



The Effect of Using Duolingo on Students' Pronunciation and Fluency at SMA Negeri 5 Bungo

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Abstract

This research is a pre-experimental design that aims to see the effect of using Duolingo on the students' pronunciation and fluency of SMA Negeri 5 Bungo students. The population for this research consisted of 10th-grade students SMA Negeri 5 Bungo which amounted to 75 students and the sample of this study was the 10th grade Mipa class which amounted to 24 students selected through the lottery method. The instrument used was reading aloud test in the form of dialog. This research lasted for 8 weeks, in which students were asked to do a pretest in the first week, then treatment for 6 weeks and finally posttest. Data were analyzed using IBM SPSS 26 by conducting hypothesis testing using paired t-test. The findings of this research indicated that the sum of the mean scores of the pre-test was 58.50 and the posttest was 77.88. The results of the paired t-test analysis indicate that the significance value (2-tailed) is < 0.05 , which means there is a significant change in students' pronunciation and fluency after utilizing the Duolingo application.

Keywords:

Speaking Ability,
Duolingo
Application,
Pronunciation and
Fluency

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INTRODUCTION

Proficiency in English communication holds significant importance in various contexts, including daily interactions, business transactions, and academic settings. Effective communication in English necessitates the skill to adapt to different levels of formality. A proficient English speaker is characterized by their capability to convey messages clearly without causing any misunderstandings. This proficiency is contingent upon various speaking aspects, such as pronunciation and fluency.

Nirwana et al (2020) assert that pronunciation serves as the foundation of effective speaking, as it enhances the naturalness and comprehensibility of communication. Gilakjani and Ahmadi (2011) asserted that pronunciation encompasses not only individual vocal sounds but also broader elements such as intonation, rhythm, and stress patterns. These components contribute to clear articulation, facilitating the expression of meaning and emotions while minimizing misinterpretations.

On the other hand, fluency, as defined by Kusumawardani and Mardiyani (2018) refers to the ability to speak spontaneously with minimal pauses. Louma (2004) further underscores that fluency encompasses maintaining a consistent speech rate, ensuring that utterances flow naturally without being excessively rapid or sluggish. It is evident that these two facets, pronunciation and fluency, significantly impact the speaking proficiency of students.

The neglect of pronunciation in English learning at school is a common issue, attributed to inadequate teaching methods and limited practice time. This deficiency results in students' weak speaking ability encompasses both pronunciation and fluency, as evidenced by various researchers (Harmer (2001), Setter (2008), Gilakjani, 2012). This challenge is particularly prevalent among students at Senior High School 5 Bungo, as observed during Praktek Lapangan Kependidikan (PLK). Several factors contribute to the subpar speaking abilities of students at this institution. Primarily, students struggle due to English not being their native language. Furthermore, a lack of interest in learning English is evident, as students often display disengagement during lessons. The absence of interesting learning support media exacerbates this problem, as teachers generally rely on textbooks.

The utilization of media in the educational process is crucial, extending beyond traditional textbooks. Sari and Margana (2019) emphasized the significant role and impact of learning media in attaining educational objectives, particularly in supporting language acquisition. Various forms of media, including audio and audio visual formats, serve as valuable tools to engage students, enhance pronunciation, and improve fluency. Juniardi (2023) defined audio media as auditory-based media, including radio, tape recorders, and CD-DVDs, which do not require visual elements. Conversely, audio-visual media, which combines auditory and visual components, such as movies and applications, are deemed more captivating and effective.

In response to the identified issues, the researcher implemented the Duolingo application as a learning supporting media to assist high school students in enhancing their pronunciation and fluency. Duolingo offers various engaging features, including a microphone for correcting pronunciation, vocabulary expansion, guidance on the pronunciation of words, and exercises focusing on English sounds like vowels, consonants, and similar sounds in different words. These features are designed to enhance the effectiveness of pronunciation and fluency improvement for SMA Negeri 5 Bungo. By using Duolingo, students can practice and familiarize themselves with pronouncing new and familiar vocabulary, thereby boosting their confidence and fluency.

