CHAPTER 1
INTRODUCTION

A. Research Background

Among the four language skills, reading skill plays an essential role in English language learning, specifically for English as a Foreign Language (EFL) learners. Strong reading skills enable students to improve their understanding of the texts they read, expand their knowledge, and support their academic achievement. National Reading Panel (2000) identified five reading components, namely phonemic awareness, phonics, fluency, vocabulary, and comprehension. Among these components, one of the important components is reading fluency, as it enables students to read fluently and efficiently. In academic settings, reading fluency is commonly observed through oral reading performance, known as Oral Reading Fluency. Oral Reading Fluency provides valuable information about students' ability to read fluently, making it an important indicator of reading development among EFL learners.

According to Rasinski (2004), Oral Reading Fluency or ORF is the ability to read a text accurately at an appropriate rate and proper prosody. This ability reflected through three aspects, namely accuracy, reading rate, and prosody. These aspects work together to enable readers to recognize words efficiently while maintaining meaning and expression during reading. The theory put forward by Rasinski (2004) states that the three aspects of ORF act as a bridge that connects word decoding to fluent reading and reading comprehension. Numerous studies have shown that students with higher ORF tend to demonstrate better reading comprehension because fluent reading allows learners to allocate more cognitive resources to construct meaning rather than decoding individual words (Teoh & Yunus, 2020; Ja'afar et al., 2021; Al-Bogami & Alahmadi, 2025) Therefore, developing students' ORF is considered essential because it supports not only fluent reading but also deeper reading comprehension. Despite its significant contribution to students' reading development, explicit instruction and practice in ORF remain limited in many EFL classrooms.

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Despite its importance, limited instruction and practice in ORF in many EFL classrooms leads to many EFL learners still demonstrate low levels of ORF. In the Indonesian EFL context, a study by Muttaqin (2025) shows that Indonesian learners experience difficulties in developing reading fluency. Muttaqin added that students' low accuracy and slow reading rate leads to poor reading fluency. These difficulties were also observed at the research site, during the teaching practicum program at SMAN 26 Bandung. The researcher found that students performed slow reading rate and low accuracy, most of the student face difficulties in decoding words. Various studies explained that these problems occurred because limited professional development, large class sizes, and inefficient instructions makes it difficult for students to decode words which impacts their decoding skills and reading fluency (Ali et al., 2022; Fitria, 2022; Budianto et al., 2026). These findings suggest that to improve students' ORF requires proper instructional approaches that provide consistent modeling with innovative teaching media. Rasinski (2004) states that modeling plays a significant role in improving reading fluency, while Ja'afar et al. (2021) states that technology-assisted instruction provides learners with repeated and individualized learning experiences. Therefore, integrating innovative technology into ORF instruction offers a promising solution to these challenges. One technology that has gained considerable attention is Text-To-Speech.

Text-To-Speech or TTS is a tool that converts written text into spoken language and provides learners with accurate pronunciation and oral reading models. In EFL classrooms, TTS can support reading instruction by providing students with consistent oral reading models and opportunities for repeated practice. Through repeated listening and imitation, students are able to improve their decoding accuracy, automaticity, and reading prosody. TTS tool are widely available across various platforms, and one of it is Microsoft. Microsoft has Microsoft Immersive Reader, a TTS tools that offers various features for reading practice. Microsoft Immersive Reader or MIR is a TTS tool that helps its users to practice reading. Microsoft integrated MIR into several Microsoft applications, such as Microsoft Word, Microsoft Edge, and Microsoft Teams. Among its feature, Read Aloud provides AI-driven native-speaker like English models to read the text.

This tool also offers an adjusted reading speed appropriate for repeated reading practice. Study by Farhan & Hadi (2024) shows that MIR has shown positive potential in supporting learners' pronunciation, suggesting that MIR may also contribute to other aspects such as ORF.

