

THE EFFECTIVENESS OF VOICE NOTE-BASED READING PRACTICE IN IMPROVING STUDENTS' READING ABILITY

Nur Azizah

Sekolah Tinggi Agama Islam STAI Mempawah
noerazizah.al2124@gmail.com

ABSTRACT

The rapid growth of mobile instant messaging applications has opened new opportunities for language teaching beyond the classroom, particularly through asynchronous voice-based communication. This research investigates the effectiveness of voice note-based reading practice, delivered through a mobile messaging application, in improving students' reading ability at Stai Mempawah. The voice note strategy required students to read assigned passages aloud and record their reading as voice notes, which were then submitted to the English' teacher for feedback on pronunciation, fluency, and comprehension. This research employed a quasi-experimental design with a nonequivalent pretest-posttest control group, involving an experimental group that received voice note-based reading practice and a control group that received conventional reading instruction over a six-week treatment period. Data were collected through a validated reading comprehension test and a reading fluency assessment based on words correct per minute and a pronunciation accuracy rubric, and were analyzed using descriptive statistics, normality and homogeneity tests, and an independent samples t-test. The findings indicate that students who engaged in voice note-based reading practice demonstrated a statistically significant improvement in reading ability, particularly in reading fluency, pronunciation accuracy, and comprehension, compared to students in the control group. The results suggest that voice note-based practice provides a low-cost, flexible, and motivating medium for extensive reading practice, and that it can effectively complement conventional classroom-based reading instruction by extending guided practice time and enabling individualized, asynchronous feedback. This study recommends that language teachers integrate voice note-based assignments into reading instruction as a means of increasing learner autonomy, reading fluency, and comprehension, and offers practical guidelines for classroom implementation.

Keywords: voice note; reading ability; mobile-assisted language learning, reading comprehension.

A. INTRODUCTION

1. Background of Research

Reading ability remains one of the most fundamental competencies that language learners must master, since it underlies access to information, academic success, and lifelong learning. Reading is not merely a passive decoding activity but an active cognitive process in which readers construct meaning by interacting with a text, drawing on prior knowledge, vocabulary, and contextual cues¹. However, many

¹F. Samiei and S. Ebadi, "Exploring EFL Learners' Inferential Reading Comprehension Skills through a Flipped Classroom," Research and Practice in Technology Enhanced Learning 16, no. 1 (2021).

students in English as a Foreign Language (EFL) contexts continue to face persistent difficulties in reading, including limited vocabulary, weak decoding skills, low reading fluency, poor pronunciation, and a lack of motivation to read extensively outside the classroom.

Conventional reading instruction, which is often confined to limited classroom hours, frequently fails to provide learners with sufficient opportunities for repeated, guided reading practice, particularly reading aloud practice that develops fluency, intonation, and pronunciation. In many schools, reading activities are dominated by silent reading followed by written comprehension exercises, while oral reading practice, which is essential for developing automaticity and prosody, receives comparatively little attention. As a result, students may be able to answer comprehension questions correctly while still struggling to read a text aloud fluently and accurately, a gap that indicates the need for supplementary practice beyond the regular classroom schedule.

The widespread adoption of smartphones and mobile instant messaging applications has changed the landscape of language learning considerably. Mobile-Assisted Language Learning (MALL) has been recognized as an effective approach to extend language practice beyond the physical classroom, offering flexibility, accessibility, and opportunities for asynchronous interaction between teachers and students². Among various mobile applications, WhatsApp has become one of the most widely used platforms in language education because of its practicality, low data requirements, and multimedia features, including text messaging, image sharing, voice notes, and video sharing³. Its asynchronous voice note feature, in particular, allows users to record and send spoken messages of any length at their own convenience, without requiring both parties to be online at the same time.

Several studies have documented the pedagogical potential of WhatsApp in developing the four language skills. A systematic review of thirty-seven studies found evidence that WhatsApp can be used to improve reading, listening, writing, and speaking, as well as to increase motivation, foster learner autonomy, increase interaction, and lower language anxiety⁴. Reading tasks delivered through WhatsApp have also been reported to positively affect students' reading comprehension achievement among early secondary learners⁵, while listening journals created through WhatsApp voice notes have been found to significantly enhance students' listening comprehension across several dimensions, including identifying main ideas, supporting details, and new vocabulary⁶.

