THE EFFECT OF USING DIGITAL STORYTELLING ON STUDENTS' LISTENING COMPREHENSION

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Abstract

This study was a quasi-experimental study using a post-test only design. The objective of this study was to investigate whether digital storytelling had a discernible impact on the listening comprehension of eleventh grade EFL students. The study population consisted of eight classes of eleventh-grade students at a senior high school in Kencong in the 2023/2024 academic year. The data were collected through a listening test. The data was subjected to statistical analysis using the t-test with the SPSS software. The result demonstrated that the mean score of the experimental group (80.00) was higher than that of the control group (63.00). The two-tailed test yielded a value of 0.000, which was lower than the 0.05 significance level. The result indicated that the use of digital storytelling had a significant effect on the listening comprehension of eleventh grade students at one of the senior high schools in Kencong in the 2023/2024 academic year. It is therefore recommended that English teachers, students and future researchers make use of the result of this research as a reference.

Keywords: Digital Storytelling; Listening Comprehension

Introduction

One of the four language skills that language learners must master is listening. This is a receptive skill, as it involves responding to language rather than producing it (Aguilera & Filologia, 2012). In other words, listening is the ability to identify and understand what another person is saying. Listening is central to first and second language learning because it is closely related to the development of other skills (Vandergrift, 2007). Consequently, listening is the initial skill that language learners must cultivate before they can progress to the acquisition of other skills. In essence, because listening abilities facilitate the advancement of other language abilities, they cannot be overlooked. It is a crucial skill that language learners must cultivate from the outset of their language learning journey.

Listening is a fundamental linguistic competence that is of paramount importance in the context of communication. It is the most frequently employed skill in everyday life and is of great importance in language learning and teaching. Attentive listening is a frequently used and essential skill in the process of acquiring knowledge. The capacity to comprehend another individual's discourse by observing their vocabulary and communicative style is regarded as a fundamental skill. As Permatasari (2013) posits, active listening can enhance comprehension of verbal communication by employing vocabulary, syntax, context and prior knowledge. It is of great importance to actively engage with the speaker's message and make an effort to understand its meaning.

Tyagi (2013) proposes that the process of listening can be divided into five stages: hearing, understanding, remembering, evaluating and responding. The act of hearing is the physical response to sound waves and requires the listener to be attentive in order to listen effectively. The process of understanding involves the analysis of symbols, such as words, sounds and sights, in order to comprehend their meaning and context. It is of the utmost importance to remember a message in order to retain its significance. The final stage of the listening process, evaluation, involves the critical analysis of evidence, the differentiation between fact and opinion, and the identification of bias or prejudice. It is important to note that responding is an essential aspect of the listening process. This allows the speaker to assess the effectiveness of their message delivery, and it is crucial for successful listening to provide feedback. Feedback is an essential component of the communication process, as it ensures understanding and enables speakers to assess their effectiveness.

A number of teaching media are currently available. One such example is digital stories, which have been demonstrated to be highly effective in the context of teaching listening skills. Digital stories, a method of representing narratives through technology, have been demonstrated to be an effective tool for developing students' listening skills (Ramirez & Alonso, 2007). Akdamar (2021) notes that the incorporation of technology in teaching and learning processes has led to an increased utilization of digital storytelling, which has been demonstrated to enhance learners' listening abilities. The use of digital storytelling has been demonstrated to significantly enhance learners' listening abilities. Digital storytelling can be defined as the use of computers and multimedia tools such as graphics, video, images, photographs, music, voice and text to tell personal stories and histories, or stories intended to inform or instruct (Chung, 2007). It can be posited that digital storytelling is a medium for

the presentation of narratives through the use of computers and multimedia, including video, images, music, voice-overs and text.

Digital storytelling is a contemporary approach to narrative that integrates technology with conventional storytelling techniques. In the past, the narrator was the sole arbiter of the delivery of the story, sound effects and physical expressions. Hull (2005) notes that digital stories represent a novel and engaging application of educational technology that can be readily integrated into the classroom if designed, developed, and presented in an effective manner. They represent the pinnacle of multimedia, encompassing still images, animation, video clips, audio commentary and background music. It can be employed for educational purposes, particularly for the instruction of auditory comprehension. Ramirez and Alonso (2007) demonstrated that the utilization of multimedia tools, including images, videos and audio, can facilitate the acquisition of a new language by providing a more realistic learning environment. The utilization of digital stories represents an advantageous approach to the acquisition of auditory information through the application of innovative technologies.