Several previous studies have demonstrated the effectiveness of technology-assisted reading instruction in improving students' reading fluency. Studies employing TTS tools have reported positive effects on students' decoding skills, pronunciation and overall reading fluency (Al-Jarf, 2022; Amin, 2022; Fitria, 2022). Other studies focusing on ORF highlight the importance of repeated oral reading practice in developing students' accuracy, reading rate, and prosody (Teoh & Yunus, 2020; Ja'afar et al., 2021). However, only one study has specifically investigated the use of Microsoft Edge's Read Aloud feature to improve students' pronunciation (Farhan & Hadi, 2024). Therefore, these studies indicated that TTS tool and repeated oral reading practice have considerable potential to support students' reading fluency.

However, the empirical evidence regarding the use of MIR's Read Aloud feature to improve students' ORF remains limited, particularly in the Indonesian EFL context. Therefore, this study aims to fill the gap by investigate the effect of using MIR's Read Aloud feature on students' ORF in Indonesian EFL context. The findings are expected to contribute to the growing body of research on technology-assisted language learning and provide practical insights for English teacher in integrating digital tools and enhance students' ORF.

B. Research Questions

Based on the problem shown in the background, the research is guided by the following questions:

1. How is students' Oral Reading Fluency before and after the implementation of conventional method?
2. How is students' Oral Reading Fluency before and after the implementation of Microsoft Immersive Reader's Read Aloud Feature?
3. How is the significant improvement in students' Oral Reading Fluency after the implementation of Microsoft Immersive Reader's Read Aloud Feature?

C. Research Purposes

In line with the research problem above, the objectives of this study are:

1. To find out the students' Oral Reading Fluency before and after the implementation of conventional method.
2. To find out the students' Oral Reading Fluency before and after the implementation of Microsoft Immersive Reader's Read Aloud feature.
3. To analyze the significant improvement in students' Oral Reading Fluency after the implementation of Microsoft Immersive Reader's Read Aloud feature.

D. Research Significances

This study has theoretical and practical benefits. Theoretically, this study is expected to contribute to the body of knowledge on technology-assisted reading instruction. Practically, the results of this study are expected to contribute to teachers, students, and future researchers in the field of English language learning, particularly in reading skill.

1. Theoretical Significance

This study aims to contribute to the existing knowledge of technology-assisted reading instruction, specifically on the development of ORF in EFL learners. The results may provide empirical evidence about the use of MIR's Read Aloud feature as a digital reading support tool designed to boost students' reading accuracy, reading rate, and prosody. In addition, this research extends upon the previous studies examining the use of TTS technology and digital reading tools by investigating the use of MIR within the Indonesian EFL context. Moreover, the results may support the implementation of Mayer's Cognitive Theory of Multimedia Learning by explaining how the visual and auditory inputs provided by the Read Aloud feature may assist students in improving their ORF.

2. Practical Significance

1) For Students

This study aims to help students improve their ORF through the use of MIR's Read Aloud feature. By providing access to native-speaker-like audio modeling, adjustable reading speed, and opportunities for repeated reading practice, the feature may support students in developing reading accuracy, reading rate, and

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prosody. In addition, it may encourage students to engage in independent reading practice both inside and outside the classroom.

2) For Teachers

This study aims to provide English teachers with an alternative technology-assisted strategy for supporting students' oral reading development. The findings may serve as a practical reference for integrating MIR's Read Aloud feature into reading instruction, particularly in EFL classrooms where opportunities for individualized oral reading practice are often limited by classroom time, teaching instruction and teacher's availability.

3) For Future Researchers

This study aims to serve as a reference for future researchers interested in ORF, TTS technology, digital reading tools, and technology-assisted language learning. The findings may provide insights for further investigations involving different educational levels, longer intervention periods, larger participant groups, or additional variables related to reading development and language learning outcomes.

E. Research Scope

This study focused on examining the use of MIR's Read Aloud feature in improving students' ORF in English learning. The study was conducted at SMAN 26 Bandung, West Java, Indonesia, involving two tenth-grade classes, namely X-7 and X-8. Class X-7 served as the experimental class that received instruction using MIR's Read Aloud feature, while class X-8 served as the control class that received conventional reading instruction. The pre-test and post-test were administered using narrative texts selected from the Ministry of Education textbook ENGLISH FOR WORKS for Grade X. While during the treatment sessions, the reading materials were taken from the Grade X English textbook available in the school library, namely ESENSI BAHASA INGGRIS and BAHASA INGGRIS KELAS X.

