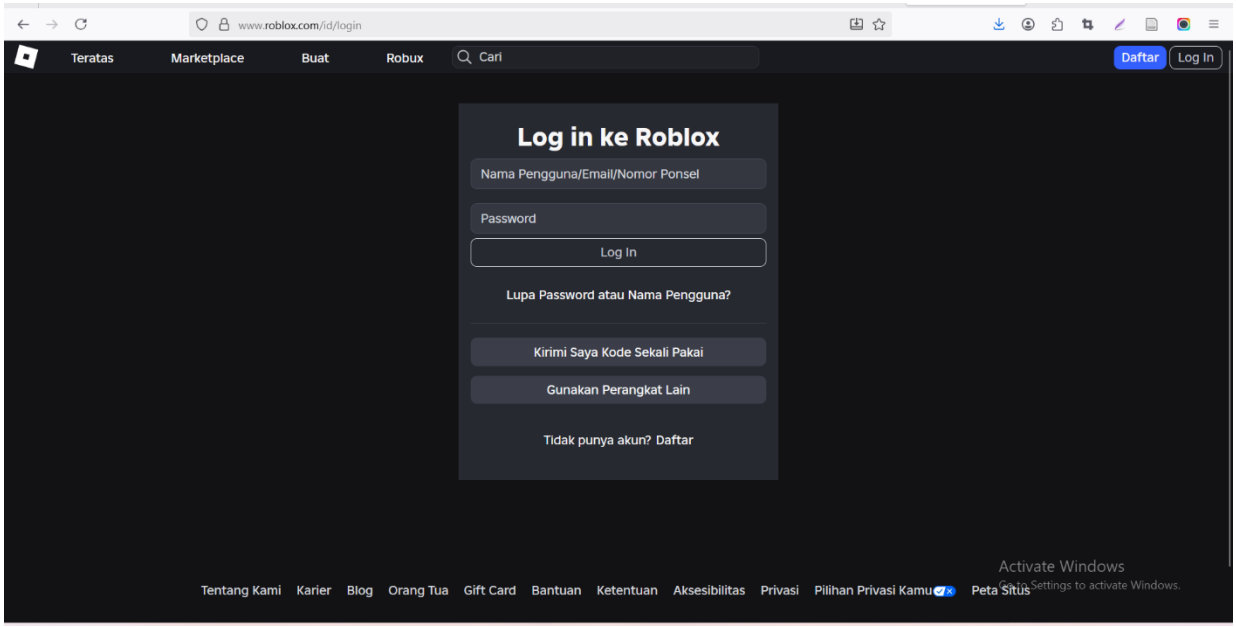

Figure 2. Login Account of Roblox
Source: https://www.roblox.com/id/login

The Roblox login page (https://www.roblox.com/id/login) is the main gateway for Indonesian users to access their accounts. It allows players to log in with their username or email and password, while also offering a "Remember me" option for convenience. The page provides prompts to download and install Roblox if needed, ensuring smooth access to experiences. Beyond access, it emphasizes both security and ease of use, protecting user data while simplifying the login and installation process.

The Roblox login page is the official entry point for users in Indonesia who want to access their Roblox accounts. This page allows players to securely log in using their username or email address along with their password. Without logging in, users cannot join experiences, access saved progress, or interact with the Roblox community. Because of this, the login page serves as an essential gateway to the platform. On this page, users will find a simple form to enter their credentials. There is also a "Remember me" option, which makes it easier to log in next time without retyping credentials. For new users or those who do not have the Roblox Player installed on their device, the login process may include prompts to download and install the Roblox software. Clear step-by-step instructions are provided, such as downloading the installer file, running it, and clicking "Join" to enter a Roblox experience. Beyond simply signing in, the login page ensures both security and convenience for players. By requiring credentials, Roblox protects user data and prevents unauthorized access to accounts. At the same time, features like "Remember me" and automatic installation prompts help streamline the process, making it faster and more user-friendly. In short, the login page not only provides access but also ensures that users are ready to explore, play, and create in the Roblox universe.

