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Improving Student Text Writing Ability by Utilizing the Use of Augmented Reality Feature

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Abstract

This study used a quantitative methodology. Experimental research is used, with a post-t only control design as the study design. There were 100 students in the study's population, and students from classes A (the experimental class) and C (the control class) made up the sample. This study uses assembler as a learning medium that is applied to those classes. There are two variables used in this study, namely the independent variable (the augmented reality feature in the assembler application) and the dependent variable (the ability to write descriptive texts for class students). Data collection techniques used are interview techniques, documentation, and observation. The application used to process research data is SPSS. The results of this study sho that there is an influence between the use of augmented reality features and students' writing abilities. This is evident from the average value of the experimental class and control class.

Keywords: experimental class, control class, student, augmented reality.

1. Introduction

Humans today have many advantages when compared to humans who lived in the past. One example is farming activities that still rely on human power or animal power, such as cows, buffaloes, and others. Now humans have been greatly helped by technology such as rice field plowing machines to facilitate the working processes of farmers. Just like the example above, in the realm of education too. The existence of current technological advances greatly facilitates human life because they can help teachers and students carry out learning activities. Learning activities are generally always carried out in the traditional way, namely with the teacher as the center of knowledge in the classroom and students receiving knowledge from the teacher. Such a method makes students just sit and listen or receive knowledge transferred by the teacher. The media used by the teacher in the classroom is also limited, so students tend not to understand what is explained [1]. The situation of students who just sit and listen to the teacher's explanation often makes them get bored quickly. This results in students being unfocused or even sleepy in class. Currently, learning activities are increasingly modern. From the beginning, students were only passive objects; now they can take an active role in learning activities. Based on what has been explained above, it is fitting for teachers to participate in improving the way they teach students. One way is to take advantage of the technologies that are currently available [2].

There are many kinds of applications that teachers can use as learning media, one of which is PowerPoint, Canva, and many more. The use of applications as learning media can foster students' interest in learning. In addition to making the atmosphere of learning activities in class more fun, students will also not feel sleepy or bored. Although it should be noted that using applications as learning media rep dly can also result in decreased student interest in learning, Therefore, teachers can experiment using a variety of learning media that they feel are suitable for the materia ing taught. The researcher chose students because, based on the search ults of researchers at the school, students were less able to write a text, one of which was a descriptive text. Based on the results of the discussion between the researcher and the teacher, the cause was the difficulty for students to describe objects that they had not seen. Therefore, to help students describe objects even better, researchers will use a learning medium called Assemblr, which has an augmented reality feature [3].

Assembler is a learning application that uses augmented reality features or a combination of virtual and real worlds. The way this application works is by using objects that are already available in the application, and then these

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objects are displayed in the real world with the help of a smartphone or gadget. This allows students to see objects as if they really existed. The use of the Assemblr application is expected to make teaching and learning activities in the classroom less boring and more interesting, as well as foster students' interest in learning. This application has various kinds of objects (animations and images) in it that can be used for learning activities, but generally users use the application more as a learning medium for subjects related to the natural sciences. This is because the objects in the Assemblr application are more suitable for use in science subjects, such as animations or pictures of the solar system, the structure of living things, and so on [4]. Even so, it is possible that this application can also be applied to Indonesian subjects, one of which is material about writing descriptive texts. In short, descriptive text is a text that describes an object clearly and in detail. Therefore, writing descriptive text requires an object that can be described so that later it will be written into a descriptive text. The objects used to write this text can be objects that are around us, both those that can be touched and those that cannot be touched, such as pictures on the internet [5].

