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| **The Effect of the Reading Aloud with Google Text-To-Speech Assistance on Students’ Reading Fluency in The Pandemic Era*****Rohmad Bayu Alfi Sahri1, Iin Rachmawati2, Chairuddin3***STKIP PGRI Bangkalan, Indonesia 1,2,3rohmadbayualfi@gmail.com1iinrachma@stkippgri-bkl.ac.id2chairuddin@stkippgri-bkl.ac.id3  |

**ABSTRACT**

*Learning processes in pandemics brought a new challenge to the teacher. The difference gap on online teaching and offline teaching was quite big. This study aims to investigate the effectiveness of the read-aloud technique combined with technology text-to-speech on student reading fluency during pandemics, especially in beginner learners. This research used a quantitative method to obtain the data and used the ORF test from DIBELS to measure the effectiveness. The results showed good improvement in the read-aloud method but it is not significant. Even if it was not significant, the method still can be used as another variation method to teaching reading at the beginner level and the usage of technology can ease the learning process more for teachers and students.*

**Keywords:**

*Pandemic, Reading Aloud, Reading Fluency, Text-to-Speech*

## Introduction

 Reading is one of four basic skills in learning a language. Reading skills will always be taught in language education. Reading skill is not as same as other skill which can be learned naturally from daily life (Lyon, 1998). Learning reading skills need proper guidance from people who understand how to read which if in the education world teacher is the main guidance for the students in learning reading skills (Rachmawati, 2016). Reading skill development is a core thing to students’ development in language acquisition.

In the current pandemic era, the education process is limited. The situation forced the learning process to be held online to prevent the further spread of Covid-19. This change in the education process brought many problems like students learning, interference in assessment, cancellation of assessment, opportunity to get a job after graduation, and cancellation of public assessment of qualifications in job selection (Aji, 2020). Education of English as a foreign language has further effects. Unlike First Language learners, foreign language learners found it difficult to learn basic English with online system classes. Language acquisition is a natural process, whereas learning a language is conscious. Learners partake in natural communicative situations, and then error correction will naturally present from the environment (Krashen, 1981). While the best way to acquire those is in offline classes, offline classes can imitate the environment of natural processes. So, a learner can learn the language faster, but in an online classroom, that situation is hardly achieved. As a result, students’ ability is sloped by the condition.

Based on the pre-preliminary research conducted during the internship and the researcher’s experience in participating in a government program called Kampus Mengajar the researcher found many students' reading skills lagging behind the competency target of the school during the pandemic situation. Mentioned skills that are left behind are reading speed, pronunciation, vocabulary mastery, etc. those problems may occur from lack of communication between teacher and students, students’ literacy, or even students’ previous school which doesn’t include English in its school subject. Those problems got worse during the current pandemic era which limits students' and teachers’ communication in the study. To solve those problems researcher decided to use the Reading Aloud technique to solve the lagging skill. The reading Aloud technique is a technique that let the teacher read the word, phrase, or paragraph aloud and then the students repeat the word that the teacher said. The Reading Aloud technique which was introduced by Trelease (2013) was intentionally used for children. Children tend to imitate something or someone around them(Carr et al., 2015), especially their parents whether parents at home or in school(teacher). Based on that behavior, a Reading Aloud technique is used. Teachers or parents give good examples of reading, so the children can imitate and learn properly. The researcher tries to imply this technique to students with the problem even if the student is not a child anymore, but with a good example and guidance from the teacher, the students will show good improvement. But in the current pandemic era, students and teachers don’t have much time to implement that technique. The researcher tries to solve that problem with Google Text-to-Speech technology such as Google Text-to-Speech.

Google Text-to-Speech is a screen reader for the Android operating system that was created by Google. It enables apps to Reading Aloud (speak) content on the screen in a variety of languages. Google Text-to-Speech is already attached to an android phone which is a very common thing to have an android smartphone in today's era. Google Text-to-Speech's main function in android is to assist people with disabilities to operate the smartphone. With the usage of the technology that is more accurate at repetition than human the researcher try to replace the teacher role for repetition process of correcting mispronunciation by the students

 In a previous study, Google Text-to-Speech in the education world is also commonly used for students with a reading disability in the first language learner. The previous study by Andriani et al.,( 2020)compared the effect of synthetic speech with natural non-native speakers in listening comprehension. The result of the study shows that synthesized speech or Google Text-to-Speech gives better results than natural non-native speakers. Based on the research above, the researcher tries to use the google Text-to-Speech function to act as a replacement for the teacher role in reading aloud. With google Text-to-Speech Assistance, the researcher hopes it can give better results in students’ reading skills in a pandemic situation and save time for teachers to teach reading.