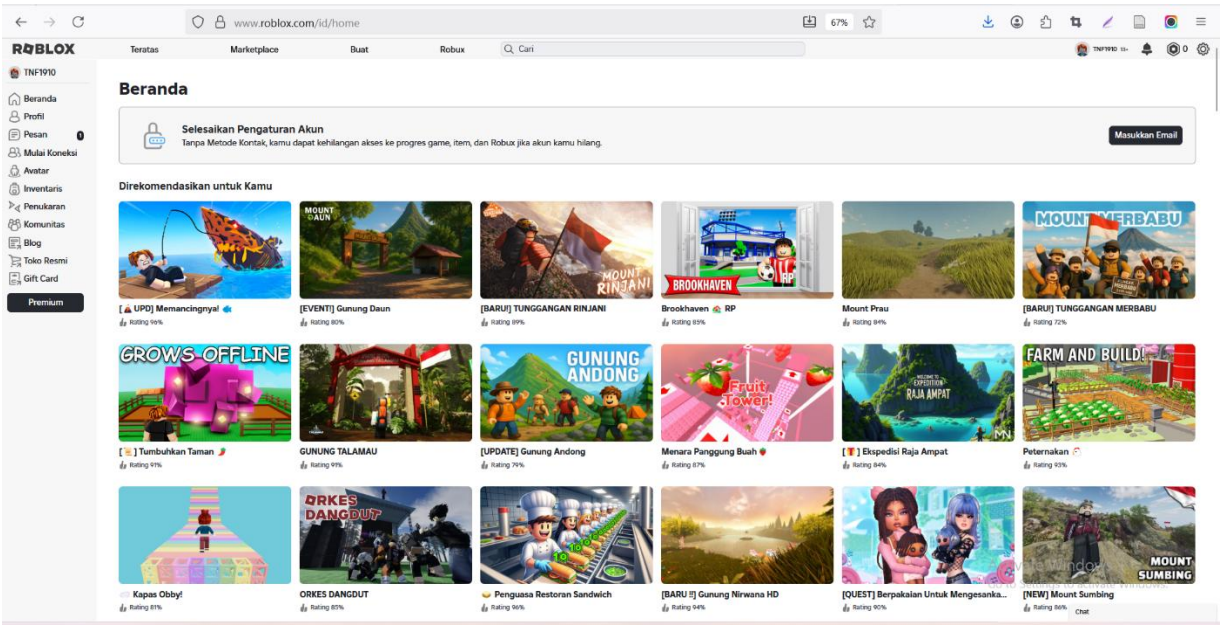

Figure 3. The View of Roblox
Source: https://www.roblox.com/id/home

The homepage of Roblox serves as the central hub for users to explore and engage with the platform's vast array of interactive experiences. Upon logging in, users are presented with a dynamic interface that features a carousel of trending and recommended games, personalized based on their activity and preferences. The layout is designed to facilitate easy navigation, with sections highlighting popular games, friends' activities, and ongoing events. Additionally, the homepage provides access to the user's profile, settings, and the Roblox catalog, offering a comprehensive overview of the platform's offerings. This user-centric design ensures that both newcomers and seasoned players can

seamlessly discover and enjoy the diverse experiences Roblox has to offer.

Table 1. Previous Studies Related to Roblox

No	Author (Year)	Purpose	Finding
1	(Yolal, 2022)	Explore the use of Roblox as an educational tool for teaching basic engineering concepts, especially Ohm's law, through game simulations.	Roblox effectively supports engineering education by allowing students to visualize and analyze circuits in an immersive way, enhancing theoretical understanding while introducing coding and game development skills.
2	(Göksel & Kobak, 2023)	Investigate how Roblox supports interactive learning and fosters 21st-century skills in children.	Roblox provides an engaging environment that develops critical thinking, creativity, problem-solving, and innovation among children aged 9–12.
3	(Alhasan et al., 2023)	Examine Roblox's role in higher education and its potential as a metaverse-based learning platform.	Roblox enhances higher education via gamification, but challenges exist due to limited educator awareness and coding complexity. Its use in higher education remains underexplored.
4	(Bui, 2023)	Provide recommendations for NaDa Studio to create its first game on Roblox.	Roblox is suitable for independent game development, offering AI and VR opportunities. Recommendations include simple gameplay, multiple difficulty levels, creative monetization, and brand collaborations.
5	(Sinar et al., 2023)	Identify junior high school students' needs for digital literacy and perceptions of Roblox in English learning.	Students show a strong need for digital literacy and perceive Roblox positively for improving multimodal literacy in English learning.
6	(Choensawat & Sookhanaphibarn, 2024)	Investigate the use of Roblox Metaverse to teach survival skills to children.	Roblox provides an engaging and effective environment for learning survival skills such as "Run, Hide, Fight" through immersive gameplay.
7	(Mujar et al., 2024)	Explore Roblox's influence on senior high school students' daily lives.	Roblox has both positive (creativity, teamwork, decision-making) and negative (safety concerns, overuse) impacts, requiring balanced and responsible use.
8	(Wicaksono et al., 2024)	Investigate students' perceptions of Roblox in ESL learning.	Students perceive improvements in vocabulary but face challenges in grammar. Roblox supports teamwork and cultural exchange but needs strategies for language accuracy.
9	(Sitompul, 2024)	Examine perceptions of students and teachers on Roblox in reading comprehension activities.	91.6% of students and the teacher agree Roblox improves reading comprehension and motivation, supported by engaging animated video media.
10	(Faridah & Deng, 2024)	Evaluate Roblox as a digital learning tool in higher education.	Roblox significantly increases student engagement and participation, overcoming learning challenges and improving education quality.
11	(Tajussubchi et al., 2024)	Explore Roblox in Islamic Religious Education (PAI).	Roblox aligns with Bruner's learning theory, effectively supporting deeper understanding and internalization of Islamic concepts through simulations and collaboration.
12	(Ramanujam & Ismail, 2024)	Examine Roblox for gamified English Language Education and its alignment with SDG 4 & 5.	Roblox improves ESL learners' vocabulary and engagement, promotes inclusivity and cultural exchange, but challenges remain in access, curriculum integration, and data security.
13	(Alinata & Marsudi, 2024)	Design promotional media for SMPN 3 Sumenep through Roblox Metaverse.	Promotional media using Roblox proved valid and effective, positioning SMPN 3 Sumenep as a potential pioneer of Metaverse Schools in Indonesia.
14	(Wicaksono et al., 2024)	Investigate Roblox in ESL learning with focus on perceptions.	Students view Roblox positively for vocabulary and cultural exchange, but grammar remains a barrier to clear communication.
15	(Haryaka & Warman, 2024)	Investigate Metaverse in teaching math, science, and social studies.	Teachers use Metaverse to make lessons interactive, with simulations and AR improving student engagement and understanding.

