CHAPTER I

INTRODUCTION

This chapter elaborates a background of the research. It involves the identification of the problems, the research questions, the research aims, the previous studies, research gaps and the research significance (both theoretical and practical) of the research.

1.1 The Research Background

Indonesia's literacy is in a crisis literacy situation. PISA 2022 results within reading in Indonesia scores 70th out of 80 nations that take part in this global evaluation, further demonstrating Indonesia's continued low literacy rate (OECD, 2023). In addition, Education First (EF) of 2024 report on the English Proficiency Index, Indonesia ranks 80th out of 116 countries (EF, 2024).

Table 1.1 Indonesian EF EPI Result (2015-2024)

No.	Years	Rank	Participants (Country)
1	2015	32	70
2	2016	32	72
3	2017	39	80
4	2018	51	100
5	2019	61	100
6	2020	74	100
7	2021	80	112
8	2022	81	111
9	2023	79	113
10	2024	80	116

(Source: EF, 2024)

Table 1.1 demonstrates that in one decade the Indonesian EF English Proficiency Index Result has remained low, with a 23-point decline from 2015 to 2024. EF Proficiency Index Result also shows that Indonesia ranks 12th of 23 countries in Asia (EF, 2024).
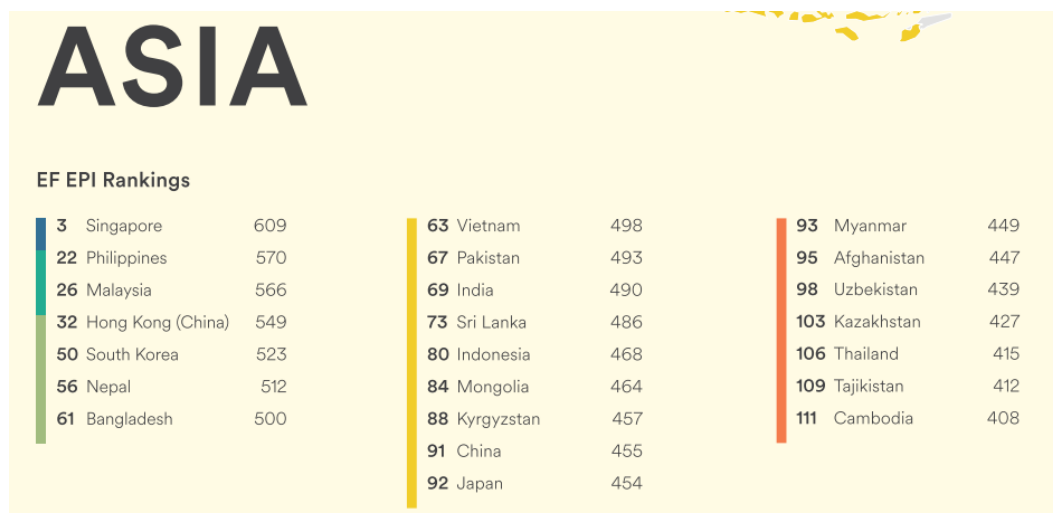
Figure 1.1 EF Proficiency Index in Asia

(Source: EF, 2024)

Indonesia's ranking this year improved from the previous year (13th out of 23 countries). Lack of interest in reading and restricted access to reading materials increase Indonesia's literacy challenge (Yusniah et al., 2023). Specifically, the community in Cirebon Regency also faced this challenges (Alifatuzzahro & Maula, 2021). According to Fikriyah, et al. (2020) there are many obstacles faced by the students of Al-Farabi Islam, Sumber District, Cirebon City, including laziness and lack of motivation in literacy, poor reading habits, relying largely on academic assignments rather than maintaining a continuous reading pattern (Asipi et al., 2022).

Additionally, based on the interviews by the researcher to the English teacher at 10th grade of Islamic Senior High School 1 Cirebon City, it was found that the students faced difficulties related to literacy. In the last three years the students' English learning outcomes are still below KKM (Minimum Completeness Criteria). Students less comprehend the material being studied, because the students struggled particularly with understanding vocabulary and long sentences, which hindered their overall reading comprehension. In addition, the teachers also have not connected the learning material with students' daily lives or vice versa. Thus, teachers need to review the prerequisite materials as contained in the curriculum.

