

Implementation of The Use of Artificial Intelligent (AI) Based Animation Media to Enhance Vocabulary Lintening Skills of Elementary School Student

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Abstract. This study was conducted to determine the effectiveness of Artificial Intelligent-based animation media in listening skills for Arabic learning vocabulary in elementary school students. This study used mixed methods, the population amounted to 115 students, the sample amounted to 34 students. The data collection technique is observation with classroom teaching techniques, interview questions given to students, pretest and post-test conducted to determine the effect of animated videos on vocabulary listening skills, data analysis using the concept of Miles and Huberman and Paired Sample T-Test. Research results a) The learning process was carried out for 4 meetings beginning with prayer, the teacher checked attendance and asked how the students were doing, gave apperception, reviewed the previous material, delivered the material using the discussion method with a loud voice. Then play the animated video, students listen to the video for 3 times and write the vocabulary on the board, the last stage students mention the vocabulary aloud. b) The effectiveness of using animated videos on listening skills is obtained from the Paired Sample T-Test value, the sig. (2-tailed) is $0.000 < 0.05$, if the Sig. (2-tailed) < 0.05 there is a significant difference between pretest and posttest data. It is concluded that there is a significant difference between Pretest and Posttest data, significantly there is an effect of using animated videos on improving vocabulary listening skills in Arabic lessons.

INTRODUCTION

In this modern era, technology is very helpful for humans, especially in learning Arabic, Awareness of the important role of technology in education to enhance the civilization of a country will ultimately encourage the emergence of innovations and technologies that support the efficiency of the learning process (Tolinggi, 2021). the learning process will not attract students' attention if the system used during learning is less interesting. Of course, this cannot be separated from the design and planning that makes learning fun (Wulandari, Salsabila, Cahyani, Nurazizah, & Ulfiah, 2023).

Arabic learning technology will be fun when a teacher designs and designs learning media as interesting as possible so that students when learning is not boring (Azhar, Wahyudi, Promadi, & Masrun, 2023). The success of a teacher is to make media that is

interesting, creative and fun, especially for learning Arabic (Imaniyah & Al Manar, 2022). Learning Arabic is very important, especially learning mufrodāt, which is one of the elements that must be owned by foreign language learners (Ekawati & Arifin, 2022). Mufrodāt is one of the most important keys to being able to speak Arabic fluently and facilitate communication in the language. Language of course cannot be separated from vocabulary learning, in learning Arabic vocabulary must start from hijaiyah letters (Aulia, Nasrun, Iskandi, & Rizki, 2021).

The use of media in the learning process is still a hot theme discussed by Arabic language observers. Not because the existing media have been widely used in every Arabic language learning, but the reality is not so, Arabic language learning in Indonesia does not use much media as a tool to convey material to students. The main factor of media not being used in the learning process is that teachers do not have enough time to prepare learning media, because teachers have many activities besides teaching in class, this is an obstacle in preparing learning media. Besides that, teachers also do not have the skills and knowledge in choosing media that are suitable for the material to be taught in class.

Learning without media causes students' interest and enthusiasm to decrease, this makes the negative perception of learning Arabic even higher, namely learning Arabic is difficult. This is an important problem that should be considered by every Arabic language observer. If it does not get special attention, it is feared that no one wants to learn Arabic.

Looking at the branch of learning media theory, we amend the kinds of media, namely audio media, audiovisual media, visual media, 3D-based media, and internet-based media. When viewed from the distribution, the variety of media use in Arabic language learning is still very limited, namely the majority of teachers use a variety of audiovisual media and 3D-based media. An example of the use of audiovisual media is the use of WeTube videos. An example of 3D media is the use of ice breaking and games. There is a fact that occurs in the field, that the WeTube video media used by teachers, the majority are made by others uploaded on WeTube, some teachers only utilize the videos available to support learning in the classroom. Teachers do not deliberately make videos that are tailored to the textbook and use them in class.

In the research that has been done, researchers provide solutions on how to make interesting videos for learning. The quality of the videos offered here has certainly been adjusted to the level of technological development in the current era, especially now that the Artificial Intelligent (AI) era is very commonly used. AI is very helpful for teachers in making video media, apart from being fast, AI has also provided features that make it very easy for users to make videos as needed, only requiring a few steps without the need to think and spend more effort.

