

Using the Assemblr Application in English learning

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Abstract: This research was conducted to test reading comprehension of English text using the Assemblr edu application to 6th-grade elementary students in SD IT Widya Cendekia. In data processing techniques, researchers used descriptive method with several research instruments that use the Scale Guttman questionnaire to collect and analyze data, descriptive statistics, and the use of Interview data collected and analyzed through qualitative methods with a descriptive approach. To make learning more relevant to students' lives and to increase their motivation in reading we provide technology as one of the learning media to be used. For this reason, Augmented Reality-Based Learning is the choice of researchers to be implemented in this learning practice. The Assemblr edu program is one of the augmented reality tools accessible for educational purposes. Furthermore, the Assemblr edu application has some special capabilities of its own for Augmented Reality projects. For example, using 2D and 3D graphics, music, and video is simple even for those without any programming experience. It has several viewpoints, is editable, and accessible from any location. The research study of augmented reality application development reality states that applications based on augmented reality are actually legal and have a practical point of view. Furthermore, the application's instructions are easy to follow.



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INTRODUCTION

The learning process is a teaching and learning activity between educators and learners to comprehend the intended material's purpose (Asih in Sugiarto, 2021). The learning objectives can be achieved if teachers and students interact actively in teaching and learning activities. Meaningful learning may be achieved when creative and imaginative instructors understand how to use media in connection with the topic they teach and are supported by existing technology. The use of technology and proper examples may encourage kids to be critical, curious, and eager to test anything new they learn.

As time passes, the use of technology becomes more innovative, not only in the business world, but technology may reach all sectors, one of which is education. In modern world, teachers are sought after for their ability to grasp technology and mix it with instructional material. It is expected that teaching and learning activities between students and teachers would create a new environment full of students' interest and will generate new ideas, new ideas, and make the learning environment more fun.

English is an international language that is widely used. In English language learning, especially reading, writing, listening and speaking skills, it is sometimes necessary to learn directly for students to know how the language is spoken by themselves. Most of them are not interested in learning English because sometimes they themselves do not realize the importance of learning English. This needs to be considered by us as educators considering the existence of English itself is very important to open our horizons to the world. And there are several elements that need to be considered. These elements include curiosity, scientific method, evidence, theory, and application. Learning will be better if students experience or do learning activities directly. However, not all material is easy to understand, and vice versa leads to laziness and study burnout. Not a few students have difficulty learning English due to many things, one of which is learning media. Sometimes learners cannot understand the elements of language because they cannot understand how the learning media should be used.

Therefore, in order to achieve learning objectives accompanied by adequate technological developments, a teacher can create innovative, efficient and systematic learning media using technological sophistication. Connecting it with technology will be able to provoke students' curiosity, critical thinking of students so that they are more comfortable learning English by minimizing their boredom, because learning with the presence of technology is a new thing for them so they are not aware that they can learn while playing. The sophistication of today's technology is able to attract their curiosity about something and this is a good innovation, especially in the world of Education.

In the sector of education, media learning is now undergoing a considerable transformation. One of them makes use of technology. Many educational media use technology in their applications, and the evolution of the usefulness of technology today is different (Zulfahmi, Muliawan, & Arifin, 2013)

One of the technologies that can be used in learning media innovation is the use of Augmented Reality. According to (Wardani in Sugiarto, 2022) Augmented Reality (AR) is a 3-dimensional media that is able to realize the visuals of abstract objects as if they are real and can be displayed around us. While according to Mustaqim in (Padang, Ramlawati, Yunus, & Samputri, 2021) suggested that Augmented Reality is an application of combining the real world with the virtual world in the form of two dimensions and three dimensions projected in a real environment at the same time.

According to research conducted by akhmad sugiarto, entitled Using Augmented Reality Assemblr Edu Media to Increase Understanding of Dark Transportation Concepts, the results show that three-dimensional (3D) media using Augmented Reality (AR) Assemblr Edu is able to increase students' understanding up to 96.97% so that they are motivated to learn.

Assemblr is one of many software tools that make it easy to develop AR now. Assemblr is a software application that offers a common classroom capability for teachers and students to interact and share material. Assemblr Edu can allow students and teachers to develop projects based on their interests and talents, such that when they are printed in the form of images or barcodes, others may scan them to make them seem like the original (Sidiqi in Sugiarto, 2021).

