Leveling Up Writing Skills: The Effects of Duolingo on The Eleventh Grade Students

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Abstract

The purpose of this study is to evaluate the impact of the Duolingo application on the writing skills of eleventh-grade students at SMA Negeri 7 Tanjung Pinang and to gather feedback on the use of the application. English writing skills are essential, and the use of appropriate media can aid in teaching. Duolingo is a game-based platform that helps students improve their writing abilities. This quantitative study involved a sample of 50 students of eleventh-grade selected through purposive sampling. This research was carried out at SMAN Negeri 7 Tanjung Pinang, Jl. Kampung Sungai Carang, Km.13, Tanjung Pinang, Riau Province. it was held in July 2024. Data was collected through tests and questionnaires, and IBM SPSS Version 21 was used for statistical analysis. The results of the normality test showed a Sig. value of 0.073 for the experimental class, 0.470 for the control class, and 0.246 for the pre-test and post-test, respectively. The results of the homogeneity test showed a Sig. value of 0.777. As indicated by the 2-tailed significance level of 0.000, the use of Duolingo had a positive and significant impact on students' writing abilities. After confirming the validity of the questionnaire, each of the ten items had a calculated r-value greater than the table r-value of 0.396. The reliability test yielded a Cronbach's alpha value of 0.855, indicating a high degree of consistency. The questionnaire results showed strong support from students for Duolingo; the majority of respondents strongly agreed with the given statements, indicating that using Duolingo helped improve their writing skills. It concludes that the use of Duolingo application significantly enhances students' English writing skills, as evidenced by statistical analysis revealing a strong positive effect.

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Introduction

English has become an international language. People worldwide communicate with each other using English. Introducing English as early as possible is also important. As one of the subjects learned by students from elementary to university level, the Indonesian government has listed English as the first foreign language to be taught. However, mastering all the language skills is essential for complete acquisition of a language. (Mayasari, 2018) stated that students must possess a mastery of four fundamental skills: listening, speaking, reading, and writing to achieve proficiency in the English language.

Based on preliminary research conducted in high schools during September and October 2023, it was observed that students often found traditional teaching methods uninteresting and demotivating. Additionally, students frequently faced difficulties in writing descriptive texts, such as lacking vivid vocabulary, struggling with sentence structure, and being unable to create coherent and detailed descriptions. The problem identification in this study reveals several key issues: students' writing proficiency remains low, and their motivation for writing is insufficient. Many students are unaware of the benefits of technology for learning English, and most students demonstrate limited interest in writing. These challenges highlight the need for more dynamic and interactive learning experiences.

According to (Sakkir, 2020) Students are full of ideas, but many are apprehensive of putting them in writing and even developing them. This apprehension can stem a lack of confidence in their writing skills, fear of making errors, or uncertainty about organizing and expressing their ideas in writing. It means apprehension about writing can arise from various factors, including lack of confidence, fear of making mistakes, or uncertainty about proper structure. However, Teachers have a crucial role in developing students' writing skills development, creating suitable learning materials is crucial for effective education. A supportive environment further encourages writing practice, and when students feel safe expressing their thoughts, they are more likely to engage in writing activities.

Teachers play a crucial role as facilitators in the learning process. They should not only focus on syllabus content but also understand students' achievements and how to strengthen their skills. Unfortunately, the absence of instructional language in the syllabus makes it challenging for students, especially when dealing with words that have multiple meanings. Additionally, students struggle to express their ideas effectively. To enhance writing education, technology and media can be harnessed, but many students fail to recognize the benefits of these tools. Addressing these issues becomes a challenge for teachers, who must guide students in using smartphone technology effectively to achieve optimal results.

One way of learning English that is gaining traction and also a product of technology's growth is language learning application such as Duolingo (Ambarwati, 2022). In today's modern era, numerous software applications are available to assist students in enhancing their English language skills, particularly in writing. Duolingo is one such application that leverages rapid technological progress to offer valuable support for improving language learning experiences. By integrating technology into

education, educators can create engaging teaching and learning processes, encourage active participation, and boost students' confidence.

The formulation of the problems in this research are "is there any positive and significant influence of using Duolingo application on the students' writing skills? And how is the students' feedback to the implementation of Duolingo Application on the students' writing skills?

