

CHAPTER I

INTRODUCTION

1.1. Background of the Research

The rapid advancement of technology in education has transformed how students engage with learning materials and develop essential skills (Naimi-Akbar, Weurlander, & Barman, 2023). In Indonesia, these changes are particularly urgent due to the country's persistently low literacy rates. According to UNESCO in 2021, Indonesia ranked 60th out of 61 countries in reading interest, highlighting a critical need for interventions that can improve students' reading comprehension and overall literacy (Wahyudi et al., 2024).

Reading comprehension is not only fundamental to academic achievement but is also closely linked to students' problem-solving abilities (Rahman, 2019). In English as a Foreign Language (EFL) classrooms, Indonesian students often struggle to construct sentences, understand complex texts, and apply language rules in real-life situations (Mustafa, Hussein, & Baba, 2020). Traditional classroom environments frequently fail to provide engaging, practical opportunities for students to develop these skills, leading to disengagement and limited progress (Smith & Carlsen, 2020).

At the same time, today's students—especially those from Generation Z and Alpha—are highly engaged with digital technology. Indonesian youth spend significant time on their smartphones, often using them for entertainment or as a distraction during unengaging lessons (Alhasan & Al Hashimi, 2023). Research shows that 43% of Indonesian Generation Z are active gamers, with 76% preferring smartphones as their primary device (Mustafa et al., 2020). Recent findings suggest that leveraging familiar digital platforms within educational settings can significantly enhance student engagement and motivation. As outlined by Permatasari, Basri, and Ramdhani (2022), members of Generation Z and Generation Alpha exhibit a marked responsiveness to immersive technologies, such as Virtual Reality, which they generally find more stimulating than traditional instructional methods. Their study demonstrates that these generations not only adapt rapidly to emerging digital tools, but also display improved concentration and information retention when learning occurs within interactive virtual spaces. Incorporating widely-used platforms like Roblox thus aligns with their digital fluency and motivational drivers, potentially fostering more effective and sustained participation in language learning activities.

The Virtual Learning Environments (VLEs), or Virtual Classroom such as Roblox have emerged as promising tools for bridging the gap between students' digital habits and educational needs. Roblox, originally designed for entertainment, now offers interactive, student-centered learning experiences that support language acquisition and critical thinking (Mustafa et al., 2020; Dillenbourg, Schneider, & Synteta, 2004). Studies have shown that gamified and immersive environments like

Roblox can significantly enhance student motivation, engagement, and learning outcomes (Ryan & Deci, 2020; Alhasan & Al Hashimi, 2023). These platforms allow students to practice language skills and develop problem-solving abilities through real-life scenarios and collaborative tasks (Smith & Carlsen, 2020).

Recent developments in digital learning platforms have introduced game-based platforms as an alternative medium of instruction for learning English. Various research studies have explored the potential of Roblox as an educational tool. Sinar et al. (2023) discovered that Roblox supports multimodal literacy learning by allowing students to access learning content through visual, text-based, and experiential modalities. The research revealed that students exhibit higher levels of motivation and engagement when learning English through virtual simulations as opposed to traditional learning approaches.

Furthermore, Mustafa, Hussein, and Baba (2020) emphasize that learning through Roblox allows for collaborative learning and problem-based learning, as students are able to apply their language learning skills to solve real-world problems. The research reveals that learning through Roblox promotes critical thinking and student-centered learning, as students are able to explore and solve learning challenges within a virtual environment. Moreover, Alhasan, Alhasan, and Al Hashimi (2023) discovered that learning through Roblox promotes higher levels of student engagement and supports experiential learning by incorporating entertainment and learning. The research reveals that learning through game-based

platforms is more effective in retaining language knowledge due to higher levels of motivation and engagement.

In this study, Roblox Virtual Classroom functioned as a virtual learning environment that enabled students to observe objects and locations, interact with learning materials, and engage in contextual learning activities. Through this environment, students were encouraged to develop reading comprehension and problem-solving skills by exploring and interpreting information presented within the virtual classroom.