The disadvantages of using assembled educational media for learning, as stated by (Maharani, 2023) are AR features are sometimes difficult to use, loading is quite long when preparing material, must buy a subscription package if you want to get more features, sometimes there are obstacles when the application is used, for example in and out of the application by itself and requires the use of the internet.

Assemblr Edu has access to dozens of educational content and learning modules that are continually improving. This information is offered in the form of 3D visuals and animations that may be utilized in the classroom to explain lessons. There is also an editor tool that allows students and teachers to develop their own AR educational content and add hundreds of existing 3D objects. This feature is intended for users who want more creative flexibility while creating content that isn't currently accessible in Assemblr. Teachers may use this software to divide their students into different virtual courses based on topic. This allows students and teachers to exchange resources and collect AR assignments or projects in the app (Nurhasana et al., 2022).

THEORETICAL SUPPORT

1. Technology

Technology according to the Big Dictionary of Indonesian is a scientific method that serves to achieve practical goals and is one of the applied sciences. Meanwhile, according to (Yaumi, 2018) Technology is the science of making things.

2. Reading

Reading is one of the four language skills. Reading is a basic component of a person's ability to have an understanding or more knowledge because by reading it, a person will increase and get richer in knowledge. Reading is an activity carried out by a person to obtain facts, information, or knowledge previously unknown to the reader (Susilo, 2015, 118-138).

3. Assemblr as learning media

Assemblr is a smartphone-based application that allows users to create three-dimensional models by combining a number of available objects (*Assemblr*, 2021). Assemblr Edu is an educational application that can be used by teachers as well as students. The application provides Augmented Reality (AR) technology which can create and share interactive teaching materials due to the presence of interesting 3D images and animations and also can arouse students' curiosity.

4. Augmented Reality (AR)

Augmented reality is a technology that can combine the virtual world with the real world by projecting in all directions as desired, which means it can produce three-dimensional works (Hermawan Putri et al., 2021; Sugiarto, 2022). Augmented reality was developed to help students to improve their experience in learning to be more real and increase their learning motivation. Assemblr Edu can encourage the creativity of its users to be able to present more interesting subject matter. This application can help teachers in creating a learning atmosphere that is more fun. Fun learning allows students to understand the subject matter better, because students can focus on participating in learning activities organized by the teacher (Nugrohadi & Anwar, 2022). (Padang et al., 2021) about Assemblr Edu in increasing students' motivation. The results of this study indicate that the use of Assemblr Edu can optimize students' learning motivation. This is due to the use of real, interactive images and three-dimensional images. This high motivation can have an impact on student success in learning. Assemblr Edu has several advantages compared to other applications in presenting augmented reality programs, namely having audio and video animations, easy to use without the need for complicated programming knowledge, can be shown anywhere, has various points of view, and can

be edited (*Assemblr*, 2021). Therefore this study tries to implement the use of *Assemblr* as a medium in learning reading comprehension.

METHOD

The method in this study is to use qualitative methods with a descriptive approach. Meanwhile, the descriptive approach is the process of describing the meaning of data or phenomena that can be used by researchers by showing direct and real evidence (Zuchri, 2021). In addition, this method also uses descriptive statistics. According to (Martias, 2021) descriptive statistics is a technique for collecting information and interpreting data that is useful for users in the form of numbers, tables, graphs, and diagrams. Therefore, the use of this method aims to be able to describe and explain the effect of the use of *Assemblr* applications in English learning. Participants in this study were English teachers and 10 SD IT Widya Cendekia students in the 2022-2023 academic year. Based on this, researchers obtained data through observation, questionnaires, and interviews. The process of observation is when the researcher directly passively observes each individual in the classroom while the study is in progress. Meanwhile, the next data processing technique is using a questionnaire to determine student responses to the use of *Assemblr* as a medium of learning English, in this study questionnaire uses the Guttman scale. Then the use of interview techniques will be collected and analyzed qualitatively. Thus, the Guttman scale questionnaire used in this study consisted of several statements related to English learning using the *Assemblr* application with answers that included Yes and No.

