CHAPTER I
INTRODUCTION

1.1 Background of Study

Entering the Industrial Revolution 4.0 era, mastery of a foreign language, especially English, is necessary to support life aspects such as education, career advancement, communication and networking, and so on. Living in the millennial era sets higher standards for achievement, so excellent skills are needed. Learning English is very important for young people, who are the next generation of the nation. Although English is not recognized as an official language in Indonesia, it has been integrated into the educational curriculum from an early age and is systematically taught at nearly all levels of education. Nevertheless, many students continue to face challenges in achieving proficiency in English, predominantly due to limited vocabulary. Vocabulary is fundamentally crucial to language acquisition, as it underpins effective communication and comprehension. Insufficient vocabulary knowledge significantly impedes the ability to attain fluency. Furthermore, the difficulties students encounter in enhancing their vocabulary within the classroom may be influenced by the predominance of traditional pedagogical methods such as memorizing, dictating, writing, and re-reading the content of the book until the lesson is done so that the students get saturated, which may not adequately support interactive and engaging learning experiences.

The millennial era presents powerful technology to support various aspects of human life, including education. In the realm of education, technology such as gadgets and the Internet provide easier access to information for both teachers and students. Learning activities become more efficient with technology. However, it can not be denied that technology is like a double-edged sword, besides being very helpful it can also be a threat. Cyber crime is something that is rampant today, technology-based crimes are one of the negative impacts of the presence of technology. In addition, technological advances have proven to have addictive effects. One of the most popular phenomena today is game addiction. This phenomenon spreads in all groups, especially students, and this is considered to be one of the triggers of the decrease in student interest and quality of learning. The decrease in interest in learning is also because students tend to consider games to be more enjoyable than learning.

ve phenomenon can be a strategy for dealing with students' ing English, namely lack of vocabulary. What is of great interest ed as a trigger to increase student enthusiasm for learning. an be used as a learning medium. Most mobile games use tem language so that the players can be introduced to new ddition, many mobile games are indeed created to help the including games to improve English vocabulary that are

available on Google Play Store, App Store, and websites. In this study, the writer used a mobile game called "Fill Missing Letters" as a learning medium that is expected to effectively improve students' vocabulary. "Fill Missing Letters" is a mobile game that was made not only for entertainment purposes but also for educational purposes. This game provides an enjoyable method for enhancing English vocabulary and spelling skills, preventing students from feeling overwhelmed while enriching their language proficiency.

Minovic et al. (2012) stated that games have emerged as a highly valuable instrument for knowledge dissemination due to their capacity to actively engage participants and their ability to instill a sense of enjoyment in the learning process. Games can increase class attraction so that learning and teaching activities are alive. Furthermore, portable device games may serve to lessen restrictions, such as those related to time and location, so that students can study anytime and anywhere. These straightforward instruments can facilitate understanding and retention of the subject (Hanus and Fox, 2015). In other words, games make learning activities more attractive and efficient. Combining learning content and games can increase intrinsic motivation in learning, critical thinking, and social relationships among students. By integrating educational objectives into mobile games, educators can leverage their passion for gaming to create immersive and effective learning experiences that bridge the gap between formal education and digital entertainment.

The age of 12-14 years is a transition phase from childhood to adolescence, at this age the tendency to enjoy trying new things and experimenting driven by high curiosity is commonplace. Nowadays, children of this age are accustomed to using digital devices for various purposes, including education. Mobile games are easy to access on smartphones and tablets, making them a familiar learning medium for students aged 12-14 years. Using the mobile game "Fill Missing Letter" in learning English can provide a new experience for students in learning new vocabulary. The rules and difficulty level of this game are suitable for students of that age.

1.2 Identification of Problems

According to the background above, the writer identified some problems related to improving students' vocabulary, as follows :
1. The students have not mastered English despite having studied it from a young age
2. Students perceive English as difficult to master due to their limited

g methods implemented have caused students to feel

e in students' interest in learning is caused by the phenomenon ction

1.3 Scope of Problem

In this research, the writer primarily aimed to explore the effectiveness of the mobile game "Fill Missing Letters" as a learning medium, specifically focusing on its potential to enhance students' vocabulary. The study sought to assess how the integration of technology, particularly through interactive learning tools like games or applications could contribute to improving vocabulary acquisition among students. Additionally, the research would examine the students' perceptions of using mobile devices for learning, considering factors such as their engagement, motivation, and overall satisfaction with this method. By investigating both the impact on vocabulary development and the students' attitudes toward mobile learning, the author aims to gain a comprehensive understanding of the potential benefits and challenges of incorporating mobile technology into educational practices.

