CHAPTER I

INTRODUCTION

This chapter comprises the background of the study, the formulation of the research question, the purpose of the study, the formulation of the hypothesis, the significance of the study, the scope and limitations of the study, and the definition of key terms.

A. Background of The Study

Reading is a fundamental skill in education, serving as the gateway to learning across all academic subjects. In the field of English as a Foreign Language (EFL), reading takes on an even greater significance, as it not only helps students acquire knowledge but also aids in the development of their language proficiency. In Indonesia, English is a mandatory subject in junior and senior high schools, the need to improve students' reading abilities becomes critical. Reading, one of the most fundamental foundations of 21st-century learning, has a major role to play, especially for English language learners. Living in a world where everything is getting advanced and globalized by every passing day, it is very much essential for people to adapt to international standards and to be a part of the connected world. Thus, reading skills, especially in English, have become an indispensable ability to operate in and succeed in today's globalized world.[1]

Despite the significance of reading proficiency in education, Indonesian students continue to lag in developing strong reading skills. The 2018 PISA results highlight Indonesia's underperformance in reading literacy, ranking well below the global average.[2] This reflects a broader challenge within the education system, where students are often not given the proper tools or environment to improve their reading comprehension.

[1] Rohani Ganie, Tengku Silvana Sinar, and Universitas Sumatera, "Identifying English Text Reading Comprehension Problems in Senior High School Students," *International Journal of Innovation, Creativity and Change* 13, no. 9 (2020): 803–17.
[2] OECD, *PISA 2018 Results*, *OECD Publishing*, vol. III, 2019, https://www.oecd.org/

One of the primary reasons for these deficiencies lies in the teaching and learning process itself.[3] Traditional teaching methods, which focus heavily on rote learning and repetition, fail to engage students meaningfully or to foster deeper comprehension skills. These practices often leave students ill-equipped to face real-world reading challenges, further exacerbating the issue of low reading proficiency in Indonesia.

In many Indonesian classrooms, reading instruction is dominated by traditional methods that emphasize rote memorization rather than active engagement with the material. Students are frequently tasked with repetitive reading exercises or vocabulary memorization, which do little to foster a deeper understanding of the text. This traditional approach to teaching reading lacks the guidance necessary to help students interpret or analyze material effectively. Consequently, students often struggle to grasp the deeper meanings of texts, limiting their comprehension. The students educated through these methods tend to display weak skills in higher-order thinking tasks, such as synthesizing information or drawing inferences from the text.[4]

Students' difficulties in acquiring strong comprehension skills are made worse by the passive nature of traditional reading instruction. Students are frequently expected to learn material without the advantage of engaging, interactive learning opportunities. This conventional method ignores students' varied learning requirements, especially regarding to reading comprehension. Therefore, prioritizing adaptable teaching methods and a variety of media is essential for increasing student engagement and motivation.[5] Without these engaging techniques, students are less prepared to take on challenging reading assignments or use what they have learned

[3] Applied Linguistics, "Https://Jurnal.Unigal.Ac.Id/Index.Php/Jall/Index," 2020.
[4]Siti Aisyah and Pratiwi Renaningdyah, "Students ' Conceptualization on Critical Thinking Skills in Their Research Proposal and Final Project" 20, no. 15 (2022): 681–703.
[5] Nur I.K, DAW Nurhayati, and …,"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.

in practical situations.[6] This demonstrates the necessity of student-centered approaches that prioritize involvement and tailored assistance. Students can acquire the critical thinking abilities necessary for both academic and long-term success in interactive learning environments.

One promising solution to these challenges is the flipped classroom approach. Placing students in the middle of the learning process, the flipped classroom model modifies traditional learning formats.[7] Rather than listening to lectures during class, students first encounter new material outside of class, via videos, writings, and other digital media. This frees up class time to focus on more interactive activities like discussions, problem sets, and group projects. This method allows students to do some active learning before coming to class, helping shift the paradigm from passively absorbing the lectures to more actively engaging with the material. Flipped classrooms deliver better understanding and retention of the lessons compared to traditional lecture-based classrooms.[8] Consequently, the flipped classroom model provides a 21st-century method of reading instruction that encourages deeper and more active engagement with reading materials.

The flipped classroom approach provides several distinct advantages for close reading instruction. It provides a better chance for students to be able to read at their own pace while working on the reading during a personalized time frame that meets their schedule. This is especially helpful for students who have difficulty understanding what they read because they can stop, go back, or re-read a text or video to work through it. Active learning techniques that are a mainstay in the flipped classroom approach lead to marked increases in student performance in several subjects, including reading comprehension. In the flipped

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[6] S A Endaryati, S St Y, and ..., "Analysis of PBL-Based Flipbook. *Conference on Education,* July (2023).