As it should be, learning will not be separated from problems. Based on the results of interviews and observations conducted by researcher to the third grade Arabic language teacher at Muhammadiyah Mrisi Elementary School, several learning problems were found in class III. The first problem is the lack of student interest in learning Arabic (Takdir, 2020). The factor that causes students' lack of interest in learning Arabic is that students still experience difficulties and think that Arabic is a difficult language to learn so that it makes students' interest in learning Arabic low (Yusvida, 2020). The second problem is the lack of learning media where the teacher only uses book and blackboard media so that the classroom atmosphere becomes boring for students. The last problem is that most

thirdgrade students still cannot read iqro' which makes it difficult to follow Arabic language learning (Imroatun, 2017), because they cannot read mufrodat and learning material provided by the teacher (Dliyaulhaq, 2024).

The lack of mastery of mufrodat in Arabic language learning is due to the lack of learning media which still uses book and blackboard media (Suryandaru, 2020), teachers still use conventional methods and have not used varied methods, that can eliminate students' boredom when learning Arabic mufrodat. As well as low imitation skills the problem of passive learning mufrodat.

Before the researcher moves his research process to the next level, the researcher certainly has several previous research foundations that are used as a reference in data collection and analysis, so that there is no repetitive research. adapapun some of the literature that is used as a strong basis is as follows:

Research with the title: "The Effectiveness of the Use of Animated Media on Mufrodat Mastery of VII Grade Students of MTs Ma'arif NU 2 Cilongok, Centra Java, Indonesia." in year 2022 by Nurul Dewi Asriani. This research uses a quantitative approach. The equation with this study discusses the use of animated media on the mastery of Arabic mufrodat, The difference is that this study discusses the use of cartoon media to increase Vocabulary listening skills Mufrodat in the researcher. based on the results of this study from a treatment before using animated media on mastery of mufrodat While the average value before being given treatment is 47.3 and for the average value after being given treatment is 72.2. This shows that the average value before being given treatment is lower than the average after being given treatment. (Asriani, 2022).

Research with the title: "Animated Video-Based Vocabulary listening skills Learning Media for Madrasah Ibtidaiyah Students in Indonesia" 2021 by Ulfa Nur Afifah (Afifah 2021) this research uses a qualitative approach. The similarity of this study discusses the learning media for Vocabulary listening skills based on animated videos for Madrasah Ibtidaiyah students, while the difference is that this study discusses the use of cartoon media to increase Vocabulary listening skills Mufrodat in the researcher. Based on the results of this study on animated video-based vocabulary listening skills' learning media for madrasa ibtidaiyah students, namely: Media is everything that is used as a means of conveying information between two parties to facilitate the process of conveying information in the form of living or non-living objects. Media can also be used by teachers to facilitate students in learning vocabulary listening skills. Vocabulary listening skills' is a person's ability to digest or understand words or sentences spoken by certain speech partners or media. The use of animated videos in learning can attract students' attention to the material presented by the teacher (Afifah, 2021).

Research with the Title:" Utilization of Audiovisual Media (Arabic Language Films) in improving Arabic Language Education Students' istima" in 2021 by Husnaeni, Akmal, Amran AR. This research uses a quantitative approach. The similarity with this study discusses the Utilization of Audiovisual Media (Arabic Language Films) in improving istima, while the difference is that this study applies Cartoon media to improve Vocabulary listening skills Mufrodat in the researcher. Based on the results of this study, a simple regression analysis that has been carried out through the SPSS 26 program, the results show that of the 53 respondents in the Arabic Language Education study program at IAI Muhammadiyah Sinjai in the coefficients table, it is known that the t-count of Arabic film

media significantly affects the ability of istima' of Arabic Language Education students at IAI Muhammadiyah Sinjai, while at a probability value of $0.000 < 0.05$, the Arabic film media has an influence on the vocabulary listening skills of Arabic Language Education students at IAI Muhammadiyah Sinjai, Sulawesi, Indonesia. (Husnaeni, Akmal, & Amran, 2021).