16	(Ho & Lee, 2023)	Explore ChatGPT's role in developing Roblox educational experiences for electrical machines.	ChatGPT enhanced efficiency in game creation and improved student engagement and comprehension, highlighting AI's role in metaverse learning.
17	(Jeong et al., 2024)	Use Generative AI in Roblox to support problem-solving skills in pre-service teachers.	AI-driven NPCs and immersive environments foster collaboration, adaptive learning, and problem-solving, enhancing teacher education.
18	(Vieira et al., 2025)	Teach financial education in Brazilian schools using Roblox Metaverse.	Roblox improved engagement and understanding of financial literacy (assets, savings, debts). Students adopted cooperative strategies despite impulsive decisions.
19	(Payonpak et al., 2025)	Test Roblox-based Factory Runner game for production engineers' analytical skills.	The game improved analytical and relational thinking skills, showing the effectiveness of immersive simulations in industrial training.
20	(Azzahra et al., 2025)	To explore social interactions in online gaming, focusing on the Roblox platform, due to its popularity and diverse social environment.	The study found that Roblox supports friendship-building, collaboration, and new communication norms, highlighting its potential to foster inclusive online communities and enhance players' social experiences.

This study reviewed and synthesized previous research across different educational contexts. The selected studies span from 2022 to 2025 and examine Roblox's applications in STEM education, English language learning, higher education, religious studies, and broader skill development. Each study provides insights into how Roblox supports interactive, immersive, and collaborative learning, while also highlighting challenges related to pedagogy, accessibility, and digital literacy. The reviewed studies highlight Roblox's versatility as a game-based learning platform across diverse contexts. In STEM and higher education, it enhances conceptual understanding in engineering, science, math, financial literacy, and industrial training through immersive simulations, though challenges include coding complexity and limited educator readiness (Yolal, 2022; Ho & Lee, 2023; Jeong et al., 2024; Vieira et al., 2025; Payonpak et al., 2025; Alhasan et al., 2023). In language learning, Roblox is positively perceived for improving vocabulary, reading comprehension, teamwork, and cultural exchange, though grammar accuracy remains a persistent barrier (Sinar et al., 2023; Wicaksono et al., 2024; Sitompul, 2024; Ramanujam & Ismail, 2024). Beyond academics, it fosters 21st-century skills such as creativity, problem-solving, collaboration, and innovation, while also raising concerns about safety, overuse, and accessibility (Göksel & Kobak, 2023; Mujar et al., 2024). The platform has also been applied in non-traditional fields, including religious education, promotional media, survival skills training, and metaverse-based schools, showing adaptability across disciplines (Tajussubchi et al., 2024; Choensawat & Sookhanaphibarn, 2024; Alinata & Marsudi, 2024). Furthermore, the integration of AI tools such as ChatGPT and generative AI strengthens personalization, engagement, and efficiency in game development for education (Ho & Lee, 2023; Jeong et al., 2024). Finally, studies also emphasize Roblox's role in promoting social interaction and inclusivity, enabling friendship-building, collaboration, and new communication norms in online communities (Azzahra et al., 2025).