1.4 Research Question

1. To what extent does the mobile game "Fill Missing Letters" improve students' vocabulary at SMPN 1 Pammana?
2. What is students' perception toward the use of the mobile game "Fill Missing Letters" in vocabulary ability and learning activity?

1.5 Objectives of Study

1. To identify what extent the mobile game "Fill Missing Letters" improves students' vocabulary at SMPN 1 Pammana
2. To figure out students' perception toward the use of the mobile game "Fill Missing Letters" in vocabulary ability and learning activity

1.6 Significance of Study

Theoretically, this study will be useful information within the scope of education regarding the effectiveness of mobile games as a learning medium to improve students' vocabulary. In addition, this study is expected to also become a reference for future research. Practically, by using mobile games for learning, it is expected that it can increase students' learning interest, improve vocabulary, and master English later. For the teacher, it is expected to be the material for consideration of which methods and media are effectively used in learning, so they can determine which method is suitable for use in the classroom, especially h vocabulary.

CHAPTER II
LITERATURE REVIEW

2.1 Previous Studies

There are some studies related to the topic of this research. To begin with, research conducted by Irene Nova (2019), entitled "The Effect of Using Online Gaming towards Students' Vocabulary Mastery at the Seventh Grade of SMP *Negeri* 4 *Siak Hulu*." This study included 60 samples of 7th-grade students from two different classes, namely VII-2 and VII-3. VII-2 was the experimental class and VII-3 was the control class. The researcher used pre-tests and post-tests as the instruments of research. After taking the data, the researcher used statistical analysis to find out the effect of using online games to enrich 7th-grade students' vocabulary in SMP Negeri 4 Siak Hulu. The result showed that there was a significant effect of using online gaming on students' vocabulary mastery in the 7th grade of SMP *Negeri* 4 *Siak Hulu*.

Another research was conducted by Jihan Nawal Aini and Ulfatul Ma'rifah (2021), "Virtual Implementation of Online-Game Based Learning: Enhancing Students' Vocabulary Mastery and Self-Motivation." 9 second-semester students participated in this research. The researchers collected the data from two cycles by using quizzes, teacher-made tests, observation, and questionnaires. They used triangulation to evaluate the data. The result of this study showed that Mobile game-based learning can significantly improve the first grade Junior High School students' vocabulary at Loeitadnonputtana school. The improvement was also seen from the outcome of the classroom observation in every meeting of teaching and learning activities.

The next study was conducted by Naila Widad Nur Jihan (2022), "Improving Students' Vocabulary Mastery using Web-based Vocab Game on Gamestolearnenglish.com at Seventh Grade SMPN 2 Senduro." This study aimed to find out how students' vocabulary improved by using a Web-based Vocab Game on Gamestolearnenglish.com. The two tests were carried out in this study and the criteria were determined and successful. In the first cycle, the percentage of students performing was 60% and it was below the criteria, so it could not be mentioned as a success. Therefore, the researchers conducted a second cycle to increase the percentage of students achieving the minimum score. The result of the test on cycle two showed that the application of the use of web-based vocabulary games on gamestolearnenglish.com with different _____ eeded and the percentage of students who obtained the _____ ncreased by 85%.

_____ et al (2022), in their research entitled "Improving Students' _____ Using Word Game Application" proved that the word game _____ dscapes" improved the vocabulary mastery of SMAN 1 _____ dents. Additionally, it boosted students' motivation to learn.

Thirty students took part in this study. A pre-test and post-test in the form of a matching test were used to gather the data. The findings indicated that the pre-test mean score of 63.16 climbed to 85.83 in the post-test following therapy.