[7] Jacob Lowell Bishop and Matthew A. Verleger, "The Flipped Classroom: A Survey of the Research," *ASEE Annual Conference and Exposition, Conference Proceedings*, (2013).

[8] Collins Attah Ogoe, "Assessing_the_Effectiveness_of_Procureme," no. August (2022).

classroom, however, the interactive nature of classroom time allows students to ask questions, work with each other, and receive immediate feedback from their teachers.[9] This not only enhances recognition but also creates a more interactive and supportive learning environment, where students are empowered to take an active part in their learning activity.

Through the continuous development of digital technology, especially the adoption of AI, learning resources have become more accessible and better quality. AI (Artificial Intelligence) tools are rapidly changing the entire educational landscape by initiating another stage of personalized study meeting the needs of individual students. AI comes with user-friendly capabilities that help teachers create interactive materials that match the learning level of the students and are represented across a wide range of subjects. With data up to October 2023, AI-based platforms subsequently improve student participation and learning consequences, providing customized overall performance to match each learner's improvement and necessities.[10] This adaptive learning experience keeps students motivated and engaged, providing them with the right level of challenge at each step of their language learning journey.

One example of personalized learning material supported by AI is the use of AI-enhanced tools, such as student handbooks integrated with explanatory videos, which can play a critical role in teaching reading comprehension. These handbooks and videos, powered by AI algorithms, are capable of analyzing student engagement and comprehension during the pre-class phase. For instance, a bilingual (dual-language) handbook can help students more easily understand the content, while the integrated explanatory videos provide visual and auditory support that enhances their grasp of the material. Teachers can create AI-enhanced student handbook

[9] Scott Freeman et al., "Active Learning Increases Student Performance in Science, Engineering, and Mathematics," *Proceedings of the National Academy of Sciences of the United States of America* 111, no. 23 (2014).
[10] Mohammed RIZVI, "Investigating AI-Powered Tutoring Systems That Adapt to Individual Student Needs" *The Eurasia Proceedings of Educational and Social Sciences* 31, 67-73. (2023).

videos using platforms such as Canva, CapCut, ElevenLabs, and Runway AI. These tools allow for the incorporation of interactive elements, such as quizzes, voice recognition, to promote active student participation and deeper learning. The students who learn through AI-enhanced videos demonstrate higher retention and comprehension compared to those using traditional methods.[11]

By combining the Flipped Classroom approach with AI-enhanced tools, this approach also fills in the voids that traditional reading instruction has created by allowing for increasingly interactive and highly student-centered learning environments. Rather than just receiving information passively, students interact with the material, which improves motivation, retention, and reading comprehension scores. That's why, with the help of technological tools, student-centered approaches are essential for independent learning and the development of critical thinking skills.[12] By embracing this new model, teachers can foster more effective learning environments that better prepare students for future academic and professional challenges.

Before this research, numerous studies have assessed the effectiveness of the Flipped Classroom approach. However, there are still notable gaps that highlight the need for further investigation, which this study aims to address. One significant gap lies in the target population, specifically junior high school students. While existing studies support the effectiveness of the Flipped Classroom model, most of the research has focused on senior high school or university students, or learners in different educational settings. For instance, studies by Suryana et al. and Putri & Nurkhamidah investigated high school students,[13], while Phuntsho focused

[11] Kyoungwon Seo et al., "The Impact of AI on Learner–Instructor Interaction in Online Learning," *International Journal of Educational Technology in Higher Education*, no. 1 (2021).
[12] P. Sasikala and R. Ravichandran, "Study on the Impact of Artificial Intelligence on Student Learning Outcomes," *Journal of Digital Learning and Education* 4, no. 2 (2024): 145–55.
[13] Suryana et al., "Discovering Students' Responses Using Flipped Classroom Model through Reading Comprehension Teaching," *Journal of Applied Studies in Language* 5, no. 1 (2021): 23–32;

on primary students[14]. However, there is a lack of research exploring how these methods impact junior high school students, particularly in Indonesia.

Previous research on flipped learning often emphasizes speaking, listening, or writing skills, while reading comprehension receives less attention. While some research, such as the study on AI-based simulation for listening and speaking classes among English majors, has begun to touch on this integration, the focus has largely been on older learners and different language skills.[15] On other hand, the results of the study showed that the metacognitive writing awareness and story writing achievement of the teaching group based on the FC model were statistically higher than the students in the traditional face-to-face teaching group.[16] These results further support the potential of flipped learning to improve language outcomes. Related to the integration of AI, the study affirmed the positive impact of GenAI tools on teaching efficiency, students' engagement, and writing skills.[17] But studies rarely explore how they can be integrated into structured learning materials. This study aims to bridge that gap by using an AI-enhanced student handbook with explanatory videos in a flipped classroom, offering practical insights into effective AI integration for junior high school learners.