IV. DISCUSSION

The growing interest in game-based learning has positioned Roblox as one of the most innovative platforms in contemporary education. As an immersive, interactive, and highly customizable environment, Roblox functions as a VR-supported learning platform, enabling users to engage in virtual environments where they can explore scientific concepts (Zhai, 2024). This approach offers an effective "learning by doing" experience through direct interaction with the virtual world. Roblox offers opportunities for both formal and informal learning across multiple disciplines. Researchers have increasingly examined its role in enhancing student engagement, fostering collaboration, and supporting skill development in different contexts. The following reviewed studies highlight how Roblox has been applied in STEM education, language learning, 21st-century skills development, interdisciplinary practices, and AI

integration, while also addressing its challenges and limitations.

1. STEM Education
   In the STEM fields, Roblox has been shown to effectively support subjects such as engineering, science, mathematics, and financial education. Through immersive simulations, students are able to visualize complex concepts, engage in problem-solving activities, and develop analytical skills. Research by Yolal (2022), Ho and Lee (2023), Jeong et al. (2024), Vieira et al. (2025), and Payonpak et al. (2025) demonstrates how Roblox can bridge the gap between theoretical knowledge and practical application by enabling learners to experiment in simulated environments.
2. Language Learning (EFL/ESL)
   Roblox has also been applied in English language teaching and learning, where both learners and teachers view it positively. Studies highlight its effectiveness in improving vocabulary acquisition, reading comprehension, teamwork, and cultural exchange. However, grammar accuracy continues to present a challenge, indicating that while Roblox enhances communication skills and learner motivation, additional pedagogical strategies are necessary for comprehensive language development. This is supported by findings from Sinar et al. (2023), Wicaksono et al. (2024), Sitompul (2024), and Ramanujam and Ismail (2024).
3. Beyond Academic Learning
   Beyond its role in academic subjects, Roblox has been recognized for its contribution to the development of 21st-century skills. It fosters creativity, collaboration, innovation, and critical thinking among students. However, research also points to potential drawbacks, such as safety concerns, excessive use, and limited accessibility for some learners. These findings, highlighted by Göksel and Kobak (2023) and Mujar et al. (2024), suggest that while Roblox offers rich opportunities for skill development, careful management and responsible use are required.
4. Religious Education and Metaverse Applications
   Roblox's versatility is further demonstrated in its application to religious education and metaverse-based schooling. For example, Tajussubchi et al. (2024) explored its role in Islamic religious education, showing how simulations and collaboration can deepen understanding of religious concepts. Similarly, Alinata and Marsudi (2024) investigated its use in creating promotional media and positioning schools within the metaverse, suggesting that Roblox can serve as a tool for both pedagogy and institutional branding.
5. AI Integration in Roblox
   A growing body of research also highlights the integration of artificial intelligence within Roblox as a way to enhance educational experiences. AI has been found to improve the efficiency of game development, enable more personalized learning, and create adaptive, engaging environments for learners. Studies by Ho and Lee (2023) and Jeong et al. (2024) emphasize how AI-driven features in Roblox can increase learner motivation and support more dynamic educational activities.

Overall, Roblox emerges as a powerful platform for interactive, gamified, and collaborative learning. It not only improves motivation and engagement but also supports the development of both academic competencies and life skills. However, for its implementation to be fully effective, challenges related to pedagogy, technology, and ethics must be addressed. As multiple studies conclude, "Roblox emerges as an engaging learning tool but faces challenges in implementation."

Between 2022 and 2025, a variety of studies have examined Roblox as a game-based learning platform across different educational contexts. These include applications in STEM education, English language learning, higher education, religious education, promotional media, and broader skill development. Collectively, these studies emphasize Roblox's role in supporting interactive, immersive, and collaborative learning environments, while also acknowledging challenges such as pedagogical alignment, accessibility, and digital literacy. Taken together, these studies indicate that

Roblox is a versatile and powerful tool for gamified, interactive, and collaborative learning. It offers significant benefits for both academic and non-academic skill development across diverse fields. At the same time, effective implementation requires strategies to overcome pedagogical, technological, and ethical challenges. Addressing these issues is crucial to maximizing the platform's potential in educational contexts.

The reviewed studies indicate that Roblox has been widely applied as a game-based learning platform across disciplines, supporting STEM, language learning, creativity, collaboration, and even religious education, while also raising concerns about safety and accessibility. In English language learning, it shows potential for improving vocabulary, reading comprehension, teamwork, and cultural exchange, though challenges such as grammar accuracy persist. However, despite its versatility, research on Roblox in EFL and ESL contexts remains limited and fragmented. Previous reviews on digital game-based learning (Hung et al., 2018), the Metaverse in education (Sirvermez & Baltaci, 2023), and online games in ELT (Kamila et al., 2025) have demonstrated positive impacts of games on motivation, engagement, and language acquisition, but these works mainly examined MMORPGs, general Metaverse environments, or online games broadly, without focusing on Roblox. Against this backdrop, the novelty of this study lies in presenting the first systematic literature review dedicated to Roblox in EFL/ESL learning, synthesizing its functions, supported skills, pedagogical strategies, and challenges. This contribution fills the gap by uniquely examining how Roblox has been implemented in language classrooms and how it supports interactive, collaborative, and gamified English learning.