This research was limited to the context of English reading instruction in senior high school and did not investigate other language skills such as speaking, writing, listening. This limitation focused on the students' oral reading development. This research aimed to provide a focused understanding of how

MIR's Read Aloud feature can support the improvement of students' ORF in an Indonesian EFL classroom.

F. Conceptual Framework

A conceptual framework explains how the connections between the concept of ORF and MIR will improve students' ORF. This part of the study covers the ORF and MIR, as shown in the conceptual framework in the following table, as follows:

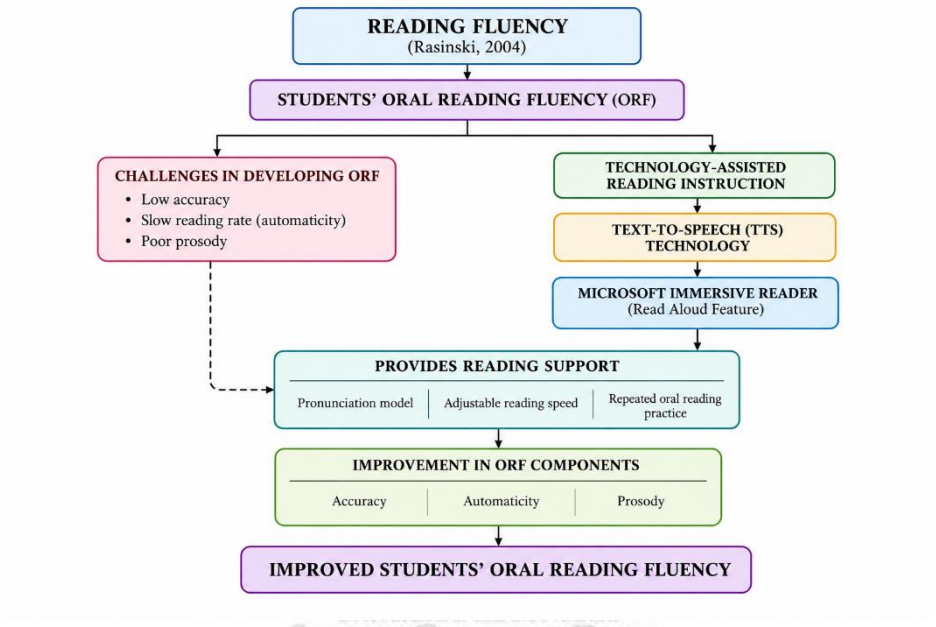


Figure 1. 1 Conceptual Framework

Based on the conceptual framework above, this study begins with the premise that ORF is an essential component of reading fluency and serves as an observable indicator of students' reading development. According to Rasinski (2004), ORF consists of three aspects, namely accuracy, reading rate, and prosody. These aspects enable readers to decode word accurately while reading fluently and expressively. Aligns with this theory, a study by Al-Bogami and Alahmadi (2025) stated that ORF is one of the five basic aspects that indicate a person's reading ability is good. However, despite its importance, many Indonesian EFL learners continue to demonstrate low levels of ORF. several previous studies have reported that students frequently experience difficulties in reading accurately, maintaining

an appropriate reading rate, and reading with natural expression. These challenges are partly attributed to limited opportunities for explicit ORF instruction and the insufficient use of innovative instructional media during classroom activities (Ali et al., 2022; Fitria, 2022; Muttaqin, 2025). Therefore, to reduce these problems, the intervention in the form of technology-assisted reading instruction is considered a promising alternative to provide students with additional reading practice beyond classroom instruction.

To address these challenges, this study proposes the use of TTS technology as an intervention in the form of a technology-assisted reading instructional medium. TTS provides assistance to students by converts written text into spoken language by providing AI-generated-native-speaker-like audio models, allowing students to repeatedly listen to and imitate accurate pronunciation. According to Fitria (2022), TTS tools are incredibly beneficial for the visually impaired and those with learning difficulties. Among various TTS tools, MIR was selected because of its Read Aloud feature provides adjustable reading speed, authentic pronunciation models, and opportunities for repeated oral reading practice. This mechanism is theoretically supported by Mayer's (2001) Cognitive Theory of Multimedia Learning. Based on this theory, students process information through two channels, visual and auditory. While reading the displayed text and simultaneously listening to the AI-generated audio from MIR's Read Aloud feature, students integrate written and spoken language more effectively, reducing cognitive load, and facilitating more efficient word recognition that leads to fluent oral reading.

