

# CHAPTER I

## INTRODUCTION

### A. Background of the Study

English is an international language that is very important to learn. It is used by people from various countries to communicate and understand each other, as well as to facilitate international relations between nations. English plays a significant role as a global communication language, particularly in international interactions and in fields such as education, politics, economics, and tourism.<sup>1</sup> With this role, English has become one of the most widely spoken languages in the world, and many people consider it their second language or a foreign language. In Indonesia, English is taught as a foreign language from elementary school to university levels, so students are expected to learn it to be globally competitive. However, many junior high school (SMP) students struggle to master English, especially in vocabulary. Therefore, students need to learn vocabulary intensively to gain a good command of English.

Vocabulary mastery is an essential element in learning English. Nurhayati states that vocabulary helps individuals construct sentences for communication and makes language more diverse.<sup>2</sup> Vocabulary skills are crucial for understanding English material, as vocabulary forms the foundation of language learning. Without adequate vocabulary mastery, individuals will have difficulty expressing ideas and responding to information effectively. Vocabulary learning in English is generally integrated with other skills, such as reading, writing, speaking, and listening. Vocabulary is not taught in isolation but is applied within each language skill. The vocabulary learning process should relate to the function of language as a

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<sup>1</sup> Pupung Puspaardini et al., "Media Realia Dalam Mengenalkan Kosakata Anak Kelompok A Di TK Kembang Teratai Kelurahan Lekobalo Kecamatan Kota Barat Kota Gorontalo," *JPP PAUD FKIP Untirta* 6, no. 1 (2019): 63–80, <http://jurnal.untirta.ac.id/index.php/jpppaud/index>.

<sup>2</sup> Sari, D. P., Fadilah, F., & Nurhayati, N. (2019). English Vocabulary Training for Elementary Students at RT 05 RW 13 Duri Kosambi West Jakarta [Pelatihan Kosakata Bahasa Inggris bagi Siswa SD RT 05 RW 13 Duri Kosambi Jakarta Barat]. *Proceeding of Community Development*, 2, 747-753.

communication tool and should not merely consist of word lists for memorization but rather serve as a part of meaningful and contextual language use.

During two observations conducted on 6<sup>th</sup> March 2024, and 2<sup>nd</sup> April 2024, the researcher identified various challenges faced by both students and teachers in teaching and learning English. These challenges highlight the complexity of teaching a foreign language, particularly in contexts where students have limited exposure to English outside the classroom. The first observation on 6<sup>th</sup> March 2024 revealed that students' vocabulary comprehension levels were still quite low, with notable challenges in pronunciation, spelling, and understanding. Many students struggled to pronounce even simple English words correctly. For instance, common words such as "five," "basketball," "chair," and "bathroom" were often mispronounced, leading to misunderstandings. Additionally, frequent spelling errors were observed, such as writing "lamp" as "lamb" and "happy" as "hepy or hepi." This suggests that students often rely on their logic when unsure of the correct spelling. Another issue observed was the students' lack of familiarity with basic English vocabulary. Many students were unaware of the meanings of words such as "spinach," "ruler," or "roof," which are frequently used in their textbooks. This is consistent with Nurhayati and Fitriana (2018), who found that vocabulary limitations, mispronunciation, and lack of text comprehension are common challenges among junior high school EFL learners, which significantly affect their reading ability and overall language mastery.<sup>3</sup> This lack of understanding often discouraged students from engaging with learning materials or participating actively in classroom activities. Furthermore, students exhibited a lack of language input and exposure. Most students were passive during lessons, and if activities were monotonous, they quickly became bored and disengaged. The in-class learning process was largely limited to completing worksheets (LKS) without additional interactive or engaging elements. These challenges can be understood

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<sup>3</sup> Dwi Astuti Wahyu Nurhayati and Maylia Wilda Fitriana, "Effectiveness of Summarizing in Teaching Reading Comprehension for Efl Students," *IJOLTL: Indonesian Journal of Language Teaching and Linguistics* 3, no. 1 (2018): 33–50, <https://doi.org/10.30957/ijolti.v3i1.403>.

through the lens of Cognitive Load Theory <sup>4</sup>, which emphasizes the importance of balancing the mental effort required in learning to prevent cognitive overload. According to the theory, effective learning occurs when instructional design minimizes unnecessary cognitive demands and optimizes meaningful engagement with the material. In the context of vocabulary learning, traditional teaching methods and monotonous activities may increase extraneous cognitive load, hindering students' ability to process and retain new vocabulary. Addressing this issue requires strategies that reduce unnecessary mental effort and actively involve students in meaningful, engaging tasks to foster vocabulary comprehension. Nurhayati highlights that inadequate vocabulary mastery significantly hinders students' ability to understand texts or communicate effectively so it is important to acquire more vocabulary.<sup>5</sup> This aligns with observations during the study, where students often relied on guessing the meaning of words, leading to frequent errors. By applying principles from Cognitive Load Theory, teaching methods and assessment tools can be designed to enhance vocabulary mastery while keeping the cognitive demands manageable for students.