Writing skills are a critical aspect of language learning, and students must develop their writing abilities along with reading and experiencing the language. According to (Rivers, 1981), writing is conveying information or expression of original ideas in a consecutive way in the new language. Writing has so many benefits. Mandal (as citied in Putri, 2018) stated that students who are good at writing will bring many benefits. First, writing effectively enhances their proficiency in vocabulary and grammar, thereby improving their overall language skills. Second, strong writing skills support the development of other language abilities, making students more adept at speaking and reading. In writing, meaning is constructed by blending prior knowledge, past experiences, information gleaned from the text, and the writer's stance in relation to the content. Additionally, it considers the immediate, remembered, or anticipated social interactions resulting from the communication (Ruddel, 2005).

Writing is a constant presence in our daily lives; even if we don't actively read it (Sandra, 2001). Writing serves as a gateway to engaging with modern information technology and expanding their knowledge base. Teachers can adopt a writing instruction approach by considering various factors, making students aware of the importance of writing, evaluating their feelings and writing experiences, and providing them with useful tools and information. (Hadijah, 2019) claimed that teachers should also be able to create suitable learning materials. Teachers can consider this when working on developing effective writing skills in students. These fundamental writing skills provide a crucial starting point for students to learn how to communicate effectively through writing (Badayos, 2016). (Jeremy, 2001) added, writing needs to be coherent and cohesive. Coherent refers to the way thoughts and points are connected, while cohesive refers to the way grammar is used in written language. Moreover, from technical manuals to creative narratives, the types of writing vary widely in their form, content, and language (Dirgeyasa, 2016).

The researcher focuses on the influence of Duolingo Application on writing descriptive text. The process of description involves clearly organizing and presenting characteristics, starting with naming and classifying, and then detailing attributes, behaviours, and functions. This approach helps readers or listeners visualize what is being described as if they were seeing it first-hand (Eko, 2023). Descriptive text aims to provide detailed descriptions so that readers can experience the subject as if they were directly involved in it. This type of writing focuses on describing specific objects, people, animals or other beings, including acquaintances or pets.

Duolingo is a language-learning platform--accessible both as a website and as an Android or iOS app--which launch for general public use just over four years ago, in June, 2012, which itself can be categorized as a branch of ICT called M- (or Mobile) Learning. Artificial intelligence is the research of the computations that enable

perception, reasoning, and action (Patrick, 1993). Duolingo provides vocabulary practice and give opportunity for students to evaluate their knowledge and identify the need to continue improving (Guaquet, 2020). Duolingo is a language learning tool available as an app, which can be accessed via Android smartphones or the web, offering various activities such as vocabulary practice, reading, writing, and listening. Widely recognized as one of the most popular language learning apps, particularly for English, Duolingo is a preferred option among students. The application uses an English native speaker voice, providing an advantage for English learners and allowing practice in writing. Moreover, The Duolingo app utilizes an effective learning strategy that incorporates game-like mechanics to motivate students. It is designed similarly to a computer game, where users advance by completing various levels.

Metode

This research was using experimental research to determine to determine the influence of using the Duolingo Application on students' writing ability. Researcher used Quasi Experimental Design, type Nonequivalent Control Group Design (Sugiono, 2016). Quantitative research is based on measurement of quantity or amount (Khotari, 2024) In other words, the purpose of this study is to evaluate the measurement of the observed subject quantity. This research was carried out at SMAN 7 Tanjungpinang, Jl Kampung Sungai Carang Km. 13, Tanjungpinang Timur, Kepulauan Riau Province. The researcher uses two classes. The first class as an experimental group has received special treatment implementing Duolingo Application in learning writing. The second class is the control group that does not receive treatment. The population of the research was consisted of eleventh-grade students majoring in Science and Social at SMAN 7 Tanjungpinang. The Researcher employed purposive sampling in this research. Purposive sampling or judgmental sampling is technique for choosing particular persons purposely to deliver information that cannot be achieved using other choices. The experimental class is assigned to class XI Science 1, and the control class is assigned to class XI Social 1.

The steps used by the researcher to collect the data were test and questionnaire. The researcher used independent sample t-test by using SPSS IBM SPSS version 21 to analyze the data.

Results

In general, before conducting the research, the researcher administered a pre-test to measure the students' prior understanding of writing skills before providing treatment. After treatment, the post-test outcomes for the experimental and control groups differ significantly. Based on the results of the Independent Sample T-Test with the help of SPSS IBM Statistic Version 21, it can be seen that the average experimental class is 75.64. Higher than the control class, namely 62.12. Furthermore, the probability or Sig number (2-tailed) is 0,000 which is smaller than α (0.005), so that the null hypothesis Ho is rejected and the alternative hypothesis (Ha) is accepted. That is, there

is a positive and significant influence on the use of Duolingo application on the writing skills.