V. CONCLUSION AND SUGGESTION

5.1 Conclusion

The previous reviews on digital game-based learning, the Metaverse, and online games confirmed the positive role of games in motivation, engagement, and acquisition, they did not specifically address Roblox. Research on Roblox in EFL and ESL remains scarce and scattered, making this study significant as it provides the first systematic review that focuses on Roblox's role in supporting skills, pedagogical strategies, and challenges in English language learning. The reviewed studies show that Roblox has been used across various fields, including STEM, language learning, creativity, collaboration, and religious education, with benefits such as enhanced vocabulary, reading comprehension, teamwork, and cultural exchange, alongside concerns about safety, accessibility, and grammar accuracy.

The selected studies research published between 2022 and 2025 highlights its applications in STEM education, English language learning, higher education, religious studies, and broader skill development. In STEM fields, Roblox has been shown to support engineering, science, mathematics, and financial education through immersive simulations that enhance conceptual understanding, problem-solving, and analytical skills. In language learning, both learners and teachers view Roblox positively for improving vocabulary, reading comprehension, teamwork, and cultural exchange, although grammar accuracy continues to pose challenges. Beyond academic learning, Roblox fosters creativity, collaboration, innovation, and 21st-century skills, while also raising concerns regarding safety, overuse, and accessibility. Its versatility is further reflected in studies on religious education, promotional media, and metaverse schools, demonstrating broad potential across disciplines. Recent research also emphasizes the role of artificial intelligence in Roblox, particularly in enhancing game development, personalization, and learner engagement. Taken together, these studies suggest that Roblox is an effective platform for interactive, gamified, and collaborative learning, though careful pedagogical, technological, and ethical considerations are needed for its optimal implementation.

5.2 Suggestion

The growing use of game-based platforms in education has opened new possibilities for engaging learners in meaningful and interactive ways. Roblox, as one of the most popular digital game platforms, has demonstrated potential in

English Language Teaching (ELT) by creating immersive environments where learners can practice language skills while collaborating and problem-solving. Research highlights its effectiveness in improving vocabulary, reading comprehension, teamwork, and cultural exchange, though challenges such as grammar accuracy, accessibility, and digital safety remain. To maximize its benefits in ELT contexts, both teachers and students need clear strategies for using Roblox not only as a source of entertainment but also as a purposeful learning tool. The following suggestions outline how teachers and students can effectively integrate Roblox into English learning activities.

Roblox offers engaging opportunities for English Language Teaching (ELT) by fostering vocabulary, reading, collaboration, and cultural exchange, though challenges like grammar accuracy and digital safety remain. To optimize its use, teachers and students need clear strategies to apply Roblox as a purposeful learning tool. Teachers can use Roblox as a complementary tool in English Language Teaching by integrating it into lesson plans with clear pedagogical goals. They should design tasks that align with language learning objectives, such as vocabulary building, reading comprehension, and communication skills. Scaffolding is essential, with teachers providing instructions, modeling dialogues, and encouraging collaborative activities that promote teamwork and cultural exchange. Gamification features like points, challenges, and leaderboards can be leveraged to increase motivation, but activities must remain focused on language use. At the same time, teachers need to monitor student engagement to prevent overuse, address challenges of accessibility, and teach digital literacy and online safety to ensure responsible participation.

For students, Roblox offers opportunities to actively practice English in authentic, interactive contexts. Learners should consistently use English when chatting, collaborating, or problem-solving in Roblox, which helps expand vocabulary and improve speaking and listening skills. Group projects and role-play activities foster communication, teamwork, and cultural understanding, while reflective practices such as keeping vocabulary journals or sharing learning outcomes can reinforce knowledge gained during gameplay. Students must also balance enjoyment with learning, focusing on the educational objectives set by teachers rather than just the game itself. Finally, practicing safe and respectful digital behavior is crucial to ensure that Roblox remains a positive and effective environment for English language learning.