The second observation on 2<sup>nd</sup> April 2024 focused on challenges faced by teachers in teaching English. One of the primary issues was time allocation. Teachers only had two sessions (80 minutes) per week to teach English, which limited their ability to cover material comprehensively. Managing large class sizes further compounded this problem, making it difficult for teachers to monitor each student's progress effectively. Additionally, teaching methodologies were another challenge. Some teachers still relied on traditional methods, such as assigning tasks directly from textbooks or worksheets, with minimal use of English during the lesson. For example, rather than engaging students in communicative activities, teachers focused primarily on completing exercises. This approach not only reduced opportunities for active learning but also failed to utilize the teacher's role

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<sup>4</sup> John Sweller, "Cognitive Load during Problem Solving: Effects on Learning," *Cognitive Science* 12, no. 2 (1988): 257–85, [https://doi.org/10.1016/0364-0213\(88\)90023-7](https://doi.org/10.1016/0364-0213(88)90023-7).

<sup>5</sup> NURHAYATI, N. (2014). *THE CORRELATION BETWEEN STUDENTS' ACHIEVEMENT IN VOCABULARY AND READING ABILITY AT EIGHTH GRADE OF MTs ASSANUSIYAH BALARAJA* (Doctoral dissertation, UNIVERSITAS SULTAN AGENG TIRTAYASA).

as a language model for students. This is supported by the research of Nurhayati et al. (2022), who emphasized that the roles of educators—particularly didactic, reflective, and affective—are crucial in enhancing student motivation and engagement in learning activities, especially when students face internal and external barriers to learning.<sup>6</sup> The researcher also noted that the lack of diverse teaching media and activities contributed to student disengagement. Some students were observed sleeping, leaving the classroom with permission, or simply not paying attention during lessons. Without dynamic and interactive teaching strategies, it was challenging to maintain students' interest in learning English.

From these statements, it can be said that students need a conducive environment to encourage them to learn English. This means they require certain conditions to freely express their aspirations in engaging activities. The use of engaging activities can enhance the effectiveness of the teaching and learning process in the classroom. It is crucial to use a learning model that is engaging, enjoyable, communicative, and meaningful. The use of engaging activities can enhance the effectiveness of the teaching and learning process in the classroom. It is crucial to use a learning model that is engaging, enjoyable, communicative, and meaningful. A good learning model actively involves students both physically and mentally. Such models not only allow students to interact and practice but also foster critical thinking by challenging them to analyze, evaluate, and apply the vocabulary they have learned. Critical thinking helps students process information deeply, improving their ability to use vocabulary meaningfully in various contexts. This is supported by Nurhayati et al., who found that the implementation of thinking skill-based inquiry learning significantly enhanced students' learning outcomes by promoting critical and creative thinking. Such approaches stimulate students' active participation, motivation, and ability to solve problems—making them highly

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<sup>6</sup> Nur Isroatul Khusna et al., "The Roles of Educators (Didactic, Reflective, Affective) To Enhance Motivation To Learn Social Science," *Dinamika Sosial: Jurnal Pendidikan Ilmu Pengetahuan Sosial* 1, no. 2 (2022): 96–108, <https://doi.org/10.18860/dsjpips.v1i2.1433>.

effective in modern classroom settings.<sup>7</sup> Furthermore, using Bloom's Taxonomy<sup>8</sup> as a guide, learning activities can progress from basic cognitive skills such as remembering and understanding vocabulary to higher-order skills like applying it in real-life contexts, analyzing its meaning, and even creating sentences or descriptions. This structured approach ensures that students engage in meaningful and effective learning experiences. To address this issue, teachers provide students with materials accompanied by visuals. A medium that can be used in the teaching and learning process is 'Augmented Reality'.

In the modern era, multimedia application-based learning media offer numerous vocabulary exercises available through the internet. According to Kirubahar and Ramprasath, anyone with access to multimedia devices can improve their English skills.<sup>9</sup> This means that anyone in the world can improve their English knowledge as long as they have access to Android mobile devices for multimedia applications. One such medium is software called "Augmented Reality" that offers engaging visuals combined with digital content projected into the real world, creating a more interesting and interactive learning experience which can help students improve vocabulary mastery easily and enjoyably.<sup>10</sup> The "Augmented Reality" medium requires students and teachers to download the Android application, *Assemblr Studio*, which has a device capacity of around 70 MB, and the AR features in this application are available for free and only require internet access. The application is also user-friendly, allowing teachers to create interactive media tailored to students' needs and lesson themes. Thus, the use of this application not only aids English language learners but also contributes to vocabulary mastery.