RESEARCH METHOD

Research design

This research used pre-experimental design with quantitative method. According to Creswell & Creswell (2018), in pre-experimental design, one group was studied by the researcher, who then conducted a measure during the experimental period. Researchers gave two tests, namely pre-test and post-test, then compared the scores using SPSS.

Population and Sample

The population in this study consisted of 10th-grade students of SMA Negeri 5 Bungo with a total of 75 students. To determine the sample, researchers used cluster sampling with the lottery method. According to Bhardwaj (2019), in cluster sampling, Population segments are regarded as clusters, and the selection for sampling has been conducted randomly. The sample selected in this research was the 10th grade Mipa class with a total of 24 students.

Instrumentation

This research used read aloud as an instrument to assess students' speaking proficiency. Then, the results of the pre-test and post-test were compared. The assessment on this test focuses on pronunciation and fluency, using the assessment rubric developed by Brown (2019).

The research took place over eight weeks. In the first week students were given a pre-test. In the following week students were given treatment for six weeks. In the last week a post-test was administered to evaluate the impact of utilizing Duolingo on students' speaking proficiency, especially pronunciation and fluency.

Analyzing data in this study using IBM SPSS 26. Normality and homogeneity tests were carried out which focused on Shapiro Wilk on the grounds that the sample was < 100 . Then, researchers conducted a hypothesis test using Paired T-Test.

The concept of validity by Gay, et al., (2012), is the degree to which an exam can measure precisely what it is intended to assess, enabling precise score interpretation. One of the UNP English Department instructors was asked to assess the content's appropriateness and validity in order to determine the instrument's validity.

Based on Gay, et al., (2012), reliability is the extent to which an assessment evaluates the subject matter it is supposed to measure consistently. Test-retest methodology was employed in this study as a means of gauging the reliability of the research instrument. Researcher used the 10th Ips 2 class as a non-sample in order to assess the instrument's dependability. At a predetermined time, the test was given twice. Two tests were run, separated by a certain amount of time. Next, using SPSS, the test-retest results were examined to determine the connection between the initial test and the follow-up test. The SPSS computation results indicate a correlation between test and retest scores, indicating the instrument's reliability.

RESULT AND DISCUSSION

The results of this research aim to elucidate the hypothesis-testing process. The study investigated the effect of Duolingo on students' speaking abilities at SMA Negeri 5 Bungo, utilizing pre-test and post-test assessments in the form of conversations titled About an Idol, IBM SPSS Statistics 26 software. The findings indicated that the null hypothesis was rejected, while the alternative hypothesis was accepted.

Research Finding

1. Pre-test and Post-test result

After the last test was conducted by students, the researcher then inputted the data of the results before and after students used Duolingo into SPSS. It means that the researcher sees the comparison of scores between the pre-test and post-test. The final results indicate the effect of using Duolingo on students' pronunciation and fluency.

Sample	Pre-test	Post-test
Student 1	63	75
Student 2	50	63
Student 3	50	88
Student 4	63	88
Student 5	75	88
Student 6	50	75
Student 7	50	75
Student 8	75	100
Student 9	63	75
Student 10	63	88
Student 11	50	63
Student 12	63	100
Student 13	75	100
Student 14	63	88
Student 15	50	63
Student 16	50	75
Student 17	50	88
Student 18	75	88
Student 19	63	88
Student 20	50	63
Student 21	50	50
Student 22	50	63
Student 23	50	50
Student 24	63	75
Total	1404	1869

2. Data Description

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
hasil pre	24	50	75	58.50	9.596
hasil post	24	50	100	77.88	14.742
Valid N (listwise)	24				

The data presented in the table indicates that the research sample comprises 24 students. In the pre-test, the minimum score achieved by a student was 50, while the maximum score was 75, resulting in an average score of 58.50. In contrast, the post-test revealed a minimum score of 50 and a maximum score of 100, with an average score of 77.88. This demonstrates a notable improvement in student performance, as evidenced by the higher mean score in the post-test compared to the pre-test.

3. Normality Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRE	.156	24	.138	.950	24	.265
POST	.205	24	.010	.918	24	.052

a. Lilliefors Significance Correction

Data obtained through the Statistical Package for the Social Sciences (SPSS) can be normally distributed if the significance (sig) value is greater than 0.05. Conversely, if the sig value is less than 0.05, the data is classified as abnormally distributed. According to the table presented above, the Shapiro-Wilk test indicates that the sig values for both the pre-test and post-test are greater than 0.05, thereby suggesting that the data follows a normal distribution.

4. Homogeneity Test

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Pre-testpost-test	Based on Mean	1.891	4	42	.130
	Based on Median	.706	4	42	.593
	Based on Median and with adjusted df	.706	4	29.783	.594
	Based on trimmed mean	1.710	4	42	.166

Data is declared homogeneous using SPSS if the mean value > 0.05 and abnormal if the mean value < 0.05 . Based on the tablet above proves that the mean value > 0.05 , then the data is homogeneously distributed.

5. Hypothesis Test

Paired Samples Test										
		Paired Differences								
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)	
					Lower	Upper				
Pair 1	pre-test - post-test	-19.375	10.400	2.123	-23.766	-14.984	-9.127	23	.000	

Based on the data presented in the table above, it is observed that the significance value (2-tailed) is 0.000. According to the calculations performed using SPSS, if the significance value (2-tailed) is less than 0.05, the null hypothesis (H0) is rejected in favor of the alternative hypothesis (Ha). This indicates that Duolingo has a positive impact on students' pronunciation and fluency at SMA Negeri 5 Bungo.

DISCUSSION

The aim of this research was to indicate how Duolingo use affected the pronunciation and fluency of the students' at SMA Negeri 5 Bungo. There were two phases to the test that the researcher administered to the sample: the pre-test and the post-test. After the students received particular attention and used Duolingo for six weeks, the post-test was administered.

The data analysis table, which indicates that there are notable changes in student's pronunciation and fluency after using Duolingo, can be used to infer the study's findings. Based on Paired T-Test data analysis with an established 2-tailed sig value of 0.000, H0 is rejected and Ha is accepted in SPSS computations if the 2-tailed sig value is less than 0.05. This indicates that there has been a notable shift in the impact of Duolingo on students' fluency and pronunciation at SMA Negeri 5 Bungo. It is said that Duolingo can enhance students' speaking abilities.

These findings are in line with previous research that utilized Duolingo to enhance students' speaking ability, encompassing pronunciation and fluency. Hafifah (2019) conducted a study titled Effectiveness of Duolingo in Improving Students'

Speaking Skill at Madrasah Aliyah Bilingual Batu School Year 2019/2020, Analysis revealed that the calculated t-value surpasses the critical t-value at a significance level of 0.05 (5%). The research outcomes indicate a significant improvement in speaking abilities, particularly in pronunciation and fluency, at MA Bilingual Batu during the 2019–2020 academic year.

In a recent research conducted by Kusuma et al. (2024), the efficacy of Duolingo as a technology-driven instructional tool was examined. The objective of this research was to evaluate the impact of the Duolingo application on the improvement of English-speaking skills. To assess the students' speaking proficiency before and following the use of Duolingo, the researchers administered a paired dialogue speaking test. The data collected were analyzed using the Wilcoxon Signed Rank Test. The revised text employs a more formal academic tone and corrects minor grammatical issues, such as ensuring subject-verb agreement and enhancing clarity. The findings indicated a significant improvement in students' speaking abilities after incorporating Duolingo as a learning aid. Furthermore, the study demonstrated that Duolingo was beneficial in improving various aspects of speaking skills, including vocabulary, pronunciation, accuracy, and fluency. In conclusion, the study underscores the effectiveness of Duolingo as a technology-based educational tool for enhancing English speaking proficiency.

