

Speechace's Action In Improving Pronunciation at Senior High School

Jihana Amelia Amin¹, Nurhamdah², Kalsum³

[jihanaameliaamin@iainpare.ac.id](mailto:jihanameliaamin@iainpare.ac.id)¹, nurhamdah@iainpare.ac.id², kalsum@iainpare.ac.id³

^{1,2,3} Institut Agama Islam Negeri Parepare, Parepare/Sulawesi Selatan, Indonesia)

Abstract: The intent of the study was to examine the efficacy of using the Speech Ace program in enhancing the English pronunciation of senior high school. A pre-experimental approach was used, consisting of one experimental class that included Speech Ace during sessions that received standard education. Both courses underwent pre-testing and post-testing to assess their pronunciation abilities. The findings demonstrated a statistically significant enhancement in the average score of the experimental group's post- test, which increased from 64,85 to 74,38. On the other hand. A t-test analysis comparing independent samples showed a statistically significant difference between the groups, with a p-value of 0.000, which is less than the significance level of 0.05. As a result, it was determined that the study hypothesis was confirmed, indicating that SpeechAce had a considerable impact on students' English-pronunciation proficiency. The good evaluations of SpeechAce were also seen in the student interviews and surveys. In summary, the results of the study provide concrete evidence that using technology-based tools like SpeechAce may significantly improve students' pronunciation abilities when used with traditional teaching techniques.

Keywords: *speechace; pronunciation; technology-based tools*

Abstrak: Tujuan dari penelitian ini adalah untuk menguji keampuhan penggunaan program Speech Ace dalam meningkatkan pelafalan bahasa Inggris di sekolah menengah atas. Pendekatan pra-eksperimental digunakan, yang terdiri dari satu kelas eksperimen yang menggunakan Speech Ace selama sesi yang menerima pendidikan standar. Kedua kelas tersebut menjalani pre-test dan post-test untuk menilai kemampuan pelafalan mereka. Temuan menunjukkan peningkatan yang signifikan secara statistik dalam skor rata-rata post-test kelompok eksperimen, yang meningkat dari 64,85 menjadi 74,38. Di sisi lain. Analisis uji-t yang membandingkan sampel independen menunjukkan perbedaan yang signifikan secara statistik antara kedua kelompok, dengan nilai p-value sebesar 0,000, yang lebih kecil dari tingkat signifikansi 0,05. Sebagai hasilnya, ditentukan bahwa hipotesis penelitian telah dikonfirmasi, yang menunjukkan bahwa SpeechAce memiliki dampak yang cukup besar pada kemahiran pengucapan bahasa Inggris siswa. Evaluasi yang baik terhadap SpeechAce juga terlihat dalam wawancara dan survei siswa. Singkatnya, hasil penelitian ini memberikan bukti konkret bahwa penggunaan alat berbasis teknologi seperti SpeechAce dapat secara signifikan meningkatkan kemampuan pelafalan siswa ketika digunakan dengan teknik pengajaran tradisional.

Kata kunci: *speechace; pengucapan; alat bantu berbasis teknologi*

INTRODUCTION

Pronunciation plays an important role in learning English. In order to be understandable, people should deliver their speech with proper English pronunciation. Learning pronunciation is quite difficult for Indonesian students since they have been used to pronunciation their mother tongue since childhood. Moreover, Anggun Kusuma Dewi stated that English is greatly different from Indonesian language in its pronunciation system. The common problem of learning English pronunciation is caused by the differences between the sound systems of the two languages. There are some sounds in English which do not exist in Indonesian. According to previous research, students make half of the pronunciation errors tested. Some factors behind it hinder understanding or recognizing pronunciation; the student's native language, such as Bahasa Bugis, Batak, Sunda, Java, and Bahasa Indonesia, which have unusual sounds in English, have an impact on this. It's also possible that they are knowledgeable about this theory but struggle to incorporate it into oral practice.