If we map the differences between this research and previous research, the results appear in the table below:

Table 1. Comparison of this title research with previous research

NO	Scopes	Scope of The Title Research	Related Research I	Related Research II	Related Research III
1.	Independet Variable	Animation Video	Animation Video	Animation Video	Audiovisual Media
2.	Dependet Variable	Vocabulary Listening Skill	Listening Skill	Listening Skill	Listening Skill
3.	Place of Research	Elementary School Students	Junior High School Students	Elementary School Students	College Students
4.	Analysis Method	Mixed Method	Quantitative	Qualitative	Quantitative

METODOLOGY

This study uses a mixed method, which is a research approach that combines quantitative and qualitative research. According to Sugiyono (2016), mixed method research is a research method that combines qualitative and quantitative research methods in one research activity to obtain complete, valid, and reliable data, more reliable and objective. The purpose of this study is to find out how to make animated videos from AI, to find out how to practice using animated videos in class, and to find out how far the effect of animated videos on vocabulary listening skills.

The population of this study is all students in grades I-VI who are studying Arabic, totaling 115 students of Muhammadiyah Mrisi Elementary School, Indonesia. The sample of this study was all grade 2 students totaling 17 students and grade 3 totaling 17 students so the total sample of all grade 2 and 3 students amounted to 34 people, the reason the researcher took this sample was first, grade II and III Animation media is suitable to be applied where students are still in the beginning stages of learning Arabic and begin to be trained for vocabulary listening skills Animation media is less effective in use in grades IV and V, while VI students begin to focus on carrying out exams.

The data collection methods used in this research are divided into 2 parts, qualitative and quantitative techniques. Qualitative data collection techniques used to observe school conditions and activities or activities carried out by students at the research location. Observation was also used to find out how the practice of using animated videos in the classroom. Then data collection using guided interviews, guided interviews conducted to Arabic language teachers, because researchers want to find in-depth data related to methods, animated video media used by teachers in the Arabic language learning process,

while interviews with students aim to ascertain whether learning using animated video media can help students in improving their ability to listen to vocabulary. Qualitative data collection techniques using tests, Pretest is a test given before applying animated media, this test is done before learning, the goal is to find out the initial competence and how much we know about the material. After giving the Pretest, the treatment of learning using animated videos was continued, the learning was carried out for 4 meetings. after 4 meetings, students were given a posttest in the form of an objective test on the ability to listen to students' Arabic vocabulary. Posttest is conducted after learning. The purpose is to determine the final competence and to find out the effect of using animated videos on vocabulary listening skills.

Qualitative data analysis is carried out interactively and continues continuously until completion, so that the data is saturated. Activities in data analysis according to Miles and Huberman include data presentation (Data Display), data reduction (Data Reduction), data verification (Data verification) and conclusion drawing (Conclusion Drawing). Quantitative Data Analysis using the T-Test technique is used to compare two samples or population averages and is also useful for knowing whether the difference between two samples or population averages is significant or not. In this study, researcher wanted to know the difference in learning outcomes of 2 different samples, the sample scores from the experimental class and the scores from the control class. The formula for calculating the T-Test is below (Jenn, 2020), but researcher prefer to analyze the T-Test using the 26th version of SPSS (Statistical Package for The Social Science) application. Hypothesis testing for the t-test used in this study is as follows (Sen, 2020):

(H0: $\mu_1 = \mu_2$)	$t = \frac{\bar{x}_d - \mu_d}{\left(\frac{s_d}{\sqrt{n}}\right)}, \quad df = n - 1$	in Arabic language
(Ha: $\mu_1 \neq \mu_2$)		language learning

The hypothesis criteria are if $-t \leq t$ (dk) = (k-1) and a si

	\bar{x}_d : sample mean difference	: applicable testing
	μ : population mean difference	degrees of freedom
	s : sample difference standard deviation	
	n : sample size	

DISCUSSION

In this sub-theme, we will put forward several discussions, summarized in 3 major points, the explanation is as follows:

1. Steps to create an Artificial Intelligent-based animation video

Creating a 3D animation movie used to be difficult and time-consuming, creators needed to use complicated software, have multiple computers, and spend a lot of time rendering the final video, but now with the use of AI, creators can create a complete 3D animation movie using any computer in just a few hours. The time required to create an animated movie is only a few hours, the way to create a movie like this is also very easy. creators can create 3D animation in just three parts:

1.1 The first part is creating a scene, in this part a “creator” must go through the following three steps, they are:

1.1.1 The first step

If the story for the movie is already available, then this step is not necessary, but if the movie story is not available, then it can use an AI Website to write a movie story through the website Gravitywrite (Gravitywrite, 2014). The flow starts by clicking “Start” then click “write AI movie script” then fill in the story details and click create content (Learner, 2023). Once we have the script, it is time to turn it into an animated movie, but there is no AI website to generate videos directly, creators can get images using AI and then turn them into videos, if it is successful, creators can move on to the second step.