On the other side, the research conducted by Castillo-Cuesta (2020), with the title "Using Digital Games for Enhancing EFL Grammar and Vocabulary in Higher Education" examined how digital games could improve the grammar and vocabulary of English as a Foreign Language (EFL) in the English major at Universidad Técnica Particular de Loja in southern Ecuador. Participants in this study included 68 students who were categorized as B1 by the Common European Framework of Reference for Languages (CEFR). Every participant was enrolled in two distinct Communicative Grammar classes. In this work, data was gathered and analyzed using a mixed-method technique. Writing rubrics and pre- and post-test questionnaires were used as tools. Over the course of a five-month academic term, students played digital games and received ongoing feedback. The findings demonstrated that digital games helped learners improve their grammar in areas pertaining to the use of modals, gerunds, and infinitives. Additionally, students demonstrated an improvement in their vocabulary, particularly in areas relating to education and employment.

Another study, "Digital game-based vocabulary learning: where are we?," was carried out by Zou et al. in 2019. The results showed that ten categories of digital games predominate in the field and that they typically have beneficial effects on reading and listening comprehension, short-term and long-term vocabulary learning, motivation and engagement, anxiety reduction, and student interaction. These findings further render implications that are meaningful for vocabulary learning and game design.

The writer can conclude that the difference between this research and the previous studies above is that the writer only focuses on examining the significant effect of using mobile games in language vocabulary teaching while the other also examines students' self-motivation in learning. The second difference is the type of game that is used as a learning tool. In this research, the writer uses the mobile game "Fill Missing Letters" as a learning tool to help students master vocabulary.

2.2 Theoretical Background

2.2.1 Definition of Vocabulary

some definitions of vocabulary defined by experts, Nunan ated that vocabulary includes a set of terms that a person ds and uses in a particular language, including their definition, tion, and contextual application. Alqahtani (2015) defined y as the entirety of words necessary to express ideas and e intended message of a speaker. Nation (2001) stated that y comprises the assortment of words and expressions

recognised and employed by a person or within a specific language, including their definitions, pronunciations, and contextual application. Brown (2000) confirms that vocabulary is essential in language learning and communication, serving as the cornerstone for articulating ideas, grasping concepts, and participating in meaningful exchanges. Furthermore, according to Richards and Renandya (2002), vocabulary constitutes a fundamental aspect of language competency, forming the foundation for learners' speaking, listening, reading, and writing abilities.

From the definition above, it could be concluded that vocabulary is important for language students. Vocabulary supports other skills (reading, writing, listening, and speaking) to improve. The more vocabulary is mastered, the easier it is for students to learn the language. It is the vocabulary that makes up a language, without the vocabulary a language is impossible to compose.

2.2.2 Difficulties in Learning Vocabulary

Rohmatillah (2014) researched students' difficulties in learning vocabulary. She found that most students face difficulties in pronouncing the words, how to write and spell, and how to use the words in grammatical patterns correctly. The difficulties are caused by several factors that Rohmatillah also found:

a. The difference between written form and spoken form in English
b. Students have difficulty in choosing the appropriate meaning of the words
c. The grammatical form of the word known is different

In addition, Afzal (2019) found that students found it difficult to pronounce, spell, memorize, recognize, and understand the meaning of the new vocabulary, and use it in writing and speaking. Those are caused by students not having enough spare time for their studies. It is also supported by Susanto (2021) who found that students have difficulties in announcing the words, the way to write and spell, and how to use them in grammatical patterns correctly. The various grammatical types of words referred to as inflections were one in every cause of students' troubles in learning vocabulary. Furthermore, the previous expert Nation (2001) stated that pronouncing unfamiliar words correctly and recognizing them form can be problematic for learners, particularly when dealing ular spellings. He also found that learners may struggle with y acquisition when they have limited exposure to the target in authentic contexts and insufficient opportunities for practice. ly, another expert Thornbury (2002) describes various faced in vocabulary learning, such as challenges with