²Z. Shi, G. Luo, and L. He, "Mobile-Assisted Language Learning Using WeChat Instant Messaging," *International Journal of Emerging Technologies in Learning* 12, no. 2 (2017).

³S. T. Saleh, "Chat and Learn: The Effectiveness of Using WhatsApp as a Pedagogical Tool to Enhance EFL Learners' Reading and Writing Skills," *International Journal of English Language and Literature Studies* 8, no. 2 (2019): 61-68.

⁴D. Fitriani et al., "EFL Students' Perception on the Use of Voice Note to Reduce Their Speaking Anxiety," (research report, 2022).

⁵Study on "Using WhatsApp to Support EFL Reading Comprehension Skills with Turkish Early Secondary Learners" as cited in T. S. A. Sabri, "WhatsApp and Learn English: A Study of the Effectiveness of WhatsApp in Developing Reading and Writing Skills in English," *ELS Journal on Interdisciplinary Studies on Humanities* 2, no. 2 (2019): 148-156.

⁶R. Fauzi and T. Angkasawati, "The Use of Listening Logs through WhatsApp in Improving Listening Comprehension of EFL Students" (Palangka Raya: Palangka Raya University, 2019).

In the domain of writing, WhatsApp-mediated journaling has also been shown to produce statistically significant improvement in students' writing scores, particularly in vocabulary choice and voice, when compared to pretest results⁷. Similarly, research on WeChat, a mobile messaging application widely used in China, found that instant messaging could improve EFL learners' reading comprehension with a moderate effect size⁸. These findings collectively suggest that mobile instant messaging applications, when used with pedagogical intent, can meaningfully extend language practice beyond the constraints of classroom time.

Despite this growing body of research, most existing studies have concentrated on the use of WhatsApp for listening, writing, or general reading comprehension through text-based tasks, while relatively few have specifically examined the use of voice notes as a medium for reading-aloud practice to develop reading fluency and pronunciation⁹. Voice note-based reading practice offers a distinctive pedagogical advantage because it requires students to produce oral output based on a written text, thereby integrating decoding, pronunciation, intonation, and comprehension in a single authentic task, while also allowing the teacher to provide individualized, asynchronous feedback that is difficult to deliver within limited classroom time. This gap in the literature constitutes the primary rationale for the present study.

This study draws on the theory of reading fluency, which conceptualizes fluency not merely as reading speed but as the ability to read with appropriate accuracy, automaticity, and prosody, all of which contribute to comprehension¹⁰. According to this framework, repeated oral reading practice, in which learners read the same or similar passages multiple times, is one of the most effective instructional strategies for building automaticity and, consequently, comprehension. Voice note-based practice operationalizes this principle by allowing students to rehearse a passage privately and repeatedly before submitting their best recorded attempt.

In addition, this study is informed by the principles of mobile-assisted language learning, which emphasize learner autonomy, flexibility of time and place, and the use of authentic, low-stakes communication tools to extend language exposure and practice beyond formal instructional settings. Within this framework, voice notes function as a bridge between classroom-based instruction and independent, self-directed practice, while still allowing the teacher to monitor progress and provide corrective feedback asynchronously.

Based on the background outlined above, this study aims to examine the effectiveness of voice note-based reading practice in improving students' overall reading ability, and to determine whether students who engage in this practice show a

⁷Hani, "The Impact of WhatsApp Group's Utilization on EFL Students' Vocabulary Writing Amelioration," as cited in "Using WhatsApp to Enhance Students' Learning of English," ERIC Document EJ1161157 (2014).

⁸Z. Shi, G. Luo, and L. He, "Mobile-Assisted Language Learning Using WeChat Instant Messaging," 2017.

⁹S. T. Saleh, "Chat and Learn: The Effectiveness of Using WhatsApp as a Pedagogical Tool to Enhance EFL Learners' Reading and Writing Skills," 2019.

¹⁰T. Rasinski, "Reading Fluency: More than Automaticity, More than a Concern for the Primary Grades," *Literacy Research and Instruction* 56, no. 1 (2017): 1-12.

statistically significant difference in reading achievement compared to students who receive conventional reading instruction.

This study employed a quasi-experimental research design with a nonequivalent pretest-posttest control group, which is commonly used in educational research when random assignment of individual participants is not feasible due to the constraints of intact classroom groups¹¹. The design involved two groups: an experimental group that received voice note-based reading practice, and a control group that received conventional reading instruction without the use of voice notes. Both groups were given a pretest before the treatment and a posttest after the treatment period, allowing the researcher to compare the magnitude of improvement between the two groups rather than merely comparing their final scores.

The population of this study consisted of all students of the English Education Study Program at STAI Mempawah enrolled in an English reading course, from which two intact classes were selected using purposive sampling based on the consideration that both classes had comparable characteristics in terms of proficiency level, curriculum, and instructional schedule. One class was assigned as the experimental group and the other as the control group. This sampling technique was chosen because random assignment of individual students across classes was not administratively feasible within the existing institutional schedule, a common constraint acknowledged in quasi-experimental classroom-based research.

Data were collected through a reading ability test consisting of a reading comprehension section, composed of multiple-choice and short-answer items based on narrative and informational passages, and a reading fluency assessment in which students read a passage aloud within a timed setting. Reading fluency was measured using words correct per minute (WCPM) together with a pronunciation accuracy rubric, an approach that has been widely used in reading fluency research¹². Prior to its use, the instrument was reviewed by content experts to establish content validity, and a readability analysis was conducted to ensure that the reading passages were appropriate for the students' proficiency level. The instrument was then piloted with a group of students outside the main sample to estimate item difficulty and internal consistency reliability using Cronbach's Alpha, with items falling below the acceptable reliability threshold revised or removed prior to the main data collection.

The research procedure consisted of three main stages: the pretest stage, the treatment stage, and the posttest stage. In the pretest stage, both the experimental and control groups completed the same reading comprehension test and reading fluency assessment prior to any treatment, in order to establish a baseline measure of reading ability for both groups.

In the treatment stage, which lasted six weeks, the experimental group received weekly reading passages distributed through a class messaging group on a mobile

¹¹J. W. Creswell and J. D. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 6th ed. (Thousand Oaks: SAGE Publications, 2023), 154.

¹²T. Rasinski, "Reading Fluency: More than Automaticity, More than a Concern for the Primary Grades," 2017.

instant messaging application. Students were required to read the passage silently, study unfamiliar vocabulary with the aid of a provided glossary, and then record themselves reading the passage aloud as a voice note, which was submitted to the teacher within a set deadline of forty-eight hours. Students were permitted to record and re-record their reading as many times as needed before submitting their best attempt, thereby engaging in a process similar to repeated reading practice. The teacher listened to each recording individually and provided feedback on pronunciation, intonation, reading pace, and comprehension-related questions, either through a reply voice note or a short written comment, within one to two days of submission.

Students in the control group, by contrast, read the same passages during regular classroom sessions under teacher supervision and completed comprehension exercises in written form, without any voice-recording component. This design ensured that both groups were exposed to identical reading materials and comprehension tasks, with the voice note recording and individualized audio feedback serving as the sole distinguishing variable between the two conditions. In the posttest stage, both groups completed the same reading comprehension test and reading fluency assessment used in the pretest, administered under the same testing conditions to ensure comparability of results.

The collected data were analyzed in several stages. First, descriptive statistics, including the mean, standard deviation, minimum, and maximum scores, were calculated for the pretest and posttest results of both groups. Second, a normality test using the Shapiro-Wilk test and a homogeneity of variance test using Levene's test were conducted to verify that the data met the assumptions required for parametric statistical analysis¹³. Third, a paired samples t-test was used to examine the within-group difference between the pretest and posttest scores of each group, and an independent samples t-test was used to examine the between-group difference in posttest scores at a significance level of 0.05. All statistical analyses were performed using SPSS statistical software, and the results were interpreted in relation to the research questions and existing literature on mobile-assisted reading instruction.

B. Finding

1. Reading Ability before the Treatment

The pretest results showed that both the experimental group and the control group had relatively similar initial reading ability, with mean scores in the low-to-moderate category. Table 1 presents a summary of the descriptive statistics for the pretest scores of both groups.

Group	N	Mean	Std. Deviation	Minimum	Maximum
Experimental	30	61.4	7.82	48	76
Control	30	62.1	7.55	47	75

¹³A. Field, *Discovering Statistics Using IBM SPSS Statistics*, 5th ed. (London: SAGE Publications, 2018), 249.

An independent samples t-test on the pretest scores indicated no statistically significant difference between the two groups ($t = 0.35$, $p > 0.05$), confirming that both groups began the study from a comparable baseline level of reading ability. Likewise, the normality and homogeneity tests confirmed that the pretest data satisfied the assumptions required for subsequent parametric analysis. This condition strengthens the validity of the comparisons made after the treatment period, since any difference observed in the posttest can be attributed with greater confidence to the treatment rather than to pre-existing differences between the groups.

2. Reading Ability after the Treatment

After six weeks of treatment, the posttest results revealed a marked improvement in the reading ability of the experimental group, both in reading comprehension scores and reading fluency, as measured by words correct per minute and pronunciation accuracy. The control group also showed improvement, but at a comparatively smaller magnitude. Table 2 presents the descriptive statistics for the posttest scores of both groups.

Group	N	Mean	Std. Deviation	Minimum	Maximum
Experimental	30	81.7	6.24	68	94
Control	30	70.3	7.11	56	84

The independent samples t-test on the posttest scores yielded $t = 6.42$ with a significance value below 0.05 ($p = 0.000$), indicating that the difference in reading ability between the experimental group and the control group was statistically significant, in favor of the group that received voice note-based reading practice. The paired samples t-test also showed a significant improvement from pretest to posttest within the experimental group ($t = 12.87$, $p = 0.000$), which was considerably larger than the improvement observed within the control group ($t = 5.10$, $p = 0.000$). This finding is consistent with previous research reporting a significant difference in the overall reading and writing scores of students who engaged in WhatsApp-mediated language tasks compared to those who did not¹⁴.

3. The Effect of Voice Note-Based Practice on Reading Fluency

The most notable improvement in the experimental group was observed in reading fluency, particularly in words correct per minute and pronunciation accuracy, which increased on average from 78 WCPM at pretest to 118 WCPM at posttest, compared to an increase from 80 WCPM to 95 WCPM in the control group. This can be attributed to the repeated, self-paced nature of the voice note task, which allowed students to rehearse a passage multiple times before submitting their recording, a practice consistent with repeated reading approaches known to enhance fluency development¹⁵. Furthermore, individualized audio feedback from the teacher allowed

2019. ¹⁴S. T. A. Sabri, "WhatsApp and Learn English: A Study of the Effectiveness of WhatsApp in Developing Reading and Writing Skills in English,"

¹⁵T. Rasinski, "Reading Fluency: More than Automaticity, More than a Concern for the Primary Grades," 2017.

students to identify and correct specific pronunciation and intonation errors that are often difficult to address through written feedback alone, a benefit similarly noted in studies on WhatsApp-mediated listening journals that combine audio recording with reflective practice¹⁶.

Qualitative observation of the recorded voice notes over the six-week period also indicated a gradual reduction in hesitation, mispronunciation, and word-by-word reading, replaced by smoother phrasing and more natural intonation patterns, particularly from the third week of treatment onward. This progression suggests that the cumulative, repeated nature of the voice note task allowed for a form of scaffolded fluency development that a single weekly classroom reading session could not replicate within the same time frame.

4. The Effect of Voice Note-Based Practice on Reading Comprehension

In addition to fluency gains, the experimental group also achieved higher reading comprehension scores than the control group, with an average posttest comprehension score of 83.2 compared to 71.6 in the control group. This result may be explained by the fact that reading aloud with attention to pronunciation and pacing requires deeper cognitive engagement with the text than silent reading alone, thereby reinforcing understanding of content and structure. This finding aligns with earlier research indicating that reading tasks delivered through mobile messaging applications positively affect students' reading comprehension achievement¹⁷. Moreover, the asynchronous nature of voice notes reduced the performance anxiety often associated with reading aloud in front of peers, allowing students to record multiple attempts privately before submitting their best performance, a factor previously reported to lower language anxiety in mobile instant messaging-based tasks¹⁸.

It is also worth noting that the process of preparing a voice note recording required students to reread the passage multiple times, which likely functioned as an incidental comprehension-building activity in addition to its intended fluency-building purpose. This dual benefit, improving both oral reading performance and comprehension outcomes through a single integrated task, represents one of the more pedagogically efficient aspects of the voice note-based strategy compared to conventional reading exercises that typically isolate silent reading from oral reading practice.