Some researchers have studied how digital storytelling (DST) helps people listen better. Verdugo and Belmonte (2007) looked at how DST helps young people learn Spanish. They found that DST helps people understand what they hear. In a study with ninth graders in Jordan, Omoush and Alslaiti (2022) looked at how oral and digital storytelling helped students learn in groups. The study found that students performed better on listening tasks after using oral and digital storytelling. Other researchers ((Tabieh, et al., 2020; Cj, et al., 2018; Basyoni, et al., 2020) looked at how modern technology affects teaching and learning. They also looked at how technology can be used with the curriculum. Different studies have found that technology affects how students and teachers learn. The three researchers carried out research from primary to secondary school level using digital storytelling. The results showed that digital storytelling provides a relaxed learning atmosphere in the classroom. Teachers can use digital storytelling to help students practice critical listening skills.

The evidence presented above indicates that the utilisation of storytelling in listening with narrative text using an experimental design is relatively rare. To address this gap in the literature, we employed a quantitative methodology to investigate the impact of digital storytelling on eleventh-grade students'

listening comprehension of narrative text at one of the senior high schools in Kencong.

Methodology

The research design employed in this study was an experimental research design. The research methodology, which is based on the positivist paradigm, is employed to investigate specific populations or collections of data through the utilization of research tools. The population of this research comprised eight classes of eleventh grade students. The classes were selected using cluster random sampling based on the results of the homogeneity test. To ascertain the homogeneity of the population, the Levene test in SPSS was employed to determine whether the population exhibited homogeneity The results of the homogeneity test were subjected to analysis of variance (ANOVA). The results of the homogeneity test indicated that the population was homogeneous. Consequently, in order to ascertain which class would be allocated to the experimental group and which to the control group, the researcher randomly selected two classes by means of a lottery.

In this research, a listening test constituted the primary data set. A listening test was employed as the primary data collection instrument, as it allowed for the measurement of students' listening comprehension. The test in question measured the students' listening comprehension of parts of a narrative text. This encompasses the general structure, purpose and features. The post-test was the listening test administered to the experimental and control groups following the conclusion of the treatment. The objective was to ascertain whether there were discernible differences in listening comprehension between the control and experimental groups.

Prior to the administration of the listening post-test, the researcher conducted a trial test to ascertain the test's validity. Djiwandono (1996) posits that the purpose of the tryout test is to ascertain the validity, reliability and difficulty index of the test. In this research, a preliminary trial was conducted in one of the available classes. Consequently, the class utilized in this preliminary trial was not included in the participants of this study. This research employs content validity as a means of determining the test's validity. Consequently, the test was constructed based on the listening material included in the Merdeka Curriculum. Furthermore, the reliability of the test was determined using the

Spearman-Brown split-half method in SPSS. Once the primary data from the listening test had been gathered, it was subjected to statistical analysis using the t-test formula in order to ascertain whether the use of digital storytelling in the teaching of listening had a discernible impact on the listening comprehension of eleventh grade students at One of the senior high schools in Kencong.

Results

Before presenting the results of the post-test analysis and hypothesis verification, a number of test results were presented, including those from results of homogeneity tests, the validity of the test, difficulty index results, an analysis of tryout test results, interviews and documentation.

The homogeneity test was conducted on the 11th and 12th of October 2023. The test was administered to eight classes of the 11th grade students at one of the senior high schools in Jember. The objective of the test was to determine the homogeneity of the population by administering a listening test. The listening tests were analysed using one-way ANOVA with the SPSS computing system, as described below.

Tabel 4. 1 The Output of One-Way ANOVA of Homogeneity Test

ANOVA					
	Sum of Square	df	Mean Square	F	Sig.
Between Group	4094.344	7	584.906	1.124	.348
Within Group	142640.762	274	520.587		
Total	146735.106	281			

The aforementioned calculation yielded a significant column value of 0.348, which was higher than 0.05. This indicated that the null hypothesis (Ho) was accepted and the alternative hypothesis (Ha) was rejected. This indicated that the population of eighth-grade students was homogeneous, exhibiting no significant differences in ability. Consequently, two sample classes were selected at random from the population using a lottery system to determine the experimental and control groups. The lottery determined that two classes

would be the respondents of this research: class XI 4 was selected as the experimental group and class XI 1 as the control group.