remembering words, grasping their contextual meanings, and using them appropriately. These difficulties stem from the abstract nature of vocabulary, insufficient contextual cues in learning resources, and the intricacies of language rules. Moreover, Thornbury (2002) emphasizes that the lack of exposure to authentic language usage and insufficient opportunities for meaningful practice further hinder the process of acquiring vocabulary. One thing that cannot be underestimated is Lack of motivation or interest in vocabulary learning can hinder learners' efforts to acquire new words effectively. Engaging and meaningful learning activities can help alleviate this challenge (Dörnyei, 2001). According to Nation (2013), students demonstrate proficient vocabulary skills when they can accurately spell, pronounce, comprehend, and apply a word in its appropriate context. Proficiency in vocabulary enables students to comprehend reading materials and engage effectively in conversations, express themselves clearly, and articulate ideas across various topics. Conversely, without a robust vocabulary, students may struggle to participate in discussions, convey thoughts effectively, or provide relevant information if they fail to grasp the meanings of the words being used.

Based on the preceding explanation, it can be inferred that students encounter challenges in learning English vocabulary, which encompass issues with pronunciation, writing, spelling, comprehension of context, and motivation. Overcoming these challenges enables students to develop a strong vocabulary profile, thereby facilitating their language acquisition process.

2.2.3 Definition of Game

A game is an artistic medium where players make choices to manage resources using game tokens to achieve a given objective (Costikyan, 2002 in Schell, 2008:31). In a more traditional definition, a game is a setting with rules where rivals compete to achieve goals. Players actively engage in an environment designed to provoke thought, decision-making, and strategy. The game elements (choices, resources, tokens, and objectives) work together to form an experience that challenges the player, provides emotional rewards, and offers opportunities for expression, growth, and achievement.

Fullerton, et al (2004) description in Schell (2008:33) illustrated a framework for understanding games as dynamic, rule-based that intricately combine conflict, player agency, and challenge to gaging and interactive experiences. In this framework, the the heart of games is what drives their narrative and mechanics. an take many forms: it can be direct competition between e struggle against artificial intelligence, or even internal conflict game's storyline or the player's decision-making process.

According to Crawford (1997) in Salen and Zimmerman (2004), a game is a closed formal system that subjectively depicts a portion of reality. It is comprehensive and self-sufficient as a whole, the model world the game creates is internally complete, and there are clear rules for the game. A game is made up of various components that interact with one another, frequently in intricate ways. A game represents emotional reality in a subjective and purposefully simplified way.

Schell (2008:37) defined a game as a problem-solving exercise that is approached with a lighthearted attitude. The writer had an inclination to this definition. This definition underscores the dual nature of games: they are not only structured activities with specific challenges and goals but also experiences meant to be enjoyed. The notion of approaching problems with a lighthearted attitude suggests that games provide a safe space for experimentation and creativity, where players can engage in problem-solving without the pressures often associated with real-life challenges. This perspective aligns with the idea that games serve as a medium for exploration and learning, allowing players to navigate obstacles in a playful manner. The writer's inclination towards this definition reflects an appreciation for the emotional and experiential aspects of gaming, emphasizing that the joy derived from play enhances the problem-solving process, making it not just about finding solutions but also about enjoying the journey of discovery.

2.2.4 Mobile Game-based Learning (MGBL)

Students are accustomed to mobile devices, frequently incorporating them into their daily routines. While it is undeniable that these tools carry potential drawbacks, when utilized effectively, they represent an innovative resource across various domains, including education. In recent years, scholars have increasingly turned to Mobile-Assisted Language Learning (MALL) as a powerful tool for enriching English language education (Panagiotis & Krystalli, 2020). Particularly in the context of teaching English as a second language (ESL) or as a foreign language (EFL), the evolution of mobile learning as a contemporary sub-discipline has expanded the scope of learning beyond traditional classroom settings, as noted by Lin & Chen (2017). Students require appropriate resources to effectively learn vocabulary. As stated by ...nd Gamlo (2022) in their study, proficiency in English language ...es heavily on efficient and practical vocabulary acquisition ...fective tools. Consequently, if educators persist in employing ... teaching methods, intensive English courses may struggle to ...d in long-term memory. According to Shelton & Hedley (2002), ...me-based learning utilizes interactive games on devices like ...es and tablets to facilitate educational experiences. These

games capitalize on the immersive and captivating nature of gameplay to bolster learning outcomes and encourage active engagement among learners. By providing dynamic and personalized content interactions, they nurture critical thinking, problem-solving abilities, and knowledge retention (Klopfer et al., 2009). Furthermore, research by Ozer and Kılıç (2018) highlights how learners value mobile learning for its capacity to enhance the educational journey, making it more efficient and enjoyable by enabling them to progress at their own pace. As a result, mobile applications incorporating gaming elements have garnered positive responses from EFL students as aids for learning English vocabulary.