Table 1. Group Statistics

	Class	N	Mean	Std. Deviation	Std. Error Mean
Writing Score	Class XI Science 1	25	75.64	6.676	1.335
	Class XI Social 1	25	62.12	6.064	1.212

The table show that Class XI Science 1 has a higher mean writing score (75.64) compared to Class XI Social 1 (62.12).

Table 2. Independent Sample Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Writing Score	Equal variances Assumed	.081	.777	7.495	48	.000	13.52000	1.80388	9.8930	17.146955
	Equal variances not assumed			7.495	47.563	.000	13.52000	1.80388	9.8921	17.147819

The table showed that the probability number Sig. (2-tailed) was 0.000. The probability or Sig number (2-tailed) was < 0.005, rejecting the null hypothesis Ho and accepting the alternative hypothesis (Ha). It suggests that utilizing the Duolingo Application has a positive and significant influence on the writing skills of eleventh grade students at SMA Negeri 7 Tanjungpinang.

Table 3. The Results of Students' Answer of Questionnaire

No	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strong Disagree (1)	Total
Q1	5	17	1	1	1	25
Q2	11	10	3	1	0	25
Q3	5	11	4	3	2	25
Q4	15	9	1	0	0	25
Q5	14	7	4	0	0	25
Q6	16	7	2	0	0	25
Q7	6	13	6	0	0	25
Q8	11	10	3	1	0	25
Q9	11	13	0	1	0	25
Q10	14	10	1	0	0	25

Based on the table above, the results show a strong positive trend across all questions related to Duolingo. Respondents tend to strongly support the statements provided. Mostly showed a positive "Strongly" "Agree" toward each statement, with only a few being neutral, disagreeing, or strongly disagreeing suggesting that the students had a favorable perception of Duolingo's role in improving their writing skills.

Discussion

Based on the results of the Independent Sample T-Test with the help of SPSS IBM Statistic Version 21, it can be seen that the average experimental class is 75.64. Higher than the control class, namely 62.12. Furthermore, the probability or Sig number (2-tailed) is 0,000 which is smaller than α (0.005), so that the null hypothesis Ho is rejected and the alternative hypothesis (Ha) is accepted. That is, there is a positive and significant influence on the use of Duolingo application on the writing skills of class XI students of SMA Negeri 7 Tanjungpinang.

This research observed the writing skills of class XI students of SMA Negeri 7 Tanjungpinang. Their difficulties stemmed from a lack of understanding about proper writing procedures. Additionally, students exhibited shyness and disinterest when practicing writing independently or with peers. To address these issues, the researchers introduced Duolingo application to enhance students' sentence and paragraph writing abilities.

The validity test results showed questionnaires amounted to 10 items. Determining the R-table to identify a valid item of the validity test. Using the formula to find out R-table is df=N-2 with 25 respondents, df=23 and the r-table for the number is 0,396. Furthermore, based on the reliability with a Cronbach's Alpha value of 0.855. This indicates that the instrument can be trusted to measure the intended construct.

Based on student's feedback using Duolingo application, the results show a strong positive trend across all questions related to Duolingo. Respondents tend to strongly support the statements provided. Mostly showed a positive "Strongly Agree" toward each statement, with only a few being neutral, disagreeing, or strongly disagreeing suggesting that the students had a favorable perception to the

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Implementation of the Duolingo application on the writing skill of the eleventh-grade students at SMA Negeri 7 Tanjungpinang.

Conclusion

Based on the results of the findings, it can be concluded that the use of Duolingo application has a positive and significant impact. In other words, using Duolingo application enhances students' writing skills at the eleventh-grade students of SMA Negeri 7 Tanjungpinang. Through the findings, it can be seen that there is a significant difference between the writing scores of the experimental class and the control class where the post- test scores of the experimental class are higher. It can be seen that the mean value of the control class is 62,12 while the experimental class is 75,64. Hence, the average score of the experimental class is higher than that of the control class. That means that there is a positive and significant influence of using Duolingo application on students' writing skills.

Additionally, based on student's feedback using Duolingo application, the results show a strong positive trend across all questions related to Duolingo. Respondents tend to strongly support the statements provided. Mostly showed a positive "Strongly" "Agree" toward each statement, with only a few being neutral, disagreeing, or strongly disagreeing suggesting that the students had a favorable perception to the Implementation of the Duolingo application on the writing skill of the eleventh-grade students at SMA Negeri 7 Tanjungpinang.

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