

# Enhancing Elementary Students' Vocabulary Mastery Through Duolingo: A pre- Experimental Study

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# INTRODUCTION

The ability to learn about diverse societies, cultures, and scientific disciplines is made possible by language. The mastery of language is greatly aided by vocabulary, which plays a significant role. Knowledge of vocabulary is usually believed to be vital for individuals who are learning a second language since having a limited vocabulary can significantly affect an individual's capacity to communicate effectively and achieve successful interactions [1]. Vocabulary is considered the foundation for communication and is widely acknowledged as the primary means of communication, nothing can be done without the vocabulary [2]. Vocabulary is the foundation of language and an essential component of learning a foreign language, connecting the four fundamental abilities of reading, writing, speaking, and listening [3]. For those learning a second language, vocabulary is often seen as an essential tool since inadequate vocabulary in the target language makes communication difficult [4]. The vocabulary is divided into two categories: Active vocabulary is taught to students for use in speech and writing and Passive vocabulary consists of the words that learners are familiar with and identify within a given context, usually present in reading and listening materials [5]. According to [6], a vocabulary can be understood in four different ways: (a) through its form, (b) through its pronunciation, (c) through its meaning, and (d) through its usage.

# INTRODUCTION

Vocabulary mastery can be implemented as early as elementary school. English for Young Learners (EYL) refers to the initial group of English language learners, which is further categorized into two distinct groups: Individuals between the ages of 6 to 8 and individuals between the ages of 9 to 12. When compared to teaching adults, teaching young learners presents unique challenges because children at this age are typically more engaged, open to new experiences, and enthusiastic about learning. The process of learning English becomes complicated by a variety of issues, including the challenge of memorizing the meaning of a word, which leads to students feeling dull and hesitant in using the dictionary [7]. Therefore, teachers are expected to make the classroom a fun and interesting place for students to learn. In EYL learning, the teacher needs to give the students real-life examples of the things they are learning, like pictures of the words they need to learn or real objects [8]. This makes it undeniably different than learning at other levels. Pertiwi et al., (2020) also state engaging students in the use of visuals and reality is one way for teachers to overcome delivery challenges when teaching English to EYL students and make learning more enjoyable. Teachers can utilize various forms of media to support the learning process within the classroom. Getting these issues is no longer difficult with technology.

# INTRODUCTION

These days, technology plays a part in both teaching and learning <sup>[10]</sup>. Technology integration has the potential to advance education in Indonesia by fostering an engaging and enjoyable learning environment through the implementation of technological teaching and learning processes <sup>[11]</sup>. The utilization of technology has facilitated new forms of representation, expression, and comprehension of languages, cultures, and the global landscape <sup>[12]</sup>. Language learning has also become more accessible with the development of new digital technologies. Using technology to learn a language helps students think more deeply, improves communication between teacher and student, focuses teaching on the learner, encourages independent learning, and boosts the effectiveness of teaching <sup>[13]</sup>.

Many different applications make use of technology that can be utilized to support activities that are related to teaching and learning English. Various applications employ technology to facilitate English teaching and learning activities. Duolingo is an example of a widely recognized online language acquisition platform that received significant growing interest as a highly effective tool for teaching English to young learners. Luis Von Ahn and Severin Hacker created the free application Duolingo in November 2011, intending to provide free language education to people worldwide <sup>[14]</sup>. On its website, Duolingo says that its application makes it easy for teachers to teach four English skills to their students: reading, writing, listening, and speaking. The four skills are present in Duolingo's learning activities, which include questions, small text to hear, and transcribed audio. To evaluate student's speaking proficiency, they are also required to record their pronunciation. To prevent students from becoming disinterested in the process of learning, one of the goals of using Duolingo is to make it easier for them to acquire new vocabulary through the use of games <sup>[15]</sup>.

# INTRODUCTION

## Literature riview

Numerous research has been conducted on how to increase English vocabulary through the Duolingo. In research conducted by Irawan et al. (2020), found that the Duolingo application received a fairly good rating, so that this application can be said to help teachers as a mobile application-based learning medium. Similar to Irawan, Habibie (2020) also conducted the research about the Duolingo application that can be assumed Significantly impactful in shaping student's motivation to learn English. Ajisoko (2020) also found that student's vocabulary mastery has increased after given the treatment. The questionnaire results indicate good responses from students.

## Research gab

From a number of studies that the author has reviewed. Since no research has been carried out at SD Muhammadiyah 11 Randegan, the researchers will proceed to conduct research at SD Muhammadiyah 11 Randegan .



# RESEARCH QUESTION

Can the duolingo affect the student's vocabulary mastery at SD muhammadiyah 11 randegan?

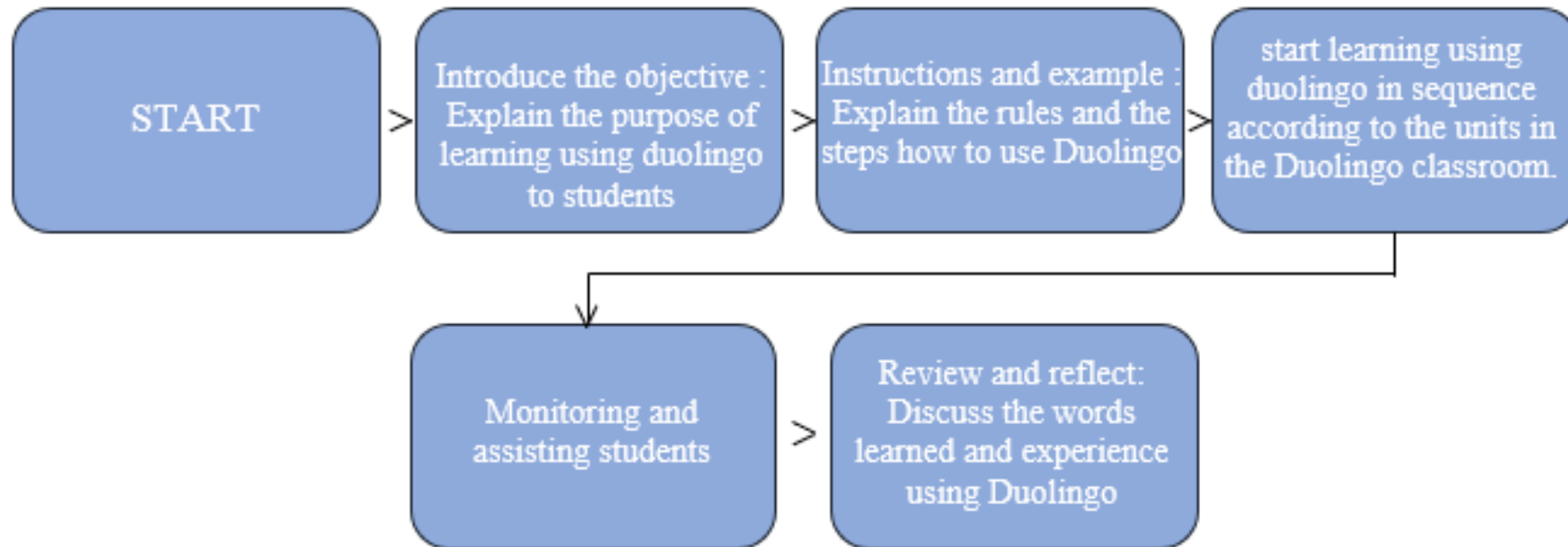
# Metode

This research uses Quantitative research method in the form of pre-experimental method, which includes a pre-test, treatment, and post-test. The research conducted at SD Muhammadiyah 11 Randegan in the even semester of the 2023/2024 school year, in Mei 2024. The setting was chosen because SD Muhammadiyah 11 Randegan is already familiar with technology and students have difficulties in learning English, particularly in the area of memorizing vocabulary. This research focuses on a group of 21 students who are in the 4th grade at SD Muhammadiyah 11 Randegan. The researchers applied purposive sampling techniques due to the fact that the number of students is fewer than 30. The researcher calculated the difference between two related samples using the Paired Sample t-test in SPSS.

# Metode

The researchers established various phases to collect data, which are outlined as follows:

- Pre-test: administered to assess student's comprehension of vocabulary. The questions given are multiple-choice and match the picture and the name question with a total of 20 questions
- Treatment: After the pre-test is carried out, the researcher provide treatment using Duolingo.



- Post-test is conducted after the pre-test and treatment are given to measure and find out whether students have improved after the treatment is carried out.



# RESULT AND DISCUSSION

		Paired Differences			95% Confidence Interval of the Different		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pretest-posttest	-12,6190	10,79572	2,35582	-17,5332	-7,70489	-5,357	20	,000

Referring to the paired samples test output table, the Sig. (2-tailed) value is 0.000, which is less than 0.005. therefore, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. With a mean difference of -12.6190, meaning the pretest scores were lower than the posttest scores. The paired sample test results showed a significant difference between the pretest and posttest scores. It can be concluded that there is an increase in student vocabulary.

The average pre-test score was 75.71, indicating a moderate level of vocabulary knowledge prior to the intervention. The treatment phase involved three 30-minute sessions where students engaged with Duolingo's interactive language learning activities. Each session focused on different aspects of vocabulary, including verbs, animal names, plural forms, and time-related vocabulary such as days, months, and seasons. The post-test results revealed a significant improvement, with the average score rising to 88.33. This increase in scores indicates that students' vocabulary mastery was positively impacted by the use of Duolingo. The paired sample t-test further validated these findings, showing a statistically significant difference between the pre-test and post-test scores.

# CONCLUSION

In conclusion, SD Muhammadiyah 11 Randegan's vocabulary mastery significantly improved as a result of Duolingo's incorporation into the curriculum. The study's findings highlight how gamified language learning apps can improve learning's effectiveness and engagement. The ongoing advancement of technology offers novel prospects for augmenting academic achievements, and resources such as Duolingo can assume a crucial function in this metamorphosis. Subsequent investigations may examine the utilization of Duolingo in various academic domains and grade levels to confirm its efficacy and adaptability as a teaching aid.

# DOCUMENTATION