Mobile Game-Based Learning (MGBL) is an educational approach that utilizes interactive games on mobile devices to facilitate learning. Mobile Game-Based Learning (MGBL) has emerged as a dynamic educational approach, drawing attention from experts in the field. These experts provide insights into the nature of MGBL and its implications for learning. Hwang and Wu (2012) explore Mobile Game-Based Learning (MGBL) as an innovative approach to education. They emphasize the interactive and engaging nature of mobile games, highlighting their potential to enhance learning experiences. MGBL offers opportunities for learners to actively participate in educational activities through gameplay, leading to increased motivation and interest in learning. The dynamic and immersive nature of mobile games captivates learners' attention, facilitating deeper engagement with educational content. Additionally, they discuss the potential of MGBL to provide personalized learning experiences, as mobile games can adapt to individual learner needs and preferences. Overall, their study underscores the significance of MGBL in modern education and its potential to revolutionize traditional learning paradigms. Mobile Game-Based Learning (MGBL) is examined as a contemporary educational approach that emphasizes the personalized learning experiences facilitated by MGBL attributing this to the adaptive learning algorithms often integrated into mobile game platforms. These algorithms enable customization of content and difficulty levels according to individual learner capabilities, thereby optimizing the learning process. It underscores the potential of MGBL to cater to diverse learning styles and preferences, contributing to more effective and engaging educational experiences.

Based on the explanation above, the writer concludes that In the [...]y, students require efficient tools to aid their language learning [...]s, prompting experts to explore Mobile-Assisted Language [...]MALL) innovation as a potent means to enhance the vocabulary [...]or language acquisition. Mobile game-based learning (MGBL) [...]s an innovative approach leveraging mobile devices for [...]learning, specifically aimed at enriching students' vocabulary

skills. MGBL leverages interactive games on mobile devices to enrich learning experiences. MGBL emphasizes the captivating and immersive nature of gameplay, fostering critical thinking, problem-solving skills, and knowledge retention. Moreover, MGBL offers personalized learning opportunities by adapting to individual learner preferences through integrated adaptive learning algorithms. These algorithms enable the customization of content and difficulty levels, optimizing the learning process. Overall, MGBL shows promise in transforming traditional learning methods and providing more effective and engaging educational experiences.

2.2.5 Advantages and Disadvantages of Mobile Game-based Learning (MGBL)

Experts widely acknowledge games as a highly effective learning strategy, offering an interactive and engaging environment that facilitates enhanced learning and retention of knowledge and skills. Games provide students with a relaxed learning experience, as their elements are often novel, exciting, and challenging, thereby fostering an environment conducive to learning and study (Cheung and Ng, 2021). Kapp (2012) delves into the advantages and disadvantages associated with integrating gaming elements into mobile learning environments. The research highlights the potential for MGBL to enhance learner engagement and motivation through interactive gameplay. However, there is also caution against the potential distractions posed by mobile games, emphasizing the importance of balancing entertainment value with educational objectives in MGBL design.

Some experts have their perspectives regarding the advantages of Mobile Game-Based Learning (MGBL):

1. Enhanced Engagement: MGBL captures learners' attention through interactive gameplay, fostering higher levels of engagement compared to traditional methods. Hwang and Wu (2012) observed that the dynamic and interactive nature of mobile games can significantly increase learner engagement, leading to more effective learning outcomes.

2. Personalized Learning: Mobile games can adapt to individual learners' and preferences, providing personalized learning experiences er to diverse learning styles. MGBL platforms often incorporate e learning algorithms, allowing learners to progress at their own d receive tailored feedback based on their performance.

ate Feedback: Games offer instant feedback on learners' ance, allowing them to identify and correct mistakes in real-time,

which enhances learning efficiency. It promotes active learning and helps learners refine their skills more effectively.