REFERENCES

[1] Abdallah, A., & Semaan, D. (2023, November 10). Fox and Blox: A Gamification Platform to Enhance the Learning Process at Schools. *Proceedings of the 7th International Academic Conference on Education*. the 7th International Academic Conference on Education. https://doi.org/10.33422/7th.iaceducation.2023.11.103

[2] Alhasan, K., Alhasan, K., & Hashimi, S. A. (2023). Roblox in Higher Education: Opportunities, Challenges, and Future Directions for Multimedia Learning. *International Journal of Emerging Technologies in Learning (iJET)*, *18*(19), 32–46.

[3] Alinata, R. H., & Marsudi, M. (2024). Pemanfaatan Roblox sebagai Media Promosi Sekolah Metaverse SMP Negeri 3 Sumenep: Using Roblox As A Promotional Media Metaverse School SMP Negeri 3 Sumenep. *MALCOM: Indonesian Journal of Machine Learning and Computer Science*, *4*(1), 57–70. https://doi.org/10.57152/malcom.v4i1.1011

[4] Azzahra, S., Putri, N. N., Mubarok, A. B., & Khomarudin, K. (2025). Virtual Socialization Through Online Game: Social Interaction in Roblox. *Edueksos Jurnal Pendidikan Sosial & Ekonomi*, *14*(01). https://doi.org/10.24235/edueksos.v14i01.18440

[5] Binhasyeesulaiman, N., Niworn, K., Thipburi, C., Srisupawong, Y., & Suamuang, W. (2025). Game-Based Learning of Linear Equations Using Roblox: Enhancing Pre-Semester Math Readiness. *2025 10th International STEM Education Conference (iSTEM-Ed)*, 1–6. https://doi.org/10.1109/iSTEM-Ed65612.2025.11129279

[6] Braguez, J., Braguez, M., Moreira, S., & Filipe, C. (2023). The possibilities of changes

in learning experiences with Metaverse. *Procedia Computer Science*, *219*, 504–511. https://doi.org/10.1016/j.procs.2023.01.318

[7] Bui, T. (2023). *How Roblox can attract more adult players: A case study of a Finnish start-up* [Undergraduate Thesis, Universities of Applied Sciences (UAS)]. http://www.theseus.fi/handle/10024/851390

[8] Chen, Z. (2024). Exploring the application scenarios and issues facing Metaverse technology in education. *Interactive Learning Environments*, *32*(5), 1975–1987. https://doi.org/10.1080/10494820.2022.2133148

[9] Choensawat, W., & Sookhanaphibarn, K. (2024). Innovative Survival Skills Training for Children via Roblox Metaverse. *2024 IEEE 13th Global Conference on Consumer Electronics (GCCE)*, 1134–1135. https://doi.org/10.1109/GCCE62371.2024.10760338

[10] Damaševičius, R., & Sidekerskienė, T. (2024). Virtual Worlds for Learning in Metaverse: A Narrative Review. *Sustainability*, *16*(5), 2032. https://doi.org/10.3390/su16052032

[11] Faridah, I., & Deng, C. (2024). Approach and Application of the Roblox Application as a Learning Medium. *Scientechno: Journal of Science and Technology*, *3*(3), 263–281. https://doi.org/10.70177/scientechno.v3i3.1395

[12] Fitria, T. N. (2020). Teaching English through Online Learning System during Covid-19 Pandemic. *Pedagogy : Journal of English Language Teaching*, *8*(2), 138–148. https://doi.org/10.32332/pedagogy.v8i2.2266

[13] Fitria, T. N. (2021a). Artificial Intelligence (AI) in Education: Using AI Tools for Teaching and Learning Process. *Prosiding Seminar Nasional & Call for Paper STIE AAS*, *4*(1), 134–147.

[14] Fitria, T. N. (2021b). The use technology based on artificial intelligence in English teaching and learning. *ELT Echo : The Journal of English Language Teaching in Foreign Language Context*, *6*(2), 213–223. https://doi.org/10.24235/eltecho.v6i2.9299

[15] Fitria, T. N. (2022a). The impact of gamification on students' motivation: A Systematic Literature Review. *LingTera*, *9*(2), 47–61. https://doi.org/10.21831/lt.v9i2.56616

[16] Fitria, T. N. (2022b). Using Game Design Techniques (Gamification) in Teaching and Learning Process: A Review. *Prosiding Seminar Nasional AAS*. https://www.researchgate.net/publication/372419809_Using_Game_Design_Techniques_Gamification_in_Teaching_and_Learning_Process_A_Review

[17] Fitria, T. N. (2023a). A Library Research in English Education Research: A Guidance for Researchers in Writing Non-Research Articles. *Prosiding Seminar Nasional & Call for Paper STIE AAS*, *6*(1). https://prosiding.stie-aas.ac.id/index.php/prosenas/article/view/266