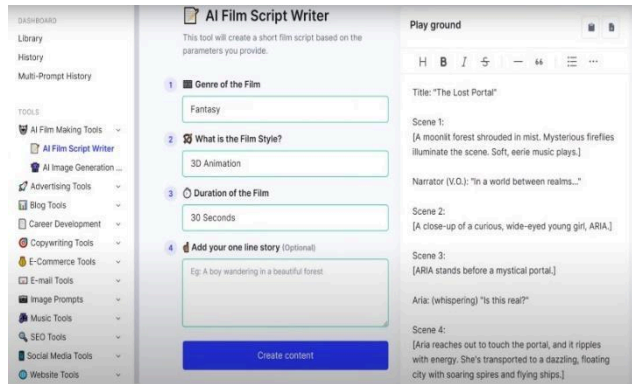


Fig. 1. A view of the Gravitywrite website

1.1.2 The second step

This step is used to get a picture of the story script, for which the Midjourney website is used (Midjourney, 2024), but this website is paid, if it's not paid, creators can try some other websites like Clipdrop (Clipdrop, 2024) and Leonardo (Leonardoai, 2024), that makes it possible to produce the desired image (Learner, 2023). This will help generate images for the script, by entering a prompt here, so the creator can type or imagine the prompt in Mid Journey, if the images have been generated, then convert the images into video, after that proceed to the third step.

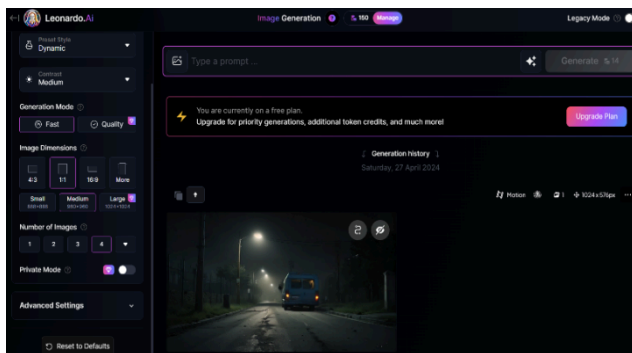


Fig. 2. A view of the Leonardoai website

1.1.3 The third step

is to turn an image into a video. To do so, creators can use a free website called Runwayml (Runwayml, 2024), first log in with a Google account, then the creator

will be directed to the page to turn the image into a video, here the creator can upload his own animated image generated from www.midjourney.com, to download this video just click the “download” icon. (Global, 2023).

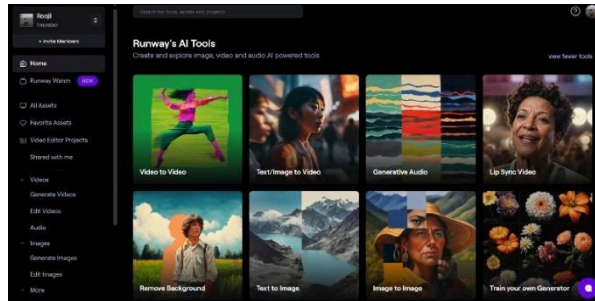


Fig. 3. A view of the Runwayml website

1.1.4 *The fourth step*

It is the merging of all the scenes into one and creating a complete movie. The next step is the last part of making this video which is editing the animated movie, so editing it requires four steps.

- 1.1.4.1 The first step is to add dialog and lip-sync for the animated characters, to do so the creator needs the website (Lalamu, 2024), This website is a good website where creators can add dialog and can display character lips into dialog, this website is also free, to start the project, the creator clicks “add new audio”, then the creator needs to add dialog for each scene, the method is to copy the dialog from Gravitywrite for each scene, then select the desired voice model (Learner, 2023).