In conclusion, through repeated listening and oral reading practice supported by MIR's Read Aloud feature, students are expected to improve the three essential aspects of ORF, namely accuracy, reading rate, and prosody. As students become more familiar with the pronunciation, rhythm, and phrasing of English texts, they may read more accurately, more fluently, and with more appropriate expression. Within the experimental class, the implementation of MIR's Read Aloud feature is expected to provide consistent auditory modeling and additional opportunities for repeated oral reading practice that are not always available through conventional classroom instruction. Therefore, this study assumes that the

use of MIR's Read Aloud feature can support the improvement of students' ORF and contribute to more effective English reading performance in Indonesian EFL contexts.

G. Research Hypotheses

In quantitative research, hypotheses are formulated to predict the expected relationship among variables (Creswell, 2014). The hypotheses of this study were formulated as follows:

1. Null Hypothesis (H0): There is no significant improvement in students' Oral Reading Fluency after the implementation of Microsoft Immersive Reader's Read Aloud feature.
2. Alternative Hypothesis (Ha): There is a significant improvement in students' Oral Reading Fluency after the implementation of Microsoft Immersive Reader's Read Aloud feature.

H. Previous Studies

In this study, the researcher took several relevant previous studies as a reference to build a theoretical foundation and highlight the research gap. First, Ja'afar et al. (2021) observed the effectiveness of Computer-Assisted Repeated Reading (CARR) in improving students' ORF. This study was conducted in a Malaysian Secondary School, Malaysia, using a quasi-experimental research design. The participants in this research were five 7th grade students aged between 12 to 13 years old from various backgrounds. The findings revealed that CARR significantly improved students' ORF by providing repeated exposure to oral reading models and immediate opportunities for practice. Moreover, the study concluded that technology-assisted repeated reading can effectively support struggling readers and facilitate the development of fluent reading skills. However, the intervention employed a computer-assisted repeated reading approach rather than utilizing TTS technology which provides authentic native-speaker-like audio and flexible independent learning opportunities. Therefore, this study extends Ja'afar et al., (2021) study by examining the effect of technology-assisted reading instruction on students' ORF in the Indonesian EFL learners' context.

Another study by Al-Jarf (2022) investigate the effect of NaturalReader, a TTS application, in improving EFL students' decoding skill and pronunciation accuracy through technology-assisted reading instruction. This study used an experimental design approach with two classes at King Saud University, Saudi Arabia. For this research, the participants were freshman students divided into an experimental class consisting of 43 students and a control class consisting of 45 students. The data for this research were collected using pre-test and post-test, and analyzed using independent and paired sample T-tests. The findings indicated that the use of NaturalReader as a TTS application positively improved students' decoding skill and pronunciation accuracy by enhancing word recognition, reading accuracy, and students' confidence during oral reading practice. Moreover, the study emphasized that TTS technology provides students with flexible opportunities to practice reading independently beyond classroom instruction, making it an effective medium for developing reading fluency. however, the study used NaturalReader, a TTS application, as a technology-assisted reading instruction to improved students' decoding skill and pronunciation accuracy. Therefore, this study extends Al-Jarf (2021) study by specifically examining the effect of another TTS application, in which this study will use MIR's Read Aloud feature, on students' ORF among Indonesian EFL learners.

In addition, Alahmadi (2024) study investigated the effectiveness of Microsoft's Digital Reading Progress tool in improving students' reading aloud performance and overall reading proficiency. This study used a quantitative pre-experimental research design conducted at Taibah University in Saudi Arabia. For this research, the participants were 30 female intermediate ESL learners. The data were collected through students' reports about mispronunciation, repetition, omission, and words corrects per minute (WCPM) by the Microsoft's Digital Reading Progress tool over four-weeks period. The analysis used Python libraries to calculate statistics revealing significant improvements in reading aloud performance and overall reading proficiency. Moreover, the study concluded that digital reading tools integrated with automated reading assessment can serve as valuable pedagogical resources for enhancing second-language reading

performance. However, the study primarily examined Microsoft Digital Reading Progress as an AI-assisted assessment tool that evaluates students' oral reading performance and overall reading proficiency. Therefore, this study extends Alahmadi (2024) study by investigating the effectiveness of MIR's Read Aloud feature in improving Indonesian EFL students' ORF.

Al-Bogami & Alahmadi (2025) observed the effectiveness of Microsoft Teams Reading Progress in improving young learners' ORF using a mixed-methods quasi-experimental design and conducted in a public elementary school in Saudi Arabia. For participants, it consists of 56 third-grade learners, including their parents, divided into two classes: an experimental class and a control class. The data were collected using pre-test and post-test for students and interviews for parents, which were then analyzed using SPSS and NVivo. The findings revealed that the experimental group achieved significantly higher ORF scores than the control group. In addition, parents reported positive perceptions toward the implementations of AI-based tool, emphasizing the consistent practice and immediate feedback supported students' reading development. The study concluded that AI-powered reading technologies can provide meaningful opportunities for independent reading practice. However, the study focused on Microsoft Teams Reading Progress, as an assessment-oriented AI tool designated to monitor reading performance. Therefore, this study extends Al-Bogami and Alahmadi (2025) study by observed the effectiveness of MIR's Read Aloud feature in enhancing Indonesian EFL students' ORF.

In Indonesian EFL context, a study by Budianto, Enita, and Priyanto (2026) investigated English teachers' knowledge and classroom implementation of ORF instruction in Indonesian EFL classrooms. This study used a convergent mixed-methods design involving three primary schools in Indonesia. The participants consisted of 20 English teachers who were purposively selected because they were directly responsible for teaching reading to young EFL learners. The data were collected through structured classroom observations and semi-structured interviews, then analyzed using descriptive statistics and thematic analysis. The findings revealed that teachers possessed only partial understanding of ORF

instruction, with greater emphasis on teacher modeling and reading rate, while repeated reading, guided oral reading, and prosody instruction were implemented less consistently in classroom practice. Furthermore, the study highlighted that limited instructional resources, insufficient professional development, and restricted opportunities for systematic fluency instruction became major barriers to effective ORF development. However, the study focused on teachers' knowledge and classroom implementation of ORF instruction in primary EFL settings rather than examining the use of technology-assisted reading tools to improve students' ORF. Therefore, this study extends Budianto, Enita, and Priyanto's (2026) research by specifically investigating the use of MIR's Read Aloud feature as a technology-assisted reading tool to improve students' ORF among Indonesian senior high school EFL learners.

Another study in Indonesian context by Fitria, Zuhairi, and Umamah (2024) investigate the effectiveness of AI-based reading aloud techniques using TTS technology in improving students' pronunciation and reading fluency. The study employed a quasi-experimental one-group pre-test and post-test design at SMPN 1 Tutur in East Java, Indonesia. The participants of this study consisted of 34 first-grade junior high school students. The data in this research were collected using pre-test and post-test and analyzed using paired sample t-test in SPSS. Then, the findings showed significant improvements in both pronunciation and reading fluency, with paired sample t-test indicating a significant difference between pre-test and post-test scores ($p < 0.05$). the study concluded that AI-assisted reading aloud provides authentic pronunciation modeling, encourages repeated oral reading practice and helps students become more active and engaged during reading activities. These findings support the potential of TTS technology in enhancing students' oral reading development in Indonesian EFL context. However, the study focused AI- reading aloud tool in general and measured pronunciation and reading fluency as components of reading skills, the study also conducted on the junior high school level rather than senior high school. Therefore, this study extends Fitria, Zuhairi, and Umamah (2024) study by specifically investigate the effect of MIR's

Read Aloud feature on students' ORF among Indonesian senior high school EFL learners.