[18] Fitria, T. N. (2023b). Augmented Reality (AR) and Virtual Reality (VR) Technology in Education: Media of Teaching and Learning: A Review. *International Journal of Computer and Information System (IJCIS)*, *4*(1), 14–25. https://doi.org/10.29040/ijcis.v4i1.102

[19] Fitria, T. N. (2023c). The Use of Artificial Intelligence in Education (AIED): Can AIReplace the Teacher's Role? *Epigram*, *20*(2), 165–187. https://doi.org/10.32722/epi.v20i2.5711

[20] Fitria, T. N. (2024). Using an Institution Platform of E-Learning in English Language Teaching (ELT) Process at ITB AAS Indonesia. *International Journal of Computer and Information System (IJCIS)*, *5*(1), 22–36. https://doi.org/10.29040/ijcis.v5i1.150

[21] Fitria, T. N., Simbolon, N. E., & Afdaleni. (2022). Possibility of Metaverse in Education: Opportunity and Threat. *SOSMANIORA: Jurnal Ilmu Sosial Dan Humaniora*, *1*(3), 365–375. https://doi.org/10.55123/sosmaniora.v1i3.821

[22] Garg, S., Luthra, A., & Sinha, A. (2024). Conceptualizing and Integrating Gaming into Learning Activities in the Education Sector in the Metaverse. In *Green Metaverse for Greener Economies*. CRC Press.

[23] Göksel, N., & Kobak, K. (2023). Online Game Platforms that Aid Children in Developing 21st-Century Skills: The Case of Roblox. *Cumhuriyet International Journal of*

Education. https://doi.org/10.30703/cije.1265890

[24] Han, J., Liu, G., & Gao, Y. (2023). Learners in the Metaverse: A Systematic Review on the Use of Roblox in Learning. *Education Sciences*, *13*(3), 296. https://doi.org/10.3390/educsci13030296

[25] Hardy, W., Paliński, M., & Rożynek, S. (2022). *Roblox And The Digital Market For Virtual Experiences*. University of Warsaw. https://open.icm.edu.pl/handle/123456789/21810

[26] Haryaka, U., & Warman. (2024). The Impact of Using Metaverse Technology in the Learning Process in Junior High Schools. *Journal of Education Research and Evaluation*, *8*(4), 718–730. https://doi.org/10.23887/jere.v8i4.82238

[27] Ho, W., & Lee, D. (2023). Enhancing Engineering Education in the Roblox Metaverse: Utilizing chatGPT for Game Development for Electrical Machine Course. *International Journal on Advanced Science, Engineering and Information Technology*, *13*(3), 1052–1058. https://doi.org/10.18517/ijaseit.13.3.18458

[28] Hsiao, H.-C. (2007). A Brief Review of Digital Games and Learning. *2007 First IEEE International Workshop on Digital Game and Intelligent Toy Enhanced Learning (DIGITEL'07)*, 124–129. https://doi.org/10.1109/DIGITEL.2007.3

[29] Hung, H.-T., Yang, J. C., Hwang, G.-J., Chu, H.-C., & Wang, C.-C. (2018). A scoping review of research on digital game-based language learning. *Computers & Education*, *126*, 89–104. https://doi.org/10.1016/j.compedu.2018.07.001

[30] Jeong, Y., Lee, Y., Byun, G., & Moon, J. (2024). Navigating the Creation of Immersive Learning Environments in Roblox: Integrating Generative AI for Enhanced Simulation-based Learning. *Immersive Learning Research - Practitioner*, 16–19. https://doi.org/10.56198/5M1RHT9ZJ

[31] Kabanda, P. G., Chipfumbu, D. C. T., & Chingoriwo, T. (2023). A Cybersecurity Model for a Roblox-based Metaverse Architecture Framework. *Global Journal of Computer Science and Technology*, *23*(E1), 11–33.

[32] Kabilan, S. J. (2023). Teaching and Learning in the Metaverse World: The Future of New-Gen Education. *Journal of Engineering Education Transformations*, 134–141. https://doi.org/10.16920/jeet/2023/v37i1/23139

[33] Kamila, O. N., Manafe, L. A., & Shobikin, S. (2025). Digital Transformation in Primary Education. *RIGGS: Journal of Artificial Intelligence and Digital Business*, *4*(2), 4134–4139. https://doi.org/10.31004/riggs.v4i2.1183

[34] Khaira, M., Lesmana, D. C., Agustina, P., & Saputra, D. (2024). Utilization of the metaverse in the context of interactive learning. *Hipkin Journal of Educational Research*, *1*(2), 151–162. https://doi.org/10.64014/hipkin-jer.v1i2.15

[35] Mujar, J. M. A., Partosa, D. R. R., Porto, L. K. J., Guinto, D. C. F., Regero, J. R., & Malangen, A. D. (2024). Perspective of Senior High School Students on the Benefits and Risk of Playing Roblox. *American Journal of Open University Education*, *1*(1), 26–35.