The students in the control group received the same materials about the narrative texts as those in the experimental group. However, the control group was taught about a narrative text without video storytelling. For the control group, the researcher gave the explanation about the narrative text . The explanation was about the general structure, characteristics, elements of the narrative text. After the explanation, the researcher provided a narrative text and asked the students to listen to it individually. Then the researcher gave the students fill-in-the-blank questions about a narrative text. After that, the researcher asked the students what were the difficulties of the narrative text material.

Concering with the validity of the test, content validity was established in this research. The test was arranged based on the Curriculum Merdeka. Furthermore, the test items were constructed based on indicators of the listening. The test was also consulted to English teachers to know whether the test was suitable with the level of the students or not. Therefore, it could be stated that the test had the content validity.

The difficulty index analysis of the test items was used to categorize whether the test was included as: easy, fair, or difficult. The results of the difficulty index analysis of the test items could be known by counting the number of correct answers divided by the total number of students doing the test.

In total, 35 numbers were presented to participants in the form of a choose-fill-in-the-blank test. The try-out test was administered in a period of 50 minutes. The difficulty index of the test items was determined to range from 0.13 to 1, based on the results of the difficulty index. The results indicated that 12 test items were classified as easy. The numbers in question were 7, 8, 11, 12, 13, 17, 20, 23, 24, 25, 28, and 29. Furthermore, three test items, numbers 9, 14, and 27, were classified as difficult, while the remaining items were categorized as fair. The researcher proceeded to eliminate 15 numbers of the test items that had been categorised as easy and difficult. Consequently, 20 test items were classified as fair, and the researcher employed these 20 items to administer the post-test. With regard to the scoring of the test, the total scores for the test items were 100. The correct score was divided by the number of test items and multiplied by 100.

To determine the reliability coefficient of the tryout test given in class XI 2, the researcher applied the split-half technique in estimating the reliability coefficient value. The researcher marked (X) for odd numbers and (Y) for even numbers (as available in appendix G and appendix H on page 58 and page 60. The correlation of even numbers (rxy) obtained was entered into the Spearman-Brown formula to obtain the reliability of the test. Referring to the calculation, the reliability coefficient of the whole test is 0,86, it can be concluded that the test items were reliable because the results were considered sufficient based on r_{xy} scale (Djiwandono, 1996). Therefore, the researcher did not need to make changes to the test items because they were considered reliable tests.

The interview was conducted on July 20, 2023 with the English teacher of grade XI of One of the senior high schools in Kencong . According to the teacher, English lessons were taught twice a week. The textbook used for grade XI was "Bahasa Inggris Tingkat Lanjut". The teacher usually taught listening to students by using audio record text and then asksed the students to listen the audio record. Regarding the students' difficulties, the teacher said that many students still had difficulty in controling the speed of delivery, or how fast the speakers spoke.

Documentation in this research was used to obtain supporting data on the list of students in class XI of One of the senior high schools in Kencong and the names of the participants, the class list were XI 1, XI 2, XI 3, XI 4, XI 5, XI 8,

Group Statistics					
	Class	N	Mean	Std Deviation	Standard Error Mean
Score	XI 1	35	63.00	18.077	3.056
	XI 4	36	80.00	26.022	4.337

XI 9, XI 10. The number of students in the class was 282. The distribution of students is shown in Table 4.2 below. The participants of the experimental group, class XI 4, has 36 students, while the control group, class XI 1, has 35 students.

Tabel 4. 2 The Output of Group Statistic of Post Test

The primary data were the scores of listening post-test which were given to the experimental group and the control group. The researcher administered the post-test on October 26th, 2023 to experimental group (XI 4) and October 26th, 2023 to control group (XI 1) after giving treatments to the two groups as the respondents. The scores of both groups were used as the data to find the effect of using digital storytelling for experimental group and using storytelling without video for the control group. The researcher analyzed the students' scores of the listening post-test by using Independent sample t-test in the SPSS computing system to know the mean difference between the two groups. The following is the result of the post-test analysis:

Tabel 4. 3 The Output of the Independent Sample T-Test of Post-Test

F	Sig	t	df	Sig 2-tailed)	Mean Difference	Std Error Difference	95% Confidence	
2.875	.094	-3.188	69	.002	-17.000	5.332	-27.637	-6.363
		-3.204	62.513	.002	-17.000	5.332	-27.637	-6.397

The table above shows the calculation of the post-test value and its standard deviation. The mean score of the experimental group was 80.00 with a standard deviation of 26.022 while the mean score of the control group was 63.00 with a standard deviation of 18.077. the standard error mean of each group is 4.337 and 3.056. the result of the post-test value analysis showed that mean score of the experimental group was higher than the control group.

Based on the result of the independent samples t-test in SPSS above, it was found that the degree of freedom (df) of the post-test is 69. The value of the significant column of Levene's test was 0.094. This means that it was higher than the significant level (0.05). The value of sig (2-tailed) was 0.02 and it was less than 0.05. It could be seen that there was a significant difference between the experimental group and the control group. In other words, there was a

significant effect of using digital storytelling on the listening comprehension of eleventh grade students at one of the senior high schools in Kencong.

Based on the result of the independent sample t-test on SPSS program, the significant value (2-tailed) of the t-test analysis was 0.02 and it was less than 0.05 (0.02 < 0.005). Therefore, it could be concluded that the alternative hypothesis stating that "There is a significant effect of using Digital Storytelling on the eleventh-grade students' listening comprehension at One of the senior high schools in Kencong " was accepted. Therefore, it could be claimed that the use of digital storytelling in teaching listening significantly affected the students' listening comprehension.

Discussion

The results of the data analysis in this study, conducted using the statistical software package SPSS, indicated that the use of digital storytelling had a significant effect on the listening learning of the eleventh grade students at one of the senior high schools in Kencong . The post-test scores demonstrated that the students in the experimental group achieved a higher and more favorable mean score than the control group. This outcome can be attributed to the experimental group's engagement with the learning process through the use of video digital storytelling. The researcher observed that the students demonstrated greater engagement and interest in the learning process. This is consistent with the findings of Fajariyah & Madya (2013), who posit that the utilization of digital media can facilitate the listening process within the classroom, thereby enhancing students' listening abilities. Secondly, the incorporation of images and videos into the listening phase was found to enhance students' engagement, facilitate their comprehension of the subject matter, and motivate them to learn. Thirdly, this medium engenders a positive emotional state in students, who will consequently participate actively in listening lessons. They will also be able to recognize patterns of stress and intonation.

The result of this study is consistent with those of previous studies. The findings of Omoush and Alslaiti (2022) indicated a statistically significant difference in the average performance of students in all key listening skills as a result of the implementation of oral storytelling and digital storytelling strategies. In a study conducted by Sandaran (2013), 30 primary school students in Year 3 (aged 9 years) participated in an 8-week listening and viewing

exercise involving 8 animations of stories. The results indicated that 23 of the 30 students (76.7%) achieved a score of 50% or above. Of the students who participated in the study, 10 obtained a B grade, while three students achieved an A. The results demonstrated enhanced listening comprehension outcomes when using digital stories, based on the findings from two attempts.

This study result was also supported by some other previous studies. Tabieh, et al (2020) showed that using DST helps students learn active listening and creative thinking. The research found that the Digital Storytelling strategy helps students think of ideas through different activities. It helps them think in new ways and create their own versions of the story characters, settings and endings. Moreover, it lets them take part in the listening activity, making them more engaged in the teaching-learning process. This is a modern strategy that fits their technological competencies as the 21st-century generation. Cj, Admowardo and Weda (2018) conducted a study using digital storytelling in classes eight-grade in SMPN 4 Parepare. The study showed that the students in the experimental group did better than the students in the control group. The difference in the students' scores was statistically significant. It can be seen from the students' scores in the pre-test and post-test. The use of DST in teaching listening showed that the students were interested in learning after the writer taught them using DST. Their interest is shown in their open-ended questions.

Conclusion

The results of the data analysis, hypothesis testing and discussion of the research findings presented in the previous chapter indicate that there was a statistically significant effect of using digital storytelling on the listening comprehension of eleventh grade students at One of the senior high schools in Kencong . The results of the T-test analysis indicated a significant value (two-tailed) of 0.02, which was less than 0.05 (0.02 < 0.005). The mean score of the experimental group (80.00) was higher than the mean score of the control group (63.00), suggesting a significant mean difference between the two groups. In other words, digital storytelling has a significant effect on students' listening comprehension.

The researcher suggests that the following people should be made aware of the followings. It can help to attract students' attention and increase their motivation to learn listening. Therefore, it is recommended that the English teachers of one of the senior high schools in Kencong use digital storytelling as a medium to teach listening comprehension. It is therefore recommended that

students utilize these media in order to enhance their listening comprehension abilities. The result of this study can be used as a reference for further research on the same topic using different research areas and designs, such as classroom action research to improve students' listening comprehension learning outcomes using digital storytelling.

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