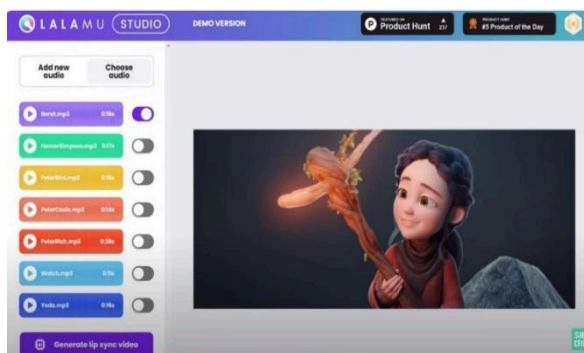


Fig. 4. A view of the Lalamu website

- 1.1.4.2 The second step, after completing Lalamu, the creator continues to the second step which is to combine all the scenes into one and edit them, to do this the creator needs a free online website called Clipchamp (Clipchamp, 2024), creator just click register to sign in with Google Account. Then to combine all the scenes, by clicking “create new video”, then selecting all the video clips, then dragging and dropping them in the empty box, the creator can also add all the other scenes one by one or all the scenes at once (Learner, 2023).

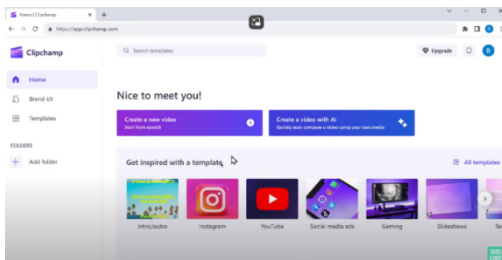


Fig. 5. A view of the Clipchamp website

1.1.4.3 The third step is to add voiceovers to the scene. To add sound, the creator used a website called Ttsmaker (Ttsmaker, 2024) which produces voiceover, basically this website converts text into audio, this step starts with registering for a Google account, then the creator will be taken to the Ttsmaker website dashboard. The scene text from the Gravitywrite website is entered into the column on the Ttsmaker website, on the monitor screen, the creator will be displayed with various voices used from various genders and from various countries. The first step is to listen to all the voices and choose the most favorite one according to the script. Once the audio is available, the creator can hear it like it sounds realistic and feels like a real person talking, then it can be downloaded, the downloaded file is then added to the movie by returning to the Clipchamp website then dragging and dropping the audio file that has just been downloaded, then placing it in the desired place.

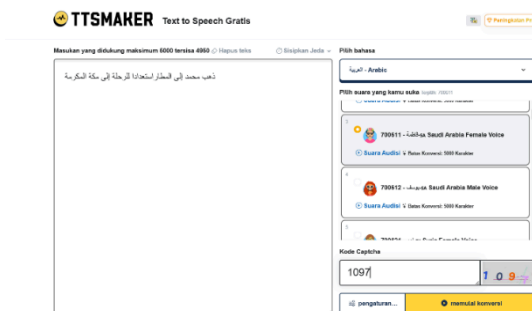


Fig. 6. A view of the Ttsmaker website

1.1.4.4 The fourth step is to add background music. The creator used a website called Pixabay (Pixabay, 2024) which has a huge effect. Creators can click on “select music” then search for the music they want to add according to the animated movie that has been made, if the audio has appeared, then click “download” to get the music.

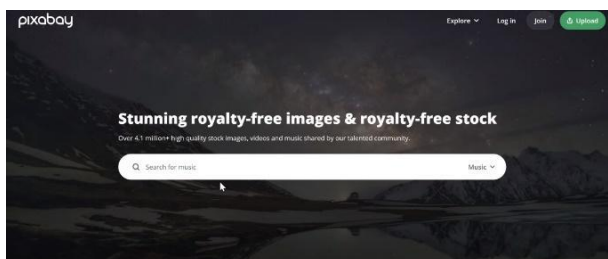


Fig. 7. A view of the Pixabay website

1.2 The second part is downloading the movie.

Creator continues the next step by downloading the perfect movie into video format, simply click “export” and select the desired video quality, then click “save” to save the movie to the computer. If the movie quality is low, to improve the quality can be helped with the Vmake application in the Play store. After downloading, click “image quality” and click “Ultra HD”, the creator can see that the quality of the movie has increased, the creator will also get the option to see the display before and after editing. This is how to make a 3D animation movie using Artificial Intelligence.

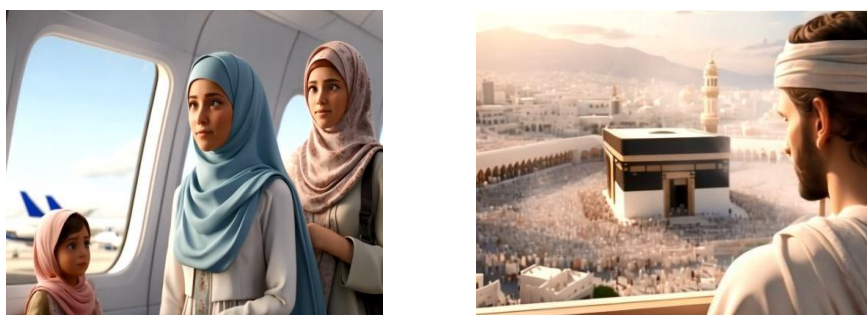


Fig. 8. One of the animated movie trailers

2. The process of applying animation media in enhancing vocabulary listening skills of Arabic language in elementary school.

From the results of interviews, observations, tests and documentation above, it can be analyzed regarding the Implementation of the use of Animation media to enhance vocabulary listening skills Arabic language at elementary school as follows:

2.1 The first meeting

When the Arabic lesson began, the researcher entered the classroom, The activities in which teacher always did was pre-viewing, viewing and post-viewing. The researcher opened the lesson with greetings and led to pray, after which the researcher checked attendance and asked how things were going. The researcher reviewed the previous material that had been taught by the previous teacher, In the pre viewing the teacher tried to ask the students about their background knowledge that they already know (Anggraeny & Fahri, 2015), Then the researcher delivered the material by asking the students "the meaning of *فِي الْفَصْلِ*", students answered aloud, then the researcher gave apperception related to the material to the students. After making apperception to the students, the researcher played animation media using speakers and laptops, students listened to the video together repeatedly, the researcher wrote mufrodats on the board then the researcher guided the students to follow the mufrodats of the objects in the video, the researcher repeated the video 3 times, then the researcher asked the students to mention the mufrodats in the video again, the students answered aloud. Then the researcher conducted an evaluation by giving a game in the form of guessing

pictures by mentioning Arabic in accordance with the mufrodat in the video, 5 students who could mention the mufrodat through pictures and researcher gave rewards. The lesson ended, the researcher closed the class by reading *hamdalah* together then closed with prayer and greetings.

2.2 The second meeting

When the Arabic lesson began, the researcher entered the classroom, the researcher opened the lesson with greetings and led to pray, after which the researcher checked attendance and asked how things were going. The researcher reviewed the previous material that had been taught by the previous teacher. Then the researcher presented the material by asking the students, "the meaning of أَعْضَاءُ الْجِسْمِ" students answered aloud, then the researcher gave apperception related to the material to the students. after making apperception to the students, the researcher played animation media using speakers and laptops, after listening to the video together repeatedly, the researcher wrote mufrodat on the board then the researcher guided the students to follow the mufrodat about body members in the video. The researcher repeated the video 3 times, then the researcher asked the students to mention the mufrodat in the video again. the researcher asked the students about the mufrodat in the video the students answered aloud. then the researcher gave an evaluation by giving questions in the form of pictures by giving a checklist according to the mufrodat in the video, after the lesson ended the researcher closed the class by reading *hamdalah* together then closed with prayer and greetings.

2.3 The third meeting

When the Arabic lesson began, the researcher entered the classroom, the researcher opened the lesson with greetings and led to pray, after which the researcher checked attendance and asked how things were going. The researcher reviewed the previous material that had been taught by the previous teacher. Then the researcher delivered the material by asking the students the material that had been learned in the previous meeting we learned what? students answered aloud, then the researcher gave apperception related to the material to the students. the researcher reviewed the material أَعْضَاءُ الْجِسْمِ (body members) and the material فِي الْفَصْلِ and the material أَعْضَاءُ الْجِسْمِ and الْفَصْلِ with the elements of pointing words (هَذَا هَذِهِ), then the researcher reiterated the mufrodat that had been learned in the previous meeting related to the topic of body members and in the classroom. The researcher asked the students to mention the mufrodat related to the material that had been learned and those who actively answered the researcher gave a reward. Three (3) students who dared to mention back the mufrodat and the researcher immediately rewarded the three students for having the courage to answer. Then giving an evaluation, the researcher asked students to summarize the material taught in the previous meeting, before the end of the lesson the researcher conducted interviews with students, after the lesson ended the researcher closed the class by reading *hamdalah* together then closed with prayer and greetings.

3. Effectiveness of using animation media in enhancing vocabulary listening skills of 3rd grade students of elementary school.

Based on the acquisition of pretest and posttest data that has been carried out, the Arabic language lesson values of 34 students were collected, the values are as follows:

Table 2. Pretest and posttest scores

RESPONDEN	SCORE	
	PRETEST	POSTTEST
Res 1	68	75
Res 2	40	60
Res 3	57	78
Res 4	62	84
Res 5	70	80
Res 6	41	75
Res 7	40	75
Res 8	65	88
Res 9	60	78
Res 10	75	88
Res 11	55	78
Res 12	74	85
Res 13	70	89
Res 14	80	90
Res 15	60	88
Res 16	45	70
Res 17	50	60
Res 18	72	75
Res 19	47	60
Res 20	76	80
Res 21	35	55
Res 22	52	60
Res 23	85	90
Res 24	60	65
Res 25	68	78
Res 26	75	80
Res 27	30	55
Res 28	76	88
Res 29	55	60
Res 30	58	64
Res 31	40	64
Res 32	48	55
Res 33	53	65
Res 34	58	70

Table 3. Mean value of pretest and posttest scores

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	58.8235	34	14.0787	2.41448
	POSTTEST	73.6765	34	11.5094	1.97386

From the table above, it can be concluded that the average value of the pretest is 58.8235 and the average value of the posttest is 73.6765, which means that the posttest learning outcomes are greater than the pretest with a value difference of 14.853.

Table 4. Paired samples correlation

		N	Correlation	Sig.
Pair 1	PRETEST & POSTTEST	34	.780	.000

Table 5. Paired sample test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
Pair					Lower	Upper			
1	PRETEST	-14.853	8.82	1.5141	-17.9334	-11.7723	-9.81	33	.000
	POSTTEST	73.6765	11.5094	1.97386					
	Difference	88.5295	14.853	2.48796					

The hypothesis in this study, tested with a two-party test, then the applicable testing criteria are if $-t \leq t_{count} = +t_{tabel}$ then H_0 is accepted and vice versa. With degrees of freedom $(dk) = (k-1)$ and a significant level of 5% or 0,05.

The Paired Sample T-Test value is $-t \leq t_{count} < +t_{table}$ then H_0 is rejected. It is known that the sig value. (2-tailed) is $0.000 < 0.05$, so there is a significant difference between the learning outcomes of vocabulary listening skills on Pretest and Posttest data, significantly there is an effect of using animated media on improving vocabulary listening skills in Arabic language learning. The participants experienced a significant increase in scores after using this animated media, meaning that this animated learning video is very influential on vocabulary listening skills. With this card a student is required to listen to his friend, then continue based on the similarity of words/phrases at the beginning of the card.

The results of this study are in line with the results of the research of Puspaningtyas (2020) that through animated video, students can understand the material much better compared to learning that is only face to face (Puspaningtyas & Ulfa, 2020). When

viewed from the results of the difference in pre-test and post-test results. The conclusion is that there is a significant increase in students' vocabulary mastery before and after being taught using animated videos (Setiawati & Septiana, 2020).

CONCLUSION

The conclusion of this study can be summarized into 2 main ideas, namely the learning process is carried out for 3 meetings which sequentially begins with greetings and prayers, checking attendance, asking how the students are doing, providing apperception, reviewing the material that has been taught before, followed by the delivery of material with discussion methods and answering techniques aloud. Then playback of animated media using speakers and laptops, students listen to the video repeatedly, the teacher writes vocabulary on the blackboard to guide students to follow the vocabulary in the video, repetition of the video is done 3 times, the last stage students are asked to mention the vocabulary in the video answering out loud. b) The acquisition of the Paired Sample T-Test value is the sig. (2-tailed) is $0.000 < 0.05$, there is a significant difference between the learning outcomes of Vocabulary listening skills on Pretest and Posttest data.

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