In addition, Farhan & Hadi (2024) observed the effectiveness of Microsoft Edge's Read Aloud feature in enhancing students' pronunciation and listening skills. The study employed a quantitative pre-experimental research design at SMPN 9 Tangerang Selatan, Indonesia. In this study, the participants were 38 seventh-grade students, and the data were collected using a pre-test and a post-test and were analyzed using a paired sample t-test in SPSS. The findings revealed a significant improvement in students' pronunciation after the implementation of Read Aloud feature, indicating that AI-generated native-speaker modeling effectively supports pronunciation development through repeated listening and imitation. The study concluded that Microsoft's Read Aloud technology can serve as an effective instructional medium for enhancing learners' pronunciation and promoting autonomous language learning. However, the study focused only on pronunciation and utilized Microsoft Edge's Read Aloud feature. Therefore, this study extends Farhan and Hadi (2024) study by investigating the effect of MIR's Read Aloud feature on students' ORF, particularly among senior high school students.

Overall, the reviewed previous studies consistently demonstrate that technology-assisted reading instruction can support the improvement of students' reading development in EFL contexts. Studies by Ja'afar et al. (2021) using Computer-Assisted Repeated Reading (CARR), Al-Jarf (2022) using NaturalReader, Alahmadi (2024) using Microsoft Digital Reading Progress, Farhan and Hadi (2024) using Microsoft Edge's Read Aloud feature, Fitria, Zuhairi, and Umamah (2024) using TTS tools, Al-Bogami and Alahmadi (2025) using Microsoft Teams Reading Progress, and Budianto, Enita, and Priyanto (2026) examining ORF instruction in Indonesian EFL classrooms, all provide evidence that repeated oral reading, pronunciation modeling, and technology-assisted practice can contribute positively to learners' reading accuracy, fluency, pronunciation, and overall reading performance. These findings collectively suggest that integrating digital technologies into reading instruction provides meaningful opportunities for

repeated practice, authentic pronunciation exposure, and more autonomous reading practice, all of which may facilitate the development of students' ORF.

However, despite these promising findings, several research gaps can still be identified. First, regarding the educational level, most studies focused on university students (Al-Jarf, 2022; Alahmadi, 2024), elementary school contexts (Al-Bogami & Alahmadi, 2025; Budianto, Enita, & Priyanto, 2026), or junior high school students (Ja'afar et al., 2021; Farhan & Hadi, 2024; Fitria, Zuhairi, & Umamah, 2024). Therefore, research investigating ORF among tenth-grade senior high school students in Indonesia remains limited. Second, regarding the research context, several studies were conducted outside Indonesia (Ja'afar et al., 2021; Al-Jarf, 2022; Alahmadi, 2024; Al-Bogami & Alahmadi, 2025), while only a few studies were carried out in Indonesian EFL settings (Farhan & Hadi, 2024; Fitria, Zuhairi, & Umamah, 2024; Budianto, Enita, & Priyanto, 2026). This indicates a need for more empirical evidence from Indonesian senior high school EFL classrooms.

Third, regarding the dependent variable, several previous studies focused primarily on reading skills in general (Al-Jarf, 2022; Alahmadi, 2024) or pronunciation development (Farhan & Hadi, 2024; Fitria, Zuhairi, & Umamah, 2024). Only a limited number of studies specifically examined ORF as a multidimensional construct consisting of accuracy, reading rate, and prosody (Ja'afar et al., 2021; Al-Bogami & Alahmadi, 2025). Fourth, regarding the technology used, previous studies investigated Computer-Assisted Repeated Reading (Ja'afar et al., 2021), Text-To-Speech applications (Al-Jarf, 2022; Fitria, Zuhairi, & Umamah, 2024), and several Microsoft-based reading tools (Alahmadi, 2024; Farhan & Hadi, 2024; Al-Bogami & Alahmadi, 2025). Nevertheless, no previous study was found that specifically investigated MIR's Read Aloud feature as a technology-assisted reading tool for improving students' ORF in Indonesian senior high school EFL classrooms.

Therefore, this study aims to address these gaps by investigating the use of MIR's Read Aloud feature in improving students' ORF, particularly in terms of accuracy, reading rate, and prosody, among Indonesian tenth-grade EFL learners. Rather than examining the superiority of one instructional method over another, this

study focuses on identifying the positive improvement in students' ORF after the implementation of MIR's Read Aloud feature within a quasi-experimental pre-test and post-test learning context.

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