4. Motivation Boost: The competitive and rewarding nature of games motivates learners to actively participate and persist in learning tasks. Gee (2003) emphasized the role of motivation in MGBL, noting that the intrinsic rewards inherent in gaming experiences can drive learners to overcome challenges and achieve learning goals.

Here are various expert perspectives on the disadvantages of Mobile Game-Based Learning (MGBL):

1. Potential Distraction: Mobile games may distract learners from the intended educational content, leading to reduced focus and learning outcomes. Kapp (2012) cautioned that the immersive nature of games can sometimes overshadow educational objectives, causing learners to prioritize entertainment over learning.

2. Limited Content Depth: While games can facilitate skill acquisition, they may lack the depth and complexity required for the in-depth understanding of certain subjects. Gee (2003) argued that MGBL platforms often prioritize gameplay mechanics over educational content, resulting in superficial learning experiences that fail to promote deep understanding.

3. Technical Challenges: Access to mobile devices and internet connectivity can be a barrier for learners, particularly in resource-constrained settings. Squire and Barab (2004) noted that disparities in access to technology can exacerbate inequalities in educational opportunities, limiting the effectiveness of MGBL initiatives in reaching all learners.

4. Overemphasis on Gaming Elements: Excessive focus on gaming elements may overshadow the educational objectives of MGBL, leading to superficial learning experiences. Becker (2011) cautioned against the tendency to prioritize entertainment value over educational effectiveness in MGBL design, emphasizing the importance of maintaining a balance between engagement and learning outcomes.

2.2.6 Mobile Game "Fill Missing Letters"

e game "Fill Missing Letters" is a product of DSTOC Apps, an al application developer, launched on October 25, 2020. pps has developed about 18 educational applications to date. ng Letters" has garnered over 5000 downloads and holds a .1 out of 5. This app is compatible with Android OS versions 5.0 ε, with a compact size of merely 5.72 MB. The current version is 2.0, and it was last updated on December 31, 2023.

The application offers a couple of advantages in it. Numerous word puzzles await solving across diverse categories such as animal, fruit, emotion, object, space, and so on to keep the players engaged and motivated. Helpful features such as word pronunciation, hints, and visual learning elements enhance the game's appeal for educational purposes. Upon completing a level, players receive stars as a token of achievement, the number of stars depends on the accuracy of the answer: three stars for flawless performance, two stars for a single error, and one star for two or more errors. Aditionally, the visual cues help reinforce word's meanings and improve retention.

The mobile game "Fill Missing Letters" is designed to adapt to the skills of novice players by gradually increasing its difficulty level as they progress. At the beginning, players are presented with relatively simple words consisting of just three to four letters, allowing them to become familiar with the game mechanics without feeling overwhelmed. However, as players successfully complete levels, the game ramps up the challenge by introducing longer and more complex words with an increasing number of missing letters. This progressive difficulty curve ensures that players are continuously challenged and engaged, offering a sense of accomplishment as they conquer more difficult puzzles. Compared to other word games such as, Crossword, Cryptogram, Scrabble, and Word Search, which have a level of difficulties that is less suitable for beginners. These games tend to focus only in vocabulary acquisition and not on meaning. In addition, the games may have more varied topics of word and more advanced graphics than Fill Missing Letters, but it is still important to consider the level of difficulty and the player's understanding of the vocabulary they are learning. Altough, it is unfortunate that Fill Missing Letters does not come with a feature to evaluate the vocabulary that has been learned like in a game called ABC Spelling, so self-evaluation need to be carried out to determine the player's vocabulary ability.

Based on the explanation above, the use of this application in learning activity, especially English vocabulary, is expected to help and facilitate students in enriching their vocabulary. As students, they are actively participating in word recognition, spelling, and recall, which are essential components of vocabulary acquisition. In addition, the game's interactive and gamified nature makes learning more captivating, offering students an enjoyable way to practice and reinforce their vocabulary e. By continuously challenging players and providing immediate the app encourages persistence and helps students retain new king it a valuable tool for improving English vocabulary in a fun ating environment.