Given these realities, my academic motivation for this research arises from both the national literacy crisis and the observable habits of Indonesian students. Observations in classroom settings indicate that students often turn to their smartphones as a coping mechanism or source of entertainment during lessons, reflecting a disconnect between traditional teaching methods and students' lived experiences. I believe that by harnessing platforms students already know and enjoy—such as Roblox—we can transform these digital habits into productive learning opportunities. This research seeks to determine whether integrating Roblox as a virtual classroom can improve students' reading comprehension and problem-solving skills in English, making learning more engaging and effective for the current generation (Mustafa et al., 2020; Ryan & Deci, 2020).

While past studies have proven Roblox to be a promising innovative learning medium, most studies have focused on the general level of engagement, motivation, and the development of multimodal literacy. There is a lack of studies that specifically examine the effectiveness of the Roblox Virtual Classroom in improving reading comprehension among senior high school students. Therefore, this research aims to determine whether Roblox Virtual Classroom has a significant effect on students' reading comprehension for problem-solving skills. By providing empirical evidence on the impact of familiar digital platforms on language proficiency and 21st-century skills, this study seeks to inform educators and policymakers on innovative strategies to address Indonesia's literacy challenges and better align educational practices with students' digital realities (Naimi-Akbar et al., 2023; Dillenbourg et al., 2004).

1.2.Problem of the Research

The problem can be formulated as:

1. Is there any significant effect of Roblox Virtual Classroom on students' reading comprehension for problem-solving skills? ★

1.3.Research Objectives

Based on the problem above, the objectives' researcher is:

1. To determine whether Roblox Virtual Classroom has a significant effect on students' reading comprehension for problem-solving skills.

1.4.Operational Definition of the Terms

To ensure clarity and prevent misunderstandings, the following key terms in this study are defined operationally:

1. **Roblox Virtual Classroom:** In this study, Roblox Virtual Classroom refers to the use of the Roblox platform as a virtual learning environment where students participate in English language learning activities. These activities are facilitated through a user-generated 3D space designed specifically to engage students in problem-solving and language acquisition tasks.
2. **English Language Learning:** English language learning is defined as the process through which senior high school students improve their skills in reading, writing, listening, and speaking English. In this context, it focuses on students' ability to comprehend their reading in English during tasks within the Roblox Virtual Classroom.
3. **Problem-Solving Skills:** Problem-solving skills in this research are the abilities of students to identify, analyze, and resolve challenges that arise in the context of English language learning. This includes solving through riddles or tasks by navigating language barriers, comprehending complex texts, or directions/instructions within the Roblox Virtual Classroom.

1.5.Significance of the Research

This study aims to contribute to both the field of education and practical teaching methods by examining the effects of Roblox Virtual Classroom in

fostering problem-solving skills within English language learning. The significance of this research can be outlined as follows:

1.5.1 Theoretical Significance:

1. This research will enrich the existing literature on the use of digital platforms and virtual learning environments in educational contexts, particularly in language acquisition.
2. It will provide empirical evidence on the relationship between problem-solving skills and English language proficiency within a virtual classroom setting.
3. The study will contribute to a deeper understanding of how interactive and immersive environments, such as Roblox, impact student engagement and learning outcomes.

1.5.2 Practical Significance:

For educators, this research offers insights into the potential benefits of integrating platforms like Roblox into the classroom to enhance language learning. It can serve as a guide for teachers looking to implement innovative, game-based learning strategies.

1.6.Scope of the Research

This study is focused on exploring the effectiveness of Roblox Virtual Classroom in the context of reading for Problem-solving skills in eleventh grade who are engaged in English language learning in SMAN 1 Situbondo. The specific scope includes:

Independent Variable:

Two types of environments (The use of Roblox Virtual Classroom as a virtual learning environment for teaching English, the other will use traditional learning method.)

Dependent Variables:

Problem-solving skills in reading: in English language learning, as demonstrated through students' ability to navigate language challenges within interactive tasks.