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<sup>7</sup> D. A.W. Nurhayati et al., "Effect of Thinking Skill-Based Inquiry Learning Method on Learning Outcomes of Social Studies: A Quasi-Experimental Study on Grade VIII Students of MTSN 6 Tulungagung," *IOP Conference Series: Earth and Environmental Science* 485, no. 1 (2020), <https://doi.org/10.1088/1755-1315/485/1/012073>.

<sup>8</sup> Lawrence N. Crumb, "The Classification of Biographical Dictionaries in Reference Collections Using the Library of Congress Classification System," *Cataloging and Classification Quarterly* 3, no. 1 (1983): 41–44, [https://doi.org/10.1300/J104v03n01\\_03](https://doi.org/10.1300/J104v03n01_03).

<sup>9</sup> Kirubahar, J. S., & Ramprasath, M. G. (2018). Mobile learning in the post-colonial era. *B DHI*, 85.

<sup>10</sup> Merry Christin Natalia and Fitriawati Fitriawati, "The Use of Augmented Reality (Ar) Media To Enhance Students's Vocabulary Mastery At Seventh Grade Students of Smp Negeri 7 Tarakan," *Borneo Journal of English Language Education* 4, no. 2 (2022), <https://doi.org/10.35334/bjele.v4i2.3135>.

This is supported by Nurhayati (2015), who emphasized that varied and engaging language games, such as Go Fish and Maze Game, significantly improve students' vocabulary and pronunciation skills, particularly by reducing boredom and increasing student motivation in English learning.<sup>11</sup>

This study is also supported by previous research showing the effectiveness of AR in enhancing vocabulary mastery. AR significantly improves vocabulary retention and comprehension in EFL students.<sup>12</sup> Similar results were obtained who stated that AR not only enhances vocabulary memory but also creates a collaborative and engaging learning environment.<sup>13</sup> In this study, it is expected that the use of AR will have a similar impact, particularly on seventh-grade students at SMP Negeri 3 Srengat. This study aims not only to improve vocabulary retention but also to create a more interactive and collaborative learning experience through small group activities. As explained in Vygotsky's social constructivism theory learning becomes more effective when students collaborate in social activities, helping and supporting each other in understanding material.<sup>14</sup> Thus, using AR in groups can strengthen understanding and application of vocabulary in more meaningful contexts.

In this AR-based vocabulary learning, students are divided into small groups, and each group is given a device with an AR application. By scanning an AR card or barcode, students can view 3D images, text, and audio explaining the vocabulary. For example, when learning the word "cupboard," students can see a 3D image of a cupboard, hear its pronunciation, and view example sentences using the word. Presenting vocabulary in this context helps reduce students' cognitive load when memorizing words without context and reinforces their ability to use

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<sup>11</sup> Dwi Astuti, "Improving Students' English Pronunciation Ability through Go Fish Game and Maze Game," *Dinamika Ilmu* 15, no. 2 (2015): 215–33, <https://eric.ed.gov/?id=EJ1121925>.

<sup>12</sup> Raja Muhammad Ishtiaq Khan et al., "Assessing the Efficacy of Augmented Reality in Enhancing EFL Vocabulary," *Cogent Arts and Humanities* 10, no. 1 (2023), <https://doi.org/10.1080/23311983.2023.2223010>.

<sup>13</sup> Amalina Binti Hasbi and Melor Md. Yunus, "The Effectiveness of Augmented Reality for English (AR4E) in Vocabulary Learning among Primary 2 Pupils," *International Journal of Education* 13, no. 3 (2021): 13, <https://doi.org/10.5296/ije.v13i3.18808>.

<sup>14</sup> Jo Mackiewicz, *A Mixed-Method Approach, Writing Center Talk over Time*, 2018, <https://doi.org/10.4324/9780429469237-3>.

vocabulary correctly. Furthermore, the use of AR technology in vocabulary learning has several advantages. AR allows students to learn in a more immersive and interactive way, not only introducing them to the meaning of words but also reinforcing their understanding through visual and audio experiences. By providing an enjoyable learning experience, AR can increase students' motivation to learn English. Additionally, AR offers more flexible learning, as students can access materials anytime and anywhere, giving them the opportunity to learn outside the classroom and at their own pace. This finding aligns with Nurhayati, who emphasized that integrating online learning platforms enables students to study independently, increases their motivation, and enhances the effectiveness of language instruction by providing time-efficient, accessible, and engaging learning experiences.<sup>15</sup> Another advantage is that AR supports collaborative learning, where students work in groups to explore and discuss the material, enhancing their social and communication skills. In this way, AR can help create a more dynamic and enjoyable learning environment.