Pronunciation issues have the potential to arise in schools in Indonesia. This was evident during teaching practice at SMAN 4 Parepare, where the teacher stated that students were assigned

tasks to create and practice dialogs expressing opinions, both in asking and giving opinions. The problem is that some students still need to achieve accuracy in pronunciation, as demonstrated by their mispronunciation of English words. Two students mispronounced the word "bath" as "bad" and the word "god" as "good". Using the patented speech recognition AI technology, Speechace can identify pronunciation errors made by students, provide them with prompt feedback, and record areas where improvement is needed. Speechace gives students quick motivation to practice more and become better by scoring their speech against a native speaker model. According to researcher, practicing with responsive feedback significantly enhances word recognition, which, in turn, improves pronunciation and pronunciation fluency. Speechace helps teachers with three fundamental pronunciation aspects: Exposure Teachers can design and customize unique lessons for their students using Speechace. According to researcher, practicing with responsive feedback significantly enhances word recognition, which, in turn, improves pronunciation and pronunciation fluency. Speechace helps teacher with three fundamental pronunciation aspects: Exposure Teachers can design and customize unique lessons for their students using Speechace. Speechace exposes users to words or phrases in contexts where native speakers commonly use them. Based on the explanation above, the writer conduct research with the title "Speechace's Action in Improving Pronunciation at Senior High School " to assure that speechace an innovative device can facilitate students' to improve their pronunciation.

RESEARCH METHODS

This research used pre-experimental research design by using pre-test and post-test with quantitative approach, because the researcher want to established possible cause and effect between dependent and independent variable. The researcher was intended to improve students' pronunciation using SpeechAce at Tenth Grade Students' of SMAN 4 PAREPARE. Population is the group to which a researcher would like the results of a study to be generalizable. The population of this study are the students at tenth grade of senior high school 4 Parepare which total of the students are 86, The researcher took the sampling in X MACCA 2 by purposive sampling. This class consisted of 21 students of first grade at Senior High School 4 Parepare. The sample consisted of 11 boys and 10 girls. Edward Thorndike and B.F. Skinner contributed to the development of testing methods and educational assessments to measure learning outcomes such as pre-test treatment and post-test. Standard performance defines what a student must know and or be able to do attain a certain level, such as passing a test or scoring proficient on some measurement scale. By using standard performance students' level in pronunciation improvement.

RESULTS AND DISCUSSION

The results and findings of this research pertain to the outcomes of pre-tests and post-tests administered to pupils. Before installing the SpeechAce program, a pre-test was given to students in the experimental class. The purpose of the pre-test was to evaluate the students' pronunciation abilities using a prepared conversation text. The post-test was conducted after the implementation of the SpeechAce application on the experimental class, with the objective of assessing the extent of progress shown by the experimental class and the impact on students' pronunciation skills. Student performance was evaluated by pre-tests and post-tests, which assessed their proficiency in speechace scoring.

Tables 1 table scores' of pronunciation

No.	Category	Score			
		Pre Test		Post Test	
1	Maximal	85	Very Good	89	Very Good
2	Minimal	23	Very Poor	38	Very Good
3	Mean	64,85	Fair	74,38	Good
4	Median	63	Fair	77	Good
5	Mode	72	Good	85	Very Good

Tables 2 table classification of pronunciation

No.	Student	Pre Test		Post Test	
		Frequency	Percentage	Frequency	Percentage
1	Very Good	3	14,29%	9	42,85%
2	Good	10	47,61%	8	38,09%
3	Fair	5	23,81%	2	9,52%
4	Poor	3	14,29%	1	4,77%
5	Very Poor	0	0,00	1	4,77%
Total		21	100%	21	100%

Tables 3 descriptive statics pre test

		Minimum	Maximum	Mean	Std. Deviation
Data Sample	21	23,00	85,00	64,85	15,79
Valid N (listwise)	21				

Sources: Data of SPSS 25

The table presents descriptive statistics for the post test scores of the students. It provided information about the sample size (N), minimum and maximum scores, mean, and standard deviation. It can be explained that:

1. Sample Size (N): The sample size represents the number of students included in the analysis. In this case, there were 21 students whose pretest scores were considered for the descriptive statistics.
2. Minimum Score: The minimum score indicated the lowest score obtained by any student in the pretest. In this dataset, the minimum score was 23,00.
3. Maximum Score: The maximum score represents the highest score achieved by any student in the pretest. In this case, the maximum score was 85,00.
4. Mean: The mean (also known as the average) is the sum of all the scores divided by the number of scores. It provided an estimate of the central tendency of the data. In this dataset, the mean pretest score was 64,85.

Standard Deviation: The standard deviation measures the spread or variability of the scores around the mean. It indicated how much the scores deviate from the mean score. In this dataset, the standard deviation for the pre test scores was 5,22.

Tables 4 descriptive statics post test

		Minimum	Maximum	Mean	Std. Deviation
Data Sample	21	38,00	89,00	74,38	13,5
Valid N (listwise)	21				

Sources: Data of SPSS 25

The table present descriptive statistics for the post test scores of a sample group of students. The statistics provided information about the distribution, central tendency, and variability of the scores.

1. This represents the total number of observations or participants in the sample. In this case, there were 21 students included in the analysis.
2. This value represents the lowest score recorded in the post test. In this sample, the minimum score was 38,00.
3. This value represents the highest score recorded in the post-test. In this sample, the maximum score was 89,00.
4. The mean (average) represents the central tendency of the data. It was calculated by summing all the scores and dividing by the total number of scores. In this sample, the mean score was 74,38. This indicated the average performance of the students in the post test.

Std. Deviation: The standard deviation measures the dispersion or variability of the scores around the mean. It provided information about how spread out the scores are from the mean. In this sample, the standard deviation was 13,5. A higher standard deviation suggests a greater degree of variability in the scores.

Tables 5 Results of Paired Samples Test

Paired Samples Test									
		Paired Differences					t	F	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95%				
					Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre test	64,85	15,79	3,53	58,09	71,60	1725	20	,000
	Post test	74,38	13,05	3,01	68,60	80,15			

Based on the results of the analysis, it is obtained that the thitung value is 2.093 where to find out whether the thitung value is significant with a 95% or 0.05 confidence interval, it must be compared with the value in the ttable. And to see the ttable it must be based on (dk) or degrees of freedom (df) whose magnitude is n-1, in this case it means $21-1 = 20$. It refer to the ttable value of

1.729. If the calculated *t* value was 2.093 and the *t* value from *t*-table (*t* distribution table) was 1.729, then the researcher concluded that there is a significant difference between the two groups of data being compared. In this context, the null hypothesis which states that there is no difference between the two data groups can be rejected. The alternative hypothesis which states that there is a difference between the two groups of data will be accepted. Because the *t*-count was bigger than *t*-table the null hypothesis (*H*₀) saying that there is no significant difference of the students' pronunciation skill score after they are taught by using speechace as media was rejected and the alternative hypothesis (*H*_a) saying that there is significant difference of the students'.

Discussion

The Speechache application can help improve users' pronunciation skill through several available features. One of the most useful features is the instant feedback feature. This feature will provide notifications if there are errors in pronouncing a word. Pronunciation errors will be marked in red and the AI from the application will provide guidance on the correct pronunciation in writing. In addition, in paid mode, this feature can also function as pronunciation tutoring by providing directions via AI voice. The goal is to help users improve pronunciation with direct guidance. With the instant feedback feature and virtual pronunciation tutor assistance, SpeechAce can indirectly act as a companion in the process of learning a foreign language. Users can easily correct pronunciation errors through real-time guidance provided by the application. This is expected to improve users' pronunciation skill (Wijaya, 2023).

Furthermore, the picture feature, pictures or visuals tend to be easier to remember and understand the meaning of something. Speechace has pictures in pronouncing some sentences so it will be easier to memorize and remember, the more pronunciation obtained and remembered can improve pronunciation skill and confidence in pronunciation. Pronunciation is crucial for expressing feelings and thoughts, playing a vital role in daily communication and language learning. This study aimed to evaluate SpeechAce's effectiveness in improving students' pronunciation abilities.