Therefore, this study seeks to fill these gaps by examining the use of an AI-enhanced student handbook with integrated explanatory videos within a flipped classroom model, specifically focusing on its impact on reading comprehension among junior high school students at SMPN 1

Putri and Nurkhamidah, "The Implementation of Flipped Classroom to Develop Students' Reading Skill," *Acitya: Journal of Teaching and Education* 5, no. 1 (2023): 156–70,

[14] Phuntsho Ugyen, "The Flipped Classroom Model: Effects on Students' Reading Comprehension in English Text," *I-Manager's Journal on School Educational Technology* 17, no. 3 (2022): 34

[15] Si Wu and Fei Wang, "Artificial Intelligence-Based Simulation Research on the Flipped Classroom Mode of Listening and Speaking Teaching for English Majors," (2021)

[16] Hasan Basri Kansizoglu and Ozlem Bayrak Comert, "The Effect of Teaching Writing Based on Flipped Classroom Model on Metacognitive Writing Awareness and Writing Achievements of Middle-School Students," (2021): 279–302, https://doi.org/10.15390/EB.2020.8823.

[17] Puna Ram Ghimire, Bharat Prasad Neupane, and Niroj Dahal, "Generative AI and AI Tools in English Language Teaching and Learning: An Exploratory Research," *English Language Teaching Perspectives* 9, no. 1–2 (2024): 30–40, https://doi.org/10.3126/eltp.v9i1-2.68716.

Sumbergempol Tulungagung. This approach not only responds to the need for age-specific research but also contributes to a deeper understanding of how AI products can be effectively used in younger learners' literacy development.

B. Formulation of Research Problem

Based on the background above, the research problem is formulated as follows: "Is there any significant difference in the reading comprehension of the students at SMPN 1 Sumbergempol Tulungagung when taught using the Flipped Classroom approach with an AI-Enhanced Student Handbook that incorporates integrated explanatory videos, compared to those taught without Flipped Classroom methods?"

C. Research Objective

Following the formulation of the Research Problem above, the researcher asserts that the research objective in this study is to investigate whether there is a significant difference in the reading comprehension of students at SMPN 1 Sumbergempol Tulungagung when taught using the Flipped Classroom approach with an AI-Enhanced Student Handbook that incorporates integrated explanatory videos, compared to those taught without Flipped Classroom method.

D. Formulation of Hypotheses

Before concluding on the results of the hypotheses, the writer would follow this interpretation procedure:

1. Formulation of the Null Hypothesis (H_0): There is no significant difference in reading comprehension between the students who are taught using the flipped classroom approach with AI-enhanced tools and those who are taught using traditional methods.
2. Formulation of the Alternative Hypothesis (H_a): There is a significant difference in reading comprehension skills between the students who are taught using the flipped classroom approach with AI-enhanced tools and those who are taught using traditional methods.

E. Significance of The Study

This study is expected to offer meaningful contributions both theoretically and practically in the field of English language education, particularly in the development of reading comprehension through innovative instructional models. The significance of this study can be viewed from several perspectives:

1. Theoretical Contribution

This research introduces a novel technique for teaching that aims towards students' reading comprehension. By exploring the effectiveness of the flipped classroom approach combined with AI-enhanced tools, the study offers new insights into innovative instructional methods and their impact on learning outcomes.

2. Practical Contributions

a. For Teachers: The study provides a framework for teaching methods specifically tailored for junior high school students by integrating technology and interactive learning strategies. This can help teachers achieve better results in students' reading comprehension and adapt their instructional approaches to meet contemporary educational needs.

b. For Students: The study introduces students to a new, engaging learning technique that supports autonomous learning. By familiarizing them with the flipped classroom approach, the study aims towards their reading comprehension and encourage active participation in their educational process.

c. For Researcher: The primary contribution of the study is to serve as a basis for future studies illustrating the use of AI-enhanced tools in education. This document can act as a reference for other researchers looking to pursue similar interventions or build on the results to investigate effective approaches to teaching.

F. Scope and Limitation of The Study

To provide clarity and prevent misunderstandings, the scope and limitations of this study are outlined as follows:

a. Scope

1. Target Group: The study focuses exclusively on students at SMPN 1 Sumbergempol Tulungagung examining their reading comprehension skills.
2. Intervention: The research investigates the effectiveness of the Flipped Classroom approach using an AI-Enhanced Student Handbook with integrated explanatory videos in teaching students' reading comprehension.
3. Comparison: The study compares the outcomes between two groups: an experimental group receiving instruction through the Flipped Classroom approach, and a control group receiving traditional classroom instruction, to assess the relative effectiveness of each method.
4. Data Collection: Data were collected through a quasi-experimental design using post-tests for both the experimental and control groups. The post-tests would measure the students' reading comprehension after the intervention has been implemented in the experimental group, and the results would be compared to those of the control group.
5. Exploration: The study also explores the challenges and benefits experienced by teachers and students during the implementation of the Flipped Classroom approach in the experimental group, and the traditional method in the control group, for developing reading comprehension.

b. Limitations

1. Geographic Limitation: The study was conducted exclusively at SMPN 1 Sumbergempol Tulungagung, which may limit the generalizability of the findings to other schools or regions. Results

may not be applicable in different educational contexts or cultural settings.

2. Specific Student Focus: The research focuses on a specific group of students at SMPN 1 Sumbergempol, which may not provide insights applicable to students in other educational institutions or grade levels. This specificity may restrict the broader implications of the study.
3. Time Frame: The duration of the study is constrained to a specific academic period, which may limit the ability to assess the long-term impact of the Flipped Classroom approach on students' reading comprehension and retention.
4. Data Reliability: The study relies on data collected from post-tests and surveys, which may introduce biases such as response bias in self-reported measures. This reliance may affect the accuracy and validity of the findings regarding student comprehension.
5. Individual Differences: The research would not account for individual differences among students, such as prior language proficiency, motivation levels, or learning styles. These factors may influence the effectiveness of the Flipped Classroom approach and the overall outcomes of the study.

G. Definition of Key Terms

a. Effectiveness

Effectiveness in educational research is commonly defined as the degree to which a specific intervention or strategy achieves its intended goals. It assesses how successfully an intervention produces the desired outcomes, usually by comparing the results with a control or baseline condition. In the context of this study, effectiveness refers to how well the Flipped Classroom Approach Using AI-enhanced student Handbook with Integrated Explanatory Videos influences students' reading comprehension.

b. Reading Comprehension

Reading comprehension, a crucial skill that facilitates the understanding, interpretation, and interaction with texts, was measured in this study using a comprehensive Reading Comprehension Test created to assess the efficacy of the flipped classroom method, employing an artificial intelligence-supported student Handbook supplemented with explanatory videos. The test had both multiple-choice and essay questions aimed at gauging students' abilities to analyze and interpret information and demonstrate deeper understanding, nudging them toward thinking critically about the material. The test was designed consistent with the "Reading Comprehension Blueprint" developed by Nancy Lewis Hennessy, emphasizing four major areas: Understanding vocabulary, making inferences, Critical reading, and Expressing comprehension. The data will then illustrate for the reader the extent to which this framework offered an encompassing examination of students' reading comprehension skills, addressing a well-structured measurement of students basic and higher levels of comprehension.

c. Flipped Classroom Approach

The flipped classroom approach is an innovative instructional model that reverses the traditional teaching paradigm by moving direct instruction outside of the classroom, typically in the form of video lectures or digital content that students engage with before class. This pre-class activity provides students with the opportunity to learn key vocabulary and concepts in a more self-paced and self-timed manner. They then flip the classroom concepts, going from passive learning — where teachers would lecture to students — to an active learning/dynamic environment. Up until the very moment they walk into the classroom, students are already thinking about what they will be doing with their peers; whether it is a collaborative discussion, a problem-solving task, studying an

actual case, or a hands-on activity that will facilitate not just learning but understanding the material at a deeper level. This technique promotes critical thinking, students' involvement, and peer collaboration as students have further chances to bond with the content and with one another.

d. AI-Enhanced Student Handbook with Integrated Explanatory Videos

The AI-Enhanced Student Handbook with Integrated Explanatory Videos is a dynamic learning resource designed to enhance students' reading comprehension. This student handbook features dual-language explanations of key topics, providing clarity and accessibility for a diverse range of learners. The content is presented in a fun, engaging design that helps maintain student interest and makes learning more enjoyable. The handbook also includes integrated explanatory videos, where each video is linked directly to the relevant sections of the handbook. These videos break down complex concepts, offering visual and auditory explanations that support the written content. This integration of video and text creates a holistic learning experience, helping students better understand the material and reinforcing key concepts through multiple modes of learning.