Descriptive text is the initial material or chapter in Indonesian subject in this class. This is because the descriptive text is used as a basis for students to be able to learn other texts. If students are not or are not able to write descriptive texts, they will most likely also have difficulty writing other texts such as exposition texts, explanations, and so on. Writing is also one of the language skills that must be mastered by students, because the higher the level of education, the higher the need to write. Especially when the Corona virus was still hitting Indonesia, teaching and learning activities were diverted to distance learning, so that the delivery of material became hampered and students ended up not understanding, being lazy, and being sleepy. Of course, this will be a problem for students, especially in this class, because it causes their writing skills to not develop. The teachers also acknowledged that the delivery of material through online learning activities was not optimal. Therefore, efforts or ways are needed so that students' writing skills, especially in descriptive text material, can be increased [6].

As explained in the previous paragraph, the Assemblr application uses a feature called augmented reality. Augmented reality is a feature that can combine a virtual object with the real world. This feature has been widely used in various fields, one of which is the game Pokemon Go! The game uses augmented reality features so that the players can feel that they are really in the world of Pokemon. In addition, augmented reality can also be used in education, one of which is to help students understand more about the structure of the human body, the solar system, and so on. That is why researchers want to try these applications and features on Indonesian subjects, especially descriptive text material. This study uses the Assemblr application as a learning medium for Indonesian subjects because Assemblr is expected to help students make descriptive texts more easily. In addition, in the Assemblr application, there are pictures and animations that are interesting for students to make descriptive text objects for. The Assembler application also has an attractive appearance and many features. Assemblr application users can see and use works that have been made by other users, so they don't have to bother anymore when using Assemblr [7]. Assemblr got a high score on the Play Store, which was 4.8 out of 5 (the highest score) with more than 1 million downloads. This is enough to prove that Assemblr is an application with the most popular augmented reality features when compared to similar applications in the Play Store.

There are several relevant studies that researchers use as basic reference in carrying out this research. The first study used classroom action research techniques that were carried out in two cycles, and each cycle had four stages: planning, action, observation, and reflection. The results of this study show that the use of Mind Map media has a significant impact on improving the skills of writing descriptive texts for class A students. This is evidenced by an increase of 30% from the initial stage to cycle I and an increase of 25% from cycle I to cycle II. The difference between this study and that conducted by Gregory is the learning media used. Gregory uses mind map learning media, while this study uses Assemblr learning media with augmented reality features. The second study used a class action approach (class action research) using cycles I and II. In each cycle, two meetings were held. The result of this study was that there was an increase in the ability to write descriptive paragraphs for 7th grade students at SMPN 2 Liliriaja. In the first cycle, out of 23 students, only 16 students, or 69%, reached a classical level of 76%; in the second cycle, there was an increase of 22 out of 23 students whose scores reached Minimum Mastery (KKM) with a classical level of 85.08%. The difference between this study and the research conducted by Yusuf is that this research uses Assemblr learning media with augmented reality features, while Yusuf uses the problem-solving method [8].

The third study used a qualitative descriptive research method to see the results of descriptive texts written by students after viewing regional tourism videos. Based on research conducted using regional travel videos, students are less able to write descriptive texts well. This is evident from the results of an analysis of students' writing skills with average breakdown scores of 41, 43, 45, 46, 48, 50, 51, 52, 53, 54, 56, 57, 62, 64, 65, 66, 68, and 70. The visible difference between the research conducted by the researchers and that carried out by Robiatul is that this research uses Assemblr learning media with augmented reality features, while Robiatul's research uses video learning media about regional tourism. Finally, the fourth study uses a quantitative approach using experimental

research types. All pupils made up the study's population, and the samples used were class A and B. Class B was designated as the control class, and Class A served as the experimental group. The pre-test and post-test in the prior researcher's study used a likert scale. The study's findings demonstrate a substantial relationship between the experimental class, which receives therapy, and the control class, which does not. A significant difference between this study and previous researcher is the number of subjects used. Previous researcher uses the thematic subject in elementary class, while this research uses the Indonesian language subject in junior high school class.