SpeechAce's interactive features, including speech recognition and detailed feedback, motivated active student participation. Continuous practice and constructive feedback enhanced students' confidence and competence in spoken English. This study aligns with Lesmana's (2022) findings using ELSA to enhance pronunciation skills, with SpeechAce offering more detailed and real-time feedback, proving effective in improving students' pronunciation proficiency. In addition to ASR (Automatic Speech Recognition) which can help improve pronunciation skills, a study by Auliya et al. (2021) explored the utilization of Mobile Assisted Language Learning (MALL) platforms among first and second-year student teachers to enhance their pronunciation abilities. Overall, SpeechAce proved effective in enhancing students' reading skills, providing immediate and detailed feedback crucial for rapid improvement in language learning. Through qualitative research methods such as interviews and focus group discussions, the researchers examined the extensive use of various MALL applications including Wattpad, social media, Duolingo, U-Dictionary, and Quora by the students to improve their pronunciation, grammar, reading speed, and comprehension. The research also highlighted the effectiveness of such SpeechAce in developing independent learning habits and enhancing pronunciation skills among the EFL (English as a Foreign Language) students over time. Overall, SpeechAce proved effective in enhancing students' pronunciation skills, providing immediate and detailed feedback crucial for rapid improvement in language learning. The present study underscores technology-based interventions' potential in language education and suggests exploring similar applications for other language skills.

CONCLUSION

Sejarah Based on our study, the Speechace application has demonstrated its effectiveness to improve English pronunciation skills among senior high school 4 Parepare. The study found that the experimental group, which used the Speechace application, showed significant improvement in pronunciation abilities after getting treatment. The average N-Gain score for the experimental class which increased from The findings demonstrated a statistically significant enhancement in the average score of the experimental group's post- test, which increased from 64,85 to 74,38. On the other hand. A *t*-test analysis comparing independent samples showed a statistically significant difference between the groups, with a *p*-value of 0.000, which is less than the significance level of 0.05, confirming the hypothesis that the Speechace application effectively enhances students' English-pronunciation skills.

BIBLIOGRAPHY

- al, N. e. (2012). "Analyzing Cause and Effect in Environmental Assessments," *Freshwater Science* 31, no.1 .
- Ampa. (2008). "English Phonology". English Education Department Makassar Muhammadiyah University.
- Arikunto, Suharsimi, *Dasar Evaluasi Pendidikan*, Edition of Refisi Cet. X, Jakarta: Bumi Aksara, 2019
- Avenue ,Madison, oxford Essential Dictionary, INC:University press,2003
- B,Gilbert, Judy, teaching pronunciation using the prosody pyramid
- Dale Paulatte, Lilian poms "English Pronunciation made simple".Logman: United States of America.2005
- Dann, Bryrne, "Teaching Oral English", Longman Handbooks For Language Teacher.London Group. 1986
- Elder, D. a. (2008). "The Handbook of Applied Linguistics".
- Goodluck, A. K. (n.d.). The Role Of Media Technology In Teaching And Learning English Language In This Era Of Insecurity And Covid 19 Pandemic: Challenges And Prospects. *Zaria Journal of Educational Studies*. Volume 21, No. 1, 43.
- Hornby oxford advanced learner's dictionary, oxford university press, oxford: 2017 John, Beech R, Friend, *Assessment in speech and language therapy*
- Hornby. (2003). "Oxford Learner's Pocket Dictionary" New York: University.
- <https://www.postman.com/speechace/workspace/speechace-s-public-workspace/collection/2675436-2dfd3077-ca21-4629-a130-144f308ac911>.
- Laide, M. Z. (2018). , "Improving The Students' Mastery Of Pronunciation Through Team Assisted Individualization" (UNIVERSITAS MUHAMMADIYAH MAKASSAR).
- Lumappa, T. (2021). "Improving Students' Pronunciation Mastery by Using Board Race Game at the Seventh Grade of SMP Nusa Prima Lamasi" (IAIN PALOPO).
Newyork:Cambridge University Press
- Penny. (n.d.). "A Course in Language Teaching. Module 4. Teaching Pronunciation".
- Rohman, M. (2016). The Use of Tongue Twister Technique to Improve EFL Students' Pronunciation" (UIN WALISONGO).
- Tahrim, T. (2015). "Tata Kelola Media Pembelajaran Berbasis Audio Pada Mata Pelajaran Bahasa Indonesia Di SMA Negeri 1 Larompong Kabupaten Luwu," Universitas Negeri Makassar .
- Tang, A. M. (2013). , "The Ability of The First Year Students SMA Negeri 1 Seram Utara (Maluku Regency) to Pronounce English Consonant Sounds" (UIN Alauddin MAKASSAR).
- Ur, P. (1996). *A Course in Language Teaching Trainee Book Trainee's Book*, First edition (Inggris, Cambridge University Press).