This research is designed to measure the effectiveness of using Augmented Reality to improve English vocabulary mastery among seventh-grade students at SMP Negeri 3 Srengat Blitar. The vocabulary taught includes basic words relevant to classroom interactions and daily situations, as well as exercises such as completing sentences, using words in sentences, and identifying nouns, verbs, and adjectives. Evaluation is conducted through tests that measure understanding, memory retention, and application of the vocabulary taught.

Through integrating AR technology into vocabulary learning, this study is expected to contribute to the development of more effective and innovative English teaching methods at the junior high school level. The results of this study are hoped to provide recommendations for teachers and educational policymakers to implement AR technology as a means to improve student motivation, learning outcomes, and language skills.

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<sup>15</sup> Dwi Astuti Wahyu Nurhayati, "Students' Perspective on Innovative Teaching Model Using Edmodo in Teaching English Phonology: A Virtual Class Development," *Dinamika Ilmu* 19, no. 1 (2019): 13–35, <https://doi.org/10.21093/di.v19i1.1379>.

## **B. Research Question**

The researcher formulates the research problem following the background:  
"Is the use of the Augmented Reality effective on the English Vocabulary Mastery of the seventh-grade at SMPN 3 Srengat students?"

## **C. Research Aim**

The purpose of this study was to measure the effectiveness of augmented reality and sets clear expectations for the English vocabulary mastery of the seventh-grade students at SMPN 3 Srengat Blitar.

## **D. Scope and Limitations**

### **1. Scope:**

This study aims to examine the effectiveness of using Augmented Reality (AR) media on the English vocabulary mastery of seventh-grade students at SMPN 3 Srengat Blitar. The focus of the study is on the improvement of students' vocabulary learning outcomes before and after being given treatment through learning activities using AR media, based on the results of the pre-test and post-test.

### **2. Limitations:**

- a. This study does not explore in depth the internal mechanisms or processes through which AR enhances students' vocabulary mastery.
- b. The study is limited to testing the use of AR in vocabulary learning and measuring the significance of learning improvement through quantitative data.
- c. The sample is limited to one class, namely class VII D of SMPN 3 Srengat, which was selected using purposive sampling.

## **E. Significant of the Research**

The significance of this research is multifaceted, aiming to benefit both theoretical understanding and practical application:

### **1. Theoretically:**

- a. Next Researchers: This research endeavors to offer insights into the advantages and practical applications of augmented reality

features. By demonstrating how AR can engage students in the learning process, solve real educational challenges, and enhance visualization skills, it provides a theoretical foundation for future research endeavors in educational technology and pedagogy.

2. Practically:

- a. For Teachers: This research serves as an informative resource, offering teachers an alternative approach to utilizing augmented reality (AR) media to improve vocabulary mastery. By providing practical guidance on integrating AR technology into the classroom, teachers can enhance their instructional methods and better support students' language learning needs.
- b. For Students: The use of augmented reality (AR) media in vocabulary instruction is expected to directly benefit students by enhancing their vocabulary mastery. Additionally, it fosters active engagement, enthusiasm, and deeper understanding of the content being taught. By making learning more interactive and immersive, AR helps students grasp complex concepts more effectively.
- c. For Educational Institutions: This research highlights the importance of providing adequate technological resources, specifically augmented reality media, to support modern learning environments. By advocating for the implementation of AR technology in schools, this research aims to enhance the overall learning experience and facilitate positive student outcomes. Moreover, investing in AR technology aligns with the evolving needs of contemporary education, ensuring that institutions remain at the forefront of innovative teaching practices.

## **F. Definition of Key Terms**

There are several explanations of the components mentioned by the researcher to prevent readers of the study from being unclear or confused. So, the researcher must define the key terms as follows:

1. Effectiveness: The degree to which a specific intervention, such as the use of Augmented Reality (AR) in vocabulary instruction, successfully achieves its intended outcomes, measured by improvements in students' vocabulary mastery.
2. Augmented Reality: A technology that superimposes digital information—such as images, videos, and sounds—onto the real world, enhancing the user's perception and interaction with their environment. In education, AR can create interactive and immersive learning experiences that facilitate better understanding and retention of information.
3. Vocabulary Mastery: The ability of students to understand, use, and apply a set of words effectively in appropriate contexts. This includes recognizing word meanings, using words in sentences, and applying vocabulary in both written and spoken communication.