[36] Nguyen, H.-T., & Ngo, Q.-D. (2024). Benefits and Challenges of Metaverse in Education. In P. P. Joby, M. S. Alencar, & P. Falkowski-Gilski (Eds.), *IoT Based Control Networks and Intelligent Systems* (pp. 745–756). Springer Nature. https://doi.org/10.1007/978-981-99-6586-1_50

[37] Payonpak, K., Chomsuwan, K., & Suamuang, W. (2025). Integrating Game-Based Learning with Lean Processes through Roblox Metaverse to Enhance Analytical Thinking Skills of Industrial Workers. *2025 10th International STEM Education Conference (iSTEM-Ed)*, 1–6. https://doi.org/10.1109/iSTEM-Ed65612.2025.11129421

[38] Phakamach, P., Senarith, P., & Wachirawongpaisarn, S. (2022). The Metaverse in Education: The Future of Immersive Teaching & Learning. *RICE Journal of Creative Entrepreneurship and Management*, *3*(2), 75–88.

[39] Ramanujam, P., & Ismail, H. H. (2024). The Realities of Roblox and Metaverse

Technologies and Emerging Potential Enhancing English Language Learning. *St. Theresa Journal of Humanities and Social Sciences*, *10*(2), 138–156.

[40] Sinar, T. S., Budiman, M. A., Ganie, R., & Rosa, R. N. (2023). Students' Perceptions of Using Roblox in Multimodal Literacy Practices in Teaching and Learning English. *World Journal of English Language*, *13*(7), 146. https://doi.org/10.5430/wjel.v13n7p146

[41] Sirvermez, U., & Baltaci, Ş. (2023). Metaverse Applications in Education: Systematic Literature Review and Bibliographic Analysis of 2010–2022. In F. S. Esen, H. Tinmaz, & M. Singh (Eds.), *Metaverse: Technologies, Opportunities and Threats* (pp. 397–417). Springer Nature. https://doi.org/10.1007/978-981-99-4641-9_27

[42] Sitompul, M. S. (2024). *Students's and Teacher Perception Using Roblox for Reading Comprehension for Eighth Grade Students at SMPN 1 Pulau Rakyat* [Undergraduate Thesis, Universitas Negeri Medan]. https://doi.org/10/2193321034_Daftar_Pustaka.pdf

[43] Tajussubchi, I., Amien, S., & Kamaludin, M. (2024). Exploring the Potential of the Roblox Platform for Developing Islamic Religious Education Learning. *Jurnal At-Tarbiyat :Jurnal Pendidikan Islam*, *7*(3). https://doi.org/10.37758/jat.v7i3.1195

[44] Tinterri, A., Mariasole Antonietta Guerriero, Annoscia, S., & Dipace, A. (2023). *Constructionism and game-making for learning in the age of Roblox. An analysis of current evidence and future perspectives.* https://doi.org/10.32043/gsd.v7i2.866

[45] Vieira, R. M., Machado, T. A., Silva, A. P. da, & Damasceno, E. F. (2025). Enhancing Financial Literacy by Roblox: An Innovative Metaverse-Based Educational Framework. *EDULEARN25 Proceedings*, 53–58. 17th International Conference on Education and New Learning Technologies. https://doi.org/10.21125/edulearn.2025.0027

[46] Wicaksono, R. D. (2024). Students' Perception Of Roblox And Language Barrier In ESL. *Inatesol*, *1*(2), 137–150.

[47] Wicaksono, R. D., Anwar, K., & Asmara, C. H. (2024). Students Perception of Roblox and Language Barrier in ESL. *Indonesian Teaching English to Speakers of Other Languages Journal*, *1*(2), 137–150. https://doi.org/10.30587/inatesol.v1i2.9318

[48] Yolal, O. (2022). Experience Development of Roblox Studio for Engineering Education (Roblox Studio ile Mühendislik Eğitimi İçin Deneyim Geliştirme). *International Journal of Multidisciplinary Studies and Innovative Technologies*, *6*(1), 51. https://doi.org/10.36287/ijmsit.6.1.51

[49] Zeybek, N., & Saygı, E. (2024). Gamification in Education: Why, Where, When, and How?—A Systematic Review. *Games and Culture*, *19*(2), 237–264. https://doi.org/10.1177/15554120231158625

[50] Zhai, J. (2024). The Use of Roblox in Elementary School Science Education during Pandemics. *Open Journal of Social Sciences*, *12*(5), 462–472. https://doi.org/10.4236/jss.2024.125025