 Reading Aloud is a teaching reading technique that lets the teacher read the text loudly to make an example to the students on how to read the text correctly. The essential of Reading Aloud is to give examples then the students mimic the example. Reading Aloud in first language learners is very important to develop students reading and vocabulary skills at an early age, but in Foreign language learning Reading Aloud is a very effective way to teach reading regardless of the students’ age. Huang (2010) states that reading aloud is an important aspect of education for overall growth, and it serves a variety of purposes in English classes. By reading the text aloud students or teachers can hear the reading process so the students or teacher can correct the student's mistakes in reading if their teacher found them. L. Huang (2010) mentions that reading aloud has five functions. Practice pronunciation, improve oral English, get a deeper understanding of the reality of the text, strengthen the knowledge and improve the class atmosphere. those functions are very compatible with the way young learners learn the language.

Google Text-to-Speech is a screen reader application for the Android operating system developed by Google. It enables apps to Reading Aloud (say) the text on the screen in a variety of languages. Apps like Google Play Books for reading books aloud, Google Translate for reading aloud translations that provide helpful insight into word pronunciation, Google Talkback, and other spoken feedback accessibility-based applications, as well as third-party apps, may all employ Google Text-to-Speech. For each language, users must install voice data. Text-to-speech itself began its development in the 1980s and still developing now. Many researchers and educators found this technology useful for helping students with problems like reading disabilities. Mostly Text-to-Speech is used to assist students with disabilities, but just a little portion of educators use it to teach the student with non-disability. In recent years, many researchers like Y.-C. Huang & Liao (2015) start studying the use of text-to-speech in ESL or second language learner. Y.-C. Huang & Liao (2015) used Text-to-Speech to teach vocabulary and pronunciation of the spelling words used in the Spelling Bee competition. The study from Y.-C. Huang & Liao (2015) found that by using text-to-speech student has improved in spelling ability and feel motivated to self-study using text-to-speech.

Based on the theories mentioned earlier the researcher conduct the research entitled “**The effect of reading aloud technique with google text-to-speech assistance on students’ reading fluency in the pandemic era**” the overall purpose of this study is to examine the difference between the Reading Aloud technique with Google Text-to-Speech Assistance with the traditional method of teaching reading during a pandemic.

**Method**

This research was quantitative research using a quasi-experimental design with the chosen participant was the first semester students in the 2021-2022 academic year at STKIP PGRI Bangkalan who were taking a basic reading course which only 1 class but contained 50 students. The researcher uses the Systematic sampling method to divide one class which consists of 50 students into 2 groups containing 21 students in each group. This method is used because the class used for the experiment is only one class and the other reason is current class is still in the middle of the course, so the researcher uses this method to not interfere with the class condition and the method is currently the best because dividing odd and even is the fairest method without a look at gender or another factor affecting the chosen sample. The first group is the experimental group which is selected by selecting students with odd attendance numbers and the second group is the control group which is selected by selecting students with an even attendance number.

The instrument for collecting the data, the researcher used a test. The researcher used the Oral Reading Fluency assessment by DIBELS which was free to use yet powerful scoring instrument for testing reading fluency. Oral reading fluency (ORF) gave the student a reading passage that contain 250 words more or less. The student then reads the passage within one minute and then the teacher calculates the correct word per minute, ORF also considers others factor such as the expression, phrasing, smoothness, and pace which is very affecting in determine the reading fluency.

The timeline of the experimental group and control group are given simultaneously to not interfere with the course schedule. The total time to collect techniques is a 3-course meeting which each meeting held each week and every meeting will last 100 minutes following the course outline of the course. For experimental group, the first meeting will be Pre-test and followed by the first treatment, the second meeting will be the second treatment, and the last meeting will be the post-test. the control group will only do the pre-test and post-test. Because of the current condition of the pandemic, the meeting will be held online via online meeting or group chat. The treatment of both groups is based on the syllabus of the lecturer who lectures basic reading courses, but the researcher modified the treatment of the experimental group using the independent variable stated in the previous chapter.

For collecting the data, the experimental group did the pre-test, treatment 1, treatment 2, and post-test those conducted sequentially. The Control group only differ in the treatment, the control group was given traditional learning as before. In the last process of analyzing the data, the ANCOVA analysis method was chosen. The researcher used SPSS version 26 to analyze the data.

For the reliability and validity of DIBELS, many previous researchers had been researching the reliability of DIBELS. Just as same as Elliott et al., (2001)research titled “A reliability and validity study of the Dynamic Indicators of Basic Early Literacy Skills—Modified” their study on reliability test on Fluency assessment shows good results in reliability test. In interrater Reliability shows, the result is .90, test-retest shows a result of .93, and equivalent forms show a result of .87. from those results in Elliott, Lee, & Tollefson's (2001) study, the reliability of assessing Fluency with DIBELS is valid and reliable to measure reading fluency.

The researcher in this study make an assumption that the result will give improvement in teaching reading in online class during the pandemic era.

## Results and Discussion

The pre-test result of the experimental group of 18 students shows 96 correct words read per minute with 3 students scoring above 130 and 4 students under 80. The expression score on average is 1,8 points in 4 points maxes, the phrasing is 1.9, the smoothness is 2.2 and the pace is 2.4. which can be assumed that the overall average point is 2 which is below average. And for the control group, shows an average of 107 words per minute with 3 students reading above 150 words and 3 students reading below 80 words. Expression score on average is 1.9 points, phrasing is 2,2 points, smoothness is 2,6 points, the pace is 2,8 points and overall average is 2,4. Unlike the experimental group, the pre-test score from the control group was relatively higher in overall points.

The post-test result of the experimental group of 18 students shows good improvement. The average number of words per minute slightly improved to 113 words per minute. For the expression the score increased to 2.6 points, the phrasing increased to 2.5 points, the smoothness increased to 3.1 points, the pace increased to 3.2 points and for overall point is 2.9 points out of 4 points for the max score. And for the post-test of the control group, the average words per minute increased to 115 words per minute with 5 students reaching above 130 words and 3 students reaching below 80 words per minute. The expression increased to 2.6 points, phrasing increased to 2.7 points, smoothness increased to 3 points, and the pace increased to 3.1 points with overall points of 2.8 points which shows a very slight improvement. For the detailed score look at the appendix. The score above was the score in the ORF scoring format. For easier analysis using SPSS, the researcher needs to convert the score above into the same scoring format. Because the word correct score above is in the total format, the researcher needs to convert the word correct score into the same format as the other score. The researcher uses PRF target rate norms based on the test method used and the researcher will adjust some scoring scales to match the condition of EFL because the table that the researcher uses is based on first language learners.

**Table 1. Scoring scale**

|  |  |
| --- | --- |
| Score | Word corrects |
| 1 | 30-80 |
| 2 | 81-110 |
| 3 | 111-130 |
| 4 | 131- above |

The scoring scale the researcher uses is a 0-100 scale. To calculate the score of the test, the researcher uses this formula:

*Score = (word correct score + expression + phrasing + smoothness + pace):20 x 100*

The table below shows the summary data of the pre-test and post-test after it was converted into a 100-scale score. This procedure is done to ease the process of analyzing the data in the SPSS application. The table below is the result of the 100 range score

**Table 2. Pre-Test and Post-Test Experimental Group Score**

|  |  |  |  |
| --- | --- | --- | --- |
| Students | Pretest | Post test | Difference |
| S1 | 55 | 80 | 25 |
| S2 | 60 | 80 | 20 |
| S3 | 45 | 70 | 25 |
| S4 | 50 | 80 | 30 |
| S5 | 50 | 70 | 20 |
| S6 | 25 | 75 | 50 |
| S7 | 55 | 75 | 20 |
| S8 | 45 | 60 | 15 |
| S9 | 50 | 65 | 15 |
| S10 | 65 | 90 | 25 |
| S11 | 65 | 75 | 10 |
| S12 | 50 | 65 | 15 |
| S13 | 55 | 70 | 15 |
| S14 | 50 | 70 | 20 |
| S15 | 40 | 50 | 10 |
| S16 | 70 | 65 | -5 |
| S17 | 25 | 45 | 20 |
| S18 | 85 | 95 | 10 |

**Table 3. Pre-Test and Post-Test Control Group Score**

|  |  |  |  |
| --- | --- | --- | --- |
| Students | Pretest | Post test | Difference |
| S1 | 55 | 80 | 25 |
| S2 | 60 | 65 | 5 |
| S3 | 55 | 70 | 15 |
| S4 | 60 | 65 | 5 |
| S5 | 35 | 55 | 20 |
| S6 | 80 | 80 | 0 |
| S7 | 60 | 75 | 15 |
| S8 | 55 | 70 | 15 |
| S9 | 65 | 85 | 20 |
| S10 | 75 | 90 | 15 |
| S11 | 25 | 40 | 15 |
| S12 | 50 | 45 | -5 |
| S13 | 75 | 85 | 10 |
| S14 | 75 | 80 | 5 |
| S15 | 60 | 70 | 10 |
| S16 | 40 | 65 | 25 |
| S17 | 55 | 60 | 5 |
| S18 | 80 | 85 | 5 |

After conducting the assumption test the analysis with ANCOVA is conducted the result from Table 19 shows that the experimental group's mean result is higher than the control group with a 5.339 difference point. The experimental group's lower bound result is 69.151 while the lower bound from the control group is 63.812 which is shown in the lower bound result experimental group shows a difference. Not only the lower bound score, but the upper bound score in the control group also shows a difference. The experimental group shows 77.577 points while the control group shows 72.238 points. The mean difference between the group is 5.339, and the standard deviation error is 2.966 which indicates the score between students in each group is spread widely. And the most important value is the “sig.” value, the “sig.” value in this table shows 0.081 which is higher than the significance level that is 0.05. this value indicates that the experimental group and control group scores are not significant.

The result from the analyzed data with SPSS different with the researcher assumption. The result shows a slightly better result but it’s not significant. The slight significant improvement almost reaches the significant value to proof for the theory from L. Huang (2010) that reading aloud can significantly increase the process of learning reading at any age by correcting the spoken word and google text to speech act as the teacher substitute proving that Y.-C. Huang & Liao (2015) method to use google text to speech assistant to correct pronunciation of the word is effective even at the college level.

The result gives an impact on the practice of pronunciation, improves oral English, and strengthens the knowledge. The students got many times to practice pronunciation by repeating after google text-to-speech. The student's oral English and knowledge were improved by looking at the score the student achieve on the test the researcher gave. The other 2 functions stated by L. Huang (2010) are getting a deeper understanding and improving the classroom atmosphere was not achieved because google-text-to-speech did not have a unique expression like a human so the deeper understanding is not achieved and the research was conducted online so the classroom atmosphere was not determined. But the overall result of the improvement affected the beginner students just as stated by L. Huang (2010) that Reading Aloud in first language learners is very important to develop students reading and vocabulary skills at an early age. It was also applied in English as a foreign learner.

 In brief, the researcher can state based on the data above that the reading aloud technique with google text-to-speech assistant gives a slight significant effect on the reading fluency of the student in STKIP PGRI Bangkalan academic year 2021/2022. Even if the result is not significant the point where the reading aloud effectively shows the error in student reading and then corrects its error with google text-to-speech assistant as a reference to the correct pronunciation word is a good point to do further research for reading. By using those steps, the student can quickly learn what they need to correct without much intervention from the teacher, but that it is not meant teacher roles are not important. Teachers still can give guidance about the material and what skills to be improved for each student.

The suggestion for the next research. For the setting up process, it is recommended to do the process face to face for easy support if the student encounter problem or even better if the school/college provides the same device for each student. For the material, the researcher must find the right sample for the research to achieve maximum results with pure results in measuring students’ fluency. Based on the result data of each student, the student who reaches a high score in the pre-test shows only a slight improvement. It can be assumed that the assistance of Text-to-speech is optimally used for beginner to intermediate learners. And the last suggestion is to make sure the lecturer or the main teacher gives a lecture and if needed the researcher can collaborate in turn for the process because the student mostly listen to teacher/lecturer instruction than other people they newly know.

## Conclusion

Based on the data in the previous chapter, the Control Group's mean score was 68.025 and the Experimental Group's 73.364, and with a significant value is 0.081 which is over 0.05 it can be said that the read-aloud with google text-to-speech assistant has not a significant effect on students reading fluency, but still has good improvement, especially in beginner learner.

Even the result is not significant, the research in teaching with technology must be conducted because in current era technology still developing. The teacher must be proactive in using technology to teach the students.

## References

Aji, R. H. S. (2020). Dampak COVID-19 pada pendidikan di indonesia: Sekolah, keterampilan, dan proses pembelajaran. *Jurnal Sosial & Budaya Syar-i*, *7*(5), 395–402.

Andriani, T. N., Herawati, Y. W., & Sulistyo, T. (2020). *Text-to-Speech Application for Foreign Language Learner’Listening Comprehension in Indonesia*.

Carr, K., Kendal, R. L., & Flynn, E. G. (2015). Imitate or innovate? Children’s innovation is influenced by the efficacy of observed behaviour. *Cognition*, *142*, 322–332.

Elliott, J., Lee, S. W., & Tollefson, N. (2001). A reliability and validity study of the dynamic indicators of basic early literacy skills-modified. *School Psychology Review*, *30*(1). https://doi.org/10.1080/02796015.2001.12086099

Huang, L. (2010). Reading aloud in the foreign language teaching. *Asian Social Science*, *6*(4), 148.

Huang, Y.-C., & Liao, L.-C. (2015). A Study of Text-to-Speech (TTS) in Children’s English Learning. *Teaching English with Technology*, *15*(1), 14–30.

Lyon, G. R. (1998). Why reading is not a natural process. *Educational Leadership*, *55*(6), 14–18.

Rachmawati, I. (2016). Learning Strategies Used by The British Institute for Upper Intermediate and Advanced Students. *NOBEL: Journal of Literature and Language Teaching*, *7*(2), 155–162.

Trelease, J. (2013). *The read-aloud handbook*. Penguin.