5. Student Motivation and Learner Autonomy

Beyond quantitative gains, classroom observation and informal feedback collected during the treatment period indicated that students in the experimental group demonstrated higher engagement and motivation in completing reading assignments, as the voice note format felt more informal, flexible, and personally meaningful than conventional written assignments. This observation supports previous findings that students who use mobile messaging applications as a learning medium generally show

2019. ¹⁶R. Fauzi and T. Angkasawati, "The Use of Listening Logs through WhatsApp in Improving Listening Comprehension of EFL Students,"

2019. ¹⁷Study on "Using WhatsApp to Support EFL Reading Comprehension Skills with Turkish Early Secondary Learners," as cited in T. S. A. Sabri,

¹⁸D. Fitriani et al., "EFL Students' Perception on the Use of Voice Note to Reduce Their Speaking Anxiety," 2022.

higher motivation and improved reading-related skills¹⁹. The flexibility to complete the reading task at any time and place also fostered a greater sense of learner autonomy, since students were responsible for managing their own practice schedule and for deciding how many times to rehearse before submitting their recordings.

Several students also reported, through informal conversation with the teacher, that they appreciated receiving personal audio feedback rather than generic written comments, as it felt more direct and encouraging. This suggests that the voice note strategy not only improved measurable reading outcomes but also contributed to a more positive affective experience of reading practice, which may have long-term implications for students' willingness to engage in independent reading beyond the scope of this study.

6. Discussion in Relation to Existing Theory

The findings of this study support the theoretical proposition that reading fluency develops most effectively through repeated, guided oral reading practice combined with corrective feedback, rather than through silent reading or written comprehension exercises alone. The statistically significant gains observed in the experimental group across fluency, pronunciation accuracy, and comprehension measures collectively indicate that voice note-based practice operationalizes key principles of both reading fluency theory and mobile-assisted language learning in a manner that is practical and scalable within resource-limited educational settings.

At the same time, the results should be interpreted within the context of the specific instructional design employed in this study, namely the combination of repeated recording opportunities, a structured submission deadline, and individualized teacher feedback. It is likely that the effectiveness of voice note-based practice depends not merely on the technology itself, but on the pedagogical structure surrounding its use, including the regularity of feedback, the appropriateness of text difficulty, and the clarity of task expectations communicated to students.

7. Limitations

This study is not without limitations. First, the relatively short treatment period of six weeks may not fully capture the long-term effect of voice note-based practice on reading ability, and a longer intervention period may reveal different patterns of growth or plateau. Second, the use of intact classes rather than fully randomized samples limits the generalizability of the findings to broader student populations. Third, technical constraints such as limited internet access, insufficient storage space, or lack of smartphone availability among some students may have affected the consistency of task submission and introduced variability not fully accounted for in the analysis. Fourth, the study relied primarily on quantitative measures, with only limited informal qualitative data; a more systematic qualitative component, such as structured interviews or reflective journals, could provide deeper insight into students' subjective experiences with the strategy. Future research is recommended to extend the

¹⁹D. Fitriani et al., "EFL Students' Perception on the Use of Voice Note to Reduce Their Speaking Anxiety," 2022.

treatment duration, involve larger and more diverse samples across different educational levels, and incorporate systematic qualitative data collection to gain deeper insight into learners' experiences with voice note-based reading practice.

CONCLUSION

Based on the findings and discussion presented above, it can be concluded that voice note-based reading practice is effective in improving students' reading ability. Students who engaged in voice note-based reading practice through a mobile messaging application demonstrated statistically significant improvement in reading fluency, pronunciation accuracy, and reading comprehension compared to students who received conventional reading instruction. The repeated, self-paced nature of the recording task, combined with individualized audio feedback from the teacher, appears to be the key mechanism underlying this improvement, as it allowed students to engage in a form of scaffolded repeated reading practice that conventional classroom time could not accommodate. In addition to measurable gains in reading ability, voice note-based practice also contributed to increased student motivation and learner autonomy, as it allowed students to practice reading in a flexible, low-pressure environment beyond the constraints of classroom time, while still receiving personalized guidance from their teacher.

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