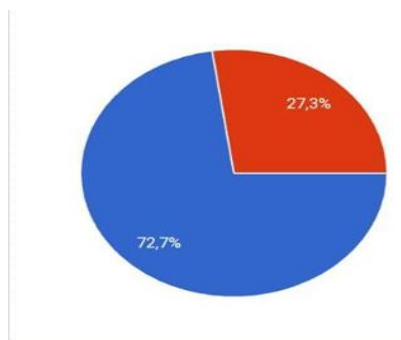
According to (Vladimir, 2018) usually in the Guttman scale, has two intervals of choice i.e. agree or disagree. In addition, the researchers used an interview instrument by providing a variety of more detailed questions. Interviews are useful for (1) getting data directly (Primary) (2) complementing other data collection techniques (3) being able to test other data collection results (Harahap, 2020). Therefore, the Guttman scale questionnaire and interviews can be complementary in obtaining valid research data. The population used by researchers in this study was 10 students of 6th grade SD IT Widya Cendekia to give their views by filling out questionnaires given by researchers. In addition, 6 students gave their opinions about the use of *Assemblr* application in the English learning process through interview sessions given by researchers to obtain qualitative data results. Besides that, then after the data is collected the next step is to calculate the number of perceptions of students who agree or disagree about the use of the *Assemblr* application in the process of learning English and researchers can find out the assessment on the English reading comprehension test after the application of the material that has been taught to determine the results obtained from this study.

RESULT AND DISCUSSION

1. Pie Chart and Images

As a result, the justification shows that the information for the research will come from the responses to the questionnaires that the researchers gave to the participants. A circular statistical visual with slices illustrating numerical proportion is called a pie chart. Each slice's arc length in a pie chart corresponds to the quantity it represents. Pie charts are helpful for showing data that has been categorized (also known as nominal data). In a pie chart, the total of the categories must equal 100%. Meanwhile, an excerpt from the article (Jamilah, 2021), Oemar Hamalik asserts that images are the means by which everything is realized by depicting into a two-dimensional form as an expression of ideas

in a variety of formats such as slides, portraits, paintings, films, projectors, or strips. Arief Sadiman contends that visuals are forms of communication that are frequently employed in everyday speech and that everyone, anyone may understand and appreciate. The use of images in this study is to support the existence of pie chart data.



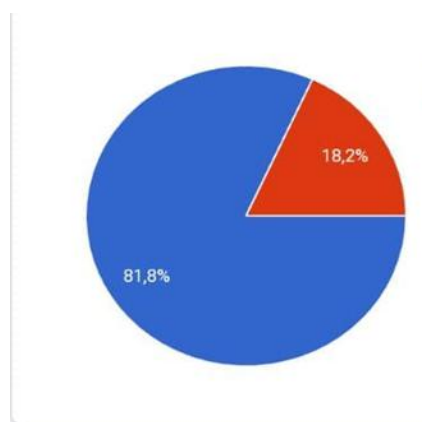
Images 1. Students' Result of First Questioner

Based on the pie chart above and the image above, it can be described as follows:

1) First Questionnaire: In your opinion, are you interested in learning to read using the Assemblr application?

·Blue : 72.7% of the children in grade 6 at SDIT Widya Cendekia answered YES, which indicated that they were interested in using the Assemblr application as a medium for learning to read.

Orange : 27.3% of the children in grade 6 SDIT Widya Cendekia answered NO, which indicated that they were not interested in using the Assemblr application as a medium for learning to read.

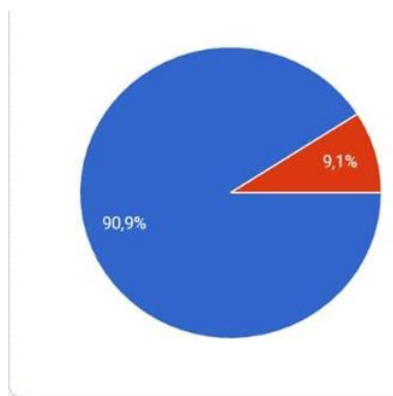


Images 2. Students' Result of Second Questioner

2) Second Questionnaire: Does using the Assemblr application improve your reading comprehension?

Blue : 81.8% of children in grade 6 at SDIT Widya Cendekia answered YES, indicating that they agree that the Assemblr application improves their reading comprehension.