2. Research Methods

This study uses quantitative research methods to help answer the problems to be studied. The quantitative method used is an experimental approach. This study uses a post-test only control design as a research design. Post-test only control design is one of the two types of designs in true elemental design. The group that received treatment in this study was class A as the experimental class, and the group that did not receive treatment was class C as the control class. Both of them will later conduct a post-test so that it can be seen whether the use of the augmented reality feature in the Assembler application can affect the ability to write descriptive texts for the experimental class or not. The population used in this study were all students. Class students have a total of 100 students, with details of classes A and B both having 50 students and class C having as many as 50 students. The samples used in this study were students in classes A with a total of 50 students and C with a total of 50 students. The data collection technique used in this study is observation, interviewing, and documentation. The research instrument used in this study was a test. This study used two methods of data analysis, namely prerequisite testing and hypothesis testing. The prerequisite test has two kinds of techniques, namely the normality test and the homogeneity test.

3. Results and Discussion

When the research was conducted in class A, the researcher used the augmented reality feature in the Assemblr application to see the effect it produced on students' ability to write descriptive text. While research conducted in class C did not use the Assemblr application, its function is to see a comparison between the class that received treatment and the class that did not get treatment, or to see if the class that received treatment was able to get a higher score than the class that did not get treatment, if it was the same, or just the opposite. The researcher enters the class together with the teacher, and then the teacher introduces the researcher to the students. After that, the learning activity begins by reading a prayer together, then doing apperception to find out whether the students still remember the material about the descriptive text or not. The next researcher used PowerPoint to explain descriptive text to students and showed a video that the researcher had made at home, namely to display objects that were displayed using the augmented reality feature. The researcher also shows how this augmented reality feature works and asks students to see objects displayed using smartphones. Next, the researcher asked the students to write a short descriptive text about animals, namely rabbits and cats. The researcher then conducted interviews with several students. After the bell signaling the end of class hours rang, the researcher asked students to collect the results of their work. When the research was taking place, there were 3 students who were not present, so the researcher only examined 47 students in class A.

The next research was carried out in class C. The researcher and the teacher entered the class and introduced themselves. Teaching and learning activities begin with reading a prayer together, followed by a brief introduction to the students. After that, the researcher did an assessment to find out whether the students still remembered the material about the descriptive text or not. Then, learning activities begin with the presentation of descriptive text material to students without using the augmented reality feature in the Assemblr application. After the presentation of the material was finished, students were asked to write a short descriptive text about animals. After the school bell that signaled the end of Indonesian language lessons rang, students were asked to collect their assignments. All students in class C attended the learning activities at that time. When the entire series of learning activities has been completed, the researcher closes the learning activities by reading a prayer, after which the researcher, teacher, and students take a group photo.

After knowing the grades of five students with the lowest scores and five students with the highest scores, the researcher continued the process of analyzing the descriptive text of class C students to conduct an assessment. The result is that the majority of C students get low scores, and only a few get pretty good grades. The lowest score obtained by class C students was 19, while the highest score was 81. Students who scored 19 were 1 person, 25 were 2 people, 31 were 1 person, 37.5 were 4 people, 44 were 5 people, 50 were 7 people, 56 were 5 people, 62.5 were 3 people, 75 were 2 people, and 81 were 1 person. The researcher then tries to find the mode, median, and mean of the data. The result is that the mode of the data above is 50, the median is 50, and the mean is 48.98 (rounded to 49). These results also show if class C gets less predictive. That is, this class is less able to understand and make descriptive text.

Based on the values obtained by class A, it is known that the lowest score obtained is 25, while the highest score is 94. Students who get a score of 25 are 3 people, 31 are 1 person, 44 are 1 person, 62.5 are 1 person, 69 are as many as 2 people, 75 are as many as 4 people, 81 are as many as 8 people, 87.5 are as many as 6 people, and 94 are as many as 1 person, so the total number of students is 271 are as many as 8 people, 87.5 are as many as 6 people, and 94 are as many as 1 person, so the total number of students is 27. The researcher then tries to find the mode, median, and mean of the data above. The result is that the mode of the data above is 81, the median is 81, and the mean is 71.01 (rounded to 71). Based on this average value, class C gets a good predicate. These results also show that there is a difference in the average value between class C as the control class and class A as the experimental class. The average value of class C is 49, and class A is 71.

Based on the results of the analysis, the value of Asymp. Sig. (2-tailed) on the results of the post-test written descriptive text was 0.00. This value is smaller than the significance level of the Mann-Whitney test of 0.05. The provisions of the Mann-Whitney test so that the hypothesis can be accepted are that the Asymp.Sig (2-tailed) value is less than 0.05. Because 0.05 is greater than 0.000, these results indicate that the hypothesis in this study is acceptable, namely that there is an effect of using the augmented reality feature in the Assemblr application on students' writing abilities. This can be seen from the average value of class A as the experimental class of 71, while class C as the control class gets a score of 49. It can also be seen that learning media, especially the augmented reality feature in the Assemblr application, has a major influence on the results obtained achieved by class A. The researcher assumes that conducive atmosphere factors and students who are enthusiastic about participating in learning activities are also factors why students in class A, an experimental class, get satisfactory results. The research in both classes was conducted in the morning during Indonesian language lessons, accompanied by the teacher. After carrying out the research, the researcher processed the data using the SPSS. Class A has a mode of 81, a median of 81, and a mean value of 71.01 (rounded to 71). Class C has a mode of 50, a median of 50, and a mean of 48.98 (rounded to 49). After determining the mode, median, and mean, the researcher conducted a data analysis prerequisite test and also tested the hypothesis.

The data analysis for this research involved prerequisite tests, namely the normality test and homogeneity test. The normality test was utilized to ascertain whether the data was distributed normally or not. The obtained significance value for class A as the experimental group was 0.000, while class C as the control group obtained a significance value of 0.496. For data to be considered normally distributed, the significance value must be greater than 0.05. This implies that data from class A was not normally distributed, while class C was normally distributed. On the other hand, the homogeneity test was conducted to determine whether the data set was homogeneous or not. The test resulted in a significance value of 0.81, which was greater than 0.05, indicating that the data in this study was homogeneous. After conducting both tests, the next step was to test the hypothesis to determine whether it was accepted or rejected. The study employed a non-parametric test, specifically the Mann-Whitney test, to analyze the data. The reason for using this test was that the requirements for using a parametric test were not met, namely that the data must be normally distributed and homogeneous. The research aimed to determine whether the use of augmented reality features in the Assemblr application had an impact on students' writing abilities.

After carrying out the Mann-Whitney test, it is known that the significance value obtained is 0.000. This result is smaller than the predetermined significance value of 0.05. Based on these results, it can be concluded that there is an effect of using the augmented reality feature in the Assemblr application on the writing abilities of students. It can be seen from the average value of class A, which is 71, while class C is 49. The researcher assumes that the results obtained by the experimental class are due to situations and conditions that do not make students bored so as to make the learning atmosphere more exciting. Students looked very interested and enthusiastic when the researcher explained the material about descriptive text using the augmented reality feature. A different view is seen in class C, where students tend to be passive when teaching and learning activities take place. Monotonous learning activities without the use of instructional media make the learning atmosphere boring and result in a lack of understanding that students get from the presentation of material about descriptive text. This can also be seen from the results obtained by class C.

The interview process was carried out by asking a number of questions that had been prepared for a teacher in the Indonesian language subject, after completing the research in classes A and C. The first question the researcher asked was about the teaching techniques used to teach Indonesian. The teacher answered that while teaching Indonesian, the teaching technique most commonly used was the lecture technique and the occasional discussion technique. This indicates that teaching so far still uses teaching techniques that are commonly used, such as lectures and discussions. The researcher then proceeded to the second question, namely, what learning media had been used during teaching. She answered that the learning media commonly used when teaching came from print media and also video media. The third question that the researcher asked was whether, while carrying out the learning, the students took an active role or vice versa. The answer given is that students usually tend to be passive when

receiving learning, although sometimes students become active during learning because it is interspersed or supplemented with quizzes and games.