Teaching descriptive text allows students to engage with content that is culturally relevant and relatable. Research indicates that when students read

descriptive texts related to local culture, there is an improvement in their reading comprehension scores (Sari et al., 2022). Teaching English reading literacy through descriptive text materials can be enhanced. Teaching descriptive texts has been shown to enhance reading comprehension, enabling students to extract and evaluate information effectively (Burievna & Gafurovna, 2020). In addition, descriptive texts encourage students to explore their thoughts and ideas, fostering a deeper connection with the material (Azep Maulana, 2022). Thus, descriptive text also encourages students to explore their thoughts and ideas, creating a deeper connection to the learning material. Furthermore, this research mentions only the reading of English literacy.

There are several factors that cause difficulties in the reading comprehension at Islamic Senior High School 1 Cirebon: the learning process focused on the teachers' cantered, monotonous learning process in the classroom that reduces students' enthusiasm and motivation, the teachers have not adjusted the learning media to the current era maximally and the lack of digital learning that reduces students' attention span. Another reason is students' lack of access to book and lack of reading habit support from the community (Nurcahyoko et al., 2024). In addition, low of students' English reading literacy are caused less of reading pieces to their students in every meeting and less creative and resourceful in providing reading resources for students (Setianingsih, 2017). For the phenomena identified, this research highlights the lack of digital learning. Therefore, this research offers the alternative by using ChatGPT-based JiTT in English reading literacy. The implementation of ChatGPT-based JiTT is highly possible because the respondents of this research come from Gen-Z, where respondents have heard, know and use ChatGPT.

Afterward, students can be directed to use ChatGPT (Generative Pre-trained Transformer) that is easily accessible anywhere to get information. The founder of ChatGPT is a consortium led by Elon Musk that released in November 2022 (Walter, 2024; Irzawati et al., 2024; Bender, 2024). ChatGPT as a powerful chat-like AI tool created by Open AI that can identify, condense, translate, predict, and produce text (Tajik, 2024; Waruntorn, 2023) and also capable of generating detailed

and natural-sounding feedback for students, which can help them learn better (Kohnke et al., 2023; Hatmanto & Sari, 2023). Additionally, by acting as a digital learning resource, supporting cognitive tasks, regulating learning, and raising student engagement, ChatGPT may enhance students' prior knowledge (Hanafi et al., 2024). In case, ChatGPT serves as a valuable tool, offering students quick access to information and personalized feedback that enhances reading and learning experiences. Moving forward, it aligns well with the principles of JiTT a pedagogical strategy that emphasizes timely feedback and active learning.

Consequently, by incorporating JiTT, teachers can further tailor their lessons to student needs, creating a more responsive and interactive learning environment. The JiTT pedagogical strategy (Novak, Patterson, Gavrin & Christian, 2000) was developed in an effort to assist non-traditional students in enhancing their learning (Novak & Patterson, 2023). JITT is a pedagogical methodology that utilizes the internet to make face-to-face classes more interactive and student-centered (Maala, 2023; Khodaskar et al., 2023; Selvam, 2023). JITT involves three steps: preparatory web-based assignments, in-class discussions based on student responses, and cooperative learning activities (Simkins & Maier, 2023; Khodaskar et al., 2023). In addition, JiTT is an interactive pedagogy fostering deeper learning and student motivation across disciplines, enhancing English literacy through pre-class warm-ups and active student participation (Novak, 2011). In case, the use of ChatGPT-based JiTT allows students to be able to read more, get information, have prior knowledges and learning experience so that students can be better to learn English literacy especially reading.

Several prior studies have explored the use of ChatGPT, JiTT, and their roles in enhancing English reading literacy. First, Cha (2023) found that ChatGPT improves student satisfaction and literacy skills, while Wang & Feng (2024) highlighted its effectiveness in enhancing reading efficiency and comprehension in the Internet era. Then, Lin & Chen (2024) also demonstrated ChatGPT's potential as a test developer and teaching assistant for reading. In addition, the experimental group using ChatGPT showed a significant increase in post-intervention test scores

over the control group, the average vocabulary score increased from 42.5% to 78.6%, while the control group only increased to 52.1% (Fadillah et al., 2025).