The research conducted by Niah and Pahmi (2019), titled of Duolingo to Improve the Speaking and Listening Skills of Junior High School Students in Pekanbaru, of the Duolingo program in enhancing students' speaking and listening abilities. The findings indicate a significant improvement in the speaking ability of students in class VIII.1, which increased from a mean score of 2.042 to 5.5, while their listening ability rose from 2.042 to 4.48. Similarly, students in class VIII.2 exhibited an enhancement in speaking ability, with scores increasing from 2.052 to 5.17, and their listening ability improved from 2.042 to 5.10. The results demonstrate that the "t" table value exceeded the calculated "t" value for both speaking and listening abilities, suggesting that the utilization of Duolingo can effectively enhance the listening skills of junior high school students, as well as improve their speaking abilities, including fluency and pronunciation.

CONCLUSION

This study identified a significant enhancement in students' pronunciation and fluency following the utilization of Duolingo. The findings underscore the importance of employing learning support media for students. In addition to facilitating improvements in English language proficiency, such tools may also serve to augment students' motivation to learn.

REFERENCES

- Bhardwaj, P. (2019). Types of sampling in research. *Journal of Primary Care Specialties*, 5(3), 157-163.
- Brown, H. D. (2003). *Language Assessment*. Longman, 172–173. <https://doi.org/10.1002/9781118533406.ch15>
- Creswell, J. W., & Creswell, J. D. (2018). *Mixed Methods Procedures*. In *Research Defign: Qualitative, Quantitative, and Mixed Methods Approaches*.

- Gay, L. R., Mills, G. E. & Airasian, P. (2012). Educational Research Competencies for Analysis and Application.
- Gilakjani, A. P. (2012). A study of factors affecting EFL learners' English pronunciation learning and the strategies for instruction. *International journal of humanities and social science*, 2(3), 119-128.
- Gilakjani, A. P., & Ahmadi, M. R. (2011). Why Is Pronunciation So Difficult to Learn? *English language teaching*, 4(3), 74-83.
- Hafifah. (2019). The Effectiveness of Duolingo in Improving Students' Speaking Skill At Madrasah Aliyah Bilingual Batunguage, *English Study*, T. LangEdu Journal.
- Harmer, J. (2010). *The Practice of English Language Teaching*. In Longman. <https://doi.org/10.1093/elt/57.4.401>
- Juniardi. W. (2023). Media Pembelajaran Bahasa Inggris Membuat Mudah Memahami Materi. Quipper Blog. <https://www.quipper.com/id/blog/info-guru/media-pembelajaran-bahasa-inggris/%0A>
- Kusuma, D. I., Rahmania, I., Imannisa, C., (2024). The Effectiveness of Duolingo As Technology-Based Instructional Media in Learning English Speaking. 10(2), 71–86.
- Kusumawardani, S. A., & Mardiyani, E. (2018). The correlation between English grammar competence and speaking fluency. *PROJECT (Professional Journal of English Education)*, 1(6), 724-733.
- Louma, S. (2004). Assessing speaking. In CAMBRIDGE University Press. <https://doi.org/10.1017/s0267190500003548>
- Rao, R. S., (2019). The importance of speaking skills in English classrooms. *Alford Council of International English & Literature Journal*, 2(2), 6–18. www.acielj.com
- Niah, S., & Pahmi. (2019). The Utilization of Duolingo to Improve the Speaking and Listening Skills of Junior High School Students in Pekanbaru. 373, 54–59. <https://doi.org/10.2991/iccelst-ss-19.2019.12>
- Nirwana, A. R., Mukadar, S., & Badu, T. K. (2020). The Effectiveness of Tongue Twisters Strategy to Increase The Students Ability:(Efektivitas Strategi Tongue Twister Untuk Meningkatkan Kemampuan Berbicara Siswa). *Uniqbu Journal of Social Sciences*, 1(3), 80-95.
- Sari, Y. N., & Margana, M. (2019). YouTube as a learning media to improve the student's speaking ability in 21st century. *Journal of English Language Teaching and Linguistics*, 4(2), 263.
- Setter, J. (2008). Theories and approaches in English pronunciation. R. Monroy & A. Sanchez (Eds.), 25, 447-457.