The next question is whether she has ever heard of or used the augmented reality feature in learning Indonesian. She admitted that he had never used or even heard of the augmented reality feature, and she said this was the first time he had heard about this feature. The last question that the researcher asked was whether, according to her, there was a difference in the activity experienced by students when using the augmented reality feature or if there was no difference at all. Shee replied that he admitted that there were differences between learning activities that used and did not use augmented reality features. One of them is that students become more active in participating in learning activities when compared to not using the augmented reality feature. According to her, the reason why students become more active is because they are usually only able to imagine the object they want to describe. However, now, with the help of the augmented reality feature, students can see objects visualized with these features. The conclusion from the results of the interviews with researchers is that there are positive differences between students before and after using the augmented reality features in the Assemblr application. Students find it easier to write descriptive text because they can see the object they want to describe directly.

The researcher also agreed with what was conveyed by the teacher, that students became more active when using the augmented reality feature after seeing the comparison between classes A and C. Class VII C, as the control class, did not use the augmented reality feature, and the researcher only used the lecture method. The result is that learning activities in class become very monotonous, and students also seem not to fully understand the material about descriptive text. Meanwhile, class A, an experimental class that uses the augmented reality feature in the Assemblr application, looks more active in participating in learning activities. Look enthusiastic and can digest well the material about the descriptive text delivered with the help of learning media. Therefore, class A gets better results than class C. Class A gets an average score of 71, and class C gets an average score of 49.

The researcher conducted interviews with students in class A and randomly selected six students to be interviewed. The researchers interviewed these names with five questions related to teaching and learning activities using the augmented reality feature in the Assemblr application. The result is that all respondents, or the six students who were interviewed by the researchers, admitted that they had never studied using the augmented reality feature in the Assemblr application. Respondents also admitted that learning to use the media was more fun and enjoyable. This is because when learning to use the media, students find it easier to understand material about descriptive text, especially when describing objects, because they can see the object they want to describe. All students interviewed by researchers agreed that they preferred learning to use augmented reality features in the Assemblr application rather than learning without using learning media. Of course, this is understandable because learning without using learning media can make the teaching and learning atmosphere very boring for almost all students. Learning results for students can be enhanced by engaging teaching and learning activities. Class A's value as the experimental class clearly shows that it is superior to Class C's value as the control class.

The conclusion from the interviews that the researchers conducted with the six students was that they acknowledged that there was a positive influence when learning to use the augmented reality feature in the Assemblr application. One of them is that student learning activities become more fun and learning becomes easier (especially in descriptive text material). In addition, studying descriptive text using the augmented reality feature in the Assemblr application can actually increase students' learning interest. It is proven that the average writing value of class A (experimental) students who use the augmented reality feature in the Assemblr application is higher when compared to class C (control). Class A gets an average score of 71, while the average score of class C is 49. Based on the assessment instrument used, class A as the experimental group gets the predicate sufficient and class C as the control group gets the predicate less.

4. Conclusion

Augmented reality features are proven to have an influence on learning activities. Classes that use these features are safer and more fun than classes that do not use augmented reality features. This is also supported by the results of observations and interviews conducted with Indonesian teachers and students. The ability to write descriptive texts for students of class A as the experimental class was better than that of class C as the control class. This can be seen from the average value of class A of 71 and class C of 49. The reason for this is that class A, as the experimental class, uses the augmented reality feature in the Assembler application, while class C, as the control class, does not. Teachers, especially Indonesian teachers, can try to innovate by using learning media to support learning activities in class. Teachers can try similar applications as the researchers use or look for other applications that they feel are suitable to be applied to Indonesian material. In addition, teachers must try their best so that learning activities in the classroom are not boring. One way is to use learning media. Spend more time when you want to research using learning media, especially the augmented reality feature in the Assembler application.

Because of the results obtained, less time is a factor in why the results between the experimental class and the control class are not so different.

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