These studies provide valuable insights into how ChatGPT can impact literacy, yet they are primarily focused on its independent role in improving general literacy skills or specific tasks, such as testing, rather than its integration with other pedagogical strategies. On the other hand, research on JITT, Adnan et al. (2016) emphasized how timely feedback through JITT improves reading comprehension, while Böttcher et al. (2015) and Chantoem & Rattanavich (2015) found that JITT supports personalized learning and English literacy. Finally, Kurbanova (2021) further showed that JITT enhances cognitive skills through pre-class activities. However, this research largely examines the separate effects of ChatGPT and JITT on English literacy. There is a gap in research that integrates ChatGPT with the JITT approach to explore their combined potential in improving reading skills. This research aims to fill this gap by investigating how ChatGPT and JiTT can work together to enhance students' reading comprehension and overall literacy, which is crucial in modern education. No prior research has fully investigated how ChatGPT's ability to provide real-time, personalized feedback can be combined with JITT's pedagogical approach to offer a more dynamic and responsive learning experience for students.

1.2 Identification of the Research Problems

This research aims to fill this research gap by investigating the combined potential of ChatGPT and JiTT in enhancing English literacy. By conducting this research at Islamic Senior High School (MAN) 1 Cirebon with 10th-grade students, the research seeks to determine how the integration of these two approaches can lead to more effective learning outcomes, particularly in reading comprehension. This combination has not been explored before, making this research novel in its approach to blending artificial intelligence and pedagogy to address challenges in literacy education.

1.3 The Research Questions

The research questions based on the research phenomena; the research questions are as follow:

1) How is the implementation of ChatGPT-based Just-in-Time Teaching (JiTT) in English reading literacy?

2) How do the implementation of ChatGPT-based Just-in-Time Teaching (JiTT) enhance English reading literacy?

3) How is the students' emotional geography when learning reading by using ChatGPT-based Just-in-Time Teaching (JiTT) in English reading literacy?

1.4 The Research Purposes

As formulated in the research questions, the aims of this research are:

1) To analyze the implementation of ChatGPT-based Just-in-Time Teaching (JiTT) in English reading literacy.

2) To investigate the implementation of ChatGPT-based Just-in-Time Teaching (JiTT) enhance English reading literacy.

3) To evaluate the Students' Emotional Geography when learning reading by using ChatGPT-based Just-in-Time Teaching (JiTT) in English reading literacy.

1.5 The Research Significances

In conducting research, there should be information that is beneficial to others. Therefore, this study has the following theoretical and practical significances:

A. The Theoretical Significances

This research is expected that the results of this research can provide valuable insights into the potential of artificial intelligence-based JITT in supporting English language teaching and learning at the senior high school level. This research is expected to produce research on the development of digital methods and learning media that suit the students need. The discussion about learning through artificial intelligence-based JITT is still rarely discussed. However, teachers should start realizing that learning through artificial intelligence is a necessary aspect to adapt students to digital development.

B. The Practical Significances

    1) Teachers

The practical implications of this study can help teachers in designing innovative and effective learning strategies to improve students' English reading literacy. All activity focuses on student-centered learning.

2) Students

This research will facilitate students for a better knowledge in English reading literacy. By using ChatGPT-based JITT methodology, students can be more enthusiastic and interested in learning English reading literacy.

3) Policymakers

The benefit of this research for policy makers in English education is that it provides empirical data and in-depth analysis regarding the implementation of technology-based teaching methods, such as JiTT, in improving English reading literacy. The findings of this study can be used by policy makers to design more effective educational policies, both in terms of curriculum development and technology integration in the teaching-learning process. As such, this research contributes to efforts to improve the quality of English education at the national level, as well as assisting policymakers in making decisions that are data-based and in line with the needs of modern education.