Orange : As much as 18.2% of children in grade 6 SDIT Widya Cendekia answered NO, which indicated they did not agree with the Assemblr application for their reading comprehension.



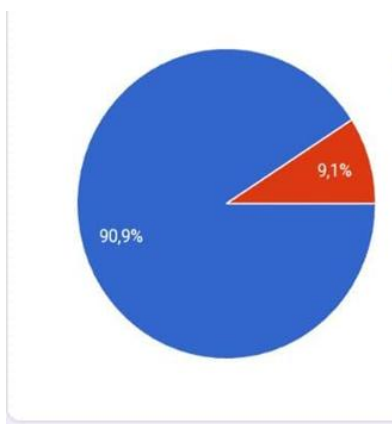
Images 3. Students' Result of Third Questioner

the pictures presented in the story in the Assemblr application.

3) Third Questionnaire: Are you interested in the pictures in the story?

Blue: 90.9% of the children in grade 6 at SDIT Widya Cendekia answered YES, which indicated that they were interested in the pictures presented in the story in the Assemblr application.

Orange : 9.1% of the children in grade 6 SDIT Widya Cendekia answered NO, which indicated that they were not interested in the pictures presented in the story on the Assemblr application.

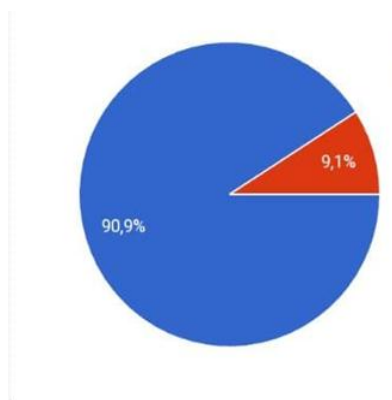


Images 4. Students' Result of Fourth Questioner

4) Fourth Questionnaire: Are the colors in the story interesting?

Blue: 90.9% of the children in grade 6 SDIT Widya Cendekia answered YES, which indicates that in terms of the colors presented in the story in the Assemblr application it is interesting.

Orange : 9.1% of the children in grade 6 SDIT Widya Cendekia answered NO, which indicates that in terms of the colors presented in the story in the Assemblr application it is not interesting.



Images 5. Students' Result of Fifth Questioner

5) Fifth Questionnaire: Can the use of the Assemblr application make it easier for you to understand English reading texts?

Blue: 90.9% of children in grade 6 SDIT Widya Cendekia answered YES, which indicates that the Assemblr application can make it easier for them to understand English reading texts.

Orange : 9.1% of children in grade 6 SDIT Widya Cendekia answered NO, which indicates that the Assemblr application can make it easier for them to understand English reading texts.

Then, A table uses rows and columns to organize and present data in an organised manner. In many different situations, including spreadsheets, databases, and papers, tables are frequently used to present data in a clear and succinct manner. In a table, each row denotes a unique piece of data, and each column denotes a unique element or feature of that data. A table, for instance, might have a list of employees' names, job descriptions, and salaries. Each individual employee would be represented by a row, with their name, position title, and compensation represented by a column. The use of tables in this study aims to classify the results of values from questions on children's understanding of the use of the Assemblr application as a medium for learning to read English texts.

Table 1. The results of values from questions on children's understanding of the use of the Assemblr application

NO	Name	Q 1	Q 2	Q 3	Q 4	Q 5	Total Score
1	S1	20	20	5	20	20	85
2	S2	20	20	20	20	20	100
3	S3	20	20	20	20	20	100
4	S4	15	20	0	20	20	75
5	S5	15	20	0	20	20	75
6	S6	15	20	20	20	10	85
7	S7	20	20	20	20	20	100

8	S8	20	20	20	20	20	100
9	S9	20	20	0	20	20	80
10	S10	20	20	5	20	20	85

Based on the participant table above on text comprehension questions, there were two participants who got the lowest score, namely 75 and four participants got the highest score, 100, and the rest of the participants got pretty good scores, namely 80-85. The participants took the value by filling in a number of questions that the researchers gave to the participants and the value taking was done manually or by observation, namely by interacting with the participants directly.

2. Widya Cendekia Interview Results

Based on the results of interviews with 6 students regarding the use of Assemblr, most of the participants could understand English learning using Assemblr well. The first participant stated that he was happy and interested in the English story text using Assemblr. According to him, the pictures displayed were also interesting and the participants agreed that one day their school would use assembly as a learning medium. Then, the second participant also stated the same thing if he was also interested in learning English using assembly as a learning medium. Participants were also able to understand the story text provided and agreed that one day their school would use Assemblr as a learning medium and participants felt learning English using Assemblr was fun. Furthermore, the third participant stated that learning English using Assemblr media looks interesting. Participants also agreed that one day their school would use assembly as a learning medium. The fourth participant continued to feel that the pictures displayed were so interesting when using Assemblr and he agreed that one day his school would use Assemblr as a learning medium. Then, the fifth participant also stated that he felt happy when learning English using Assemblr media and agreed that one day his school would use Assemblr as a learning medium. Then, the sixth participant also stated the same thing if he was interested in learning English using Assemblr media. He also expressed the impression that learning English using Assemblr media looked more exciting and he also agreed that one day his school would use Assemblr as a learning medium.

a. Previous Background

Inside background behind research that has explained before , we took topics regarding the learning process with themed education . Of course , the learning process this collaborate with media use or increasingly technology develop follow civilization human . Use continuing technology evolve and the more advanced has spread to a number of field in life human , p the make man must learn it, so what to do man Becomes more efficient and fast . one _ moderate development intense applied in world education is use of Augmented Reality or designation from learning based technology that can insert audio, video, and picture in the form of 2 dimensions and 3 dimensions . This relate also with study before , by line big that is According to (Ayu et al., 2022) say that technology offered in developing learning media for draft design 3D build is Augmented Reality (AR). AR technology is combined Among virtual object with object real (Ramadan , AF, et al. 2021). AR is technology

promising push _ participant educate for explore material learning from a new perspective (Siregar , Y. M, 2021). Researcher focus target object study on child school base that is child class 6 SDIT Widya scholar with variable the independent that is use wrong one application from AR named Assemblr edu on eye lesson language England . On the side That is , the dependent variable is the researcher Use is for test understanding read they with use wrong one aspect language England namely Reading in the form text descriptive about animal .

b. Previous Literature Reviews

Application technology really important in modern times advanced this , especially in world education . Following is wrong one problems experienced by a teacher according (Sutaryono & Setyasto, 2021) say that teacher already obtain information about learning media innovation based technology but not yet can apply optimally especially utilization of Augmented Reality. So from it , before We teach technology to child student with right , as a teacher or prospective teachers are required for study it especially first so when learning the teacher delivers material with good and students also understand what was said by the teacher. As for related literature review, researchers discuss about use learning Augmented Reality based , application Assemblr edu , and understanding student in read text English text.

c. Previous Method

Quoted from study before , like article creation (Sutaryono & Setyasto, 2021) they use method analysis and explanation in a manner descriptive . However , in matter this , researcher decide for use method qualitative with approach descriptive . Processing of the data presented also shaped statistics descriptive that is with exists use pie chart images for calculation percent then the explanation explained in a manner descriptive . On the side that , the addition of the second data from results interview to participant Becomes wrong one instrument in data processing in research this , and naturally the data results also explained in a manner descriptive.

d. Previous Validation

Study started on explanation following this :

1) **Day / Date Observation First** : Wednesday , November 16, 2022

Meet with Vice Principal (Deputy Head school): Mr. Tedi Ridho , S.Pd.

Request permission first time to school the and get good response _ from party school . However ,for decision teach us told for wait news good from party school because accidental party school tell that school they will stage Evaluation End of Semester (PAS).

2) **Day / Date Observation Second** : Friday , November 25, 2022

Meet with Principal and Vice Principal : Mr. Wahyudin , M.Pd and Mr. Ted Ridho , S.Pd.

Request permission our second in acc , however there is little problem inside scheduling for teach him , because busyness from each party so that communication walk a little slow and also adapt situation school before do Evaluation End of Semester (PAS). Beside That 's permission teach finally fluent because communication already walk smooth day _ Sunday , November 27, 2022. Our group finally allowed for teach on day Tuesday , November 29, 2022. Not forget we also apply sheet validation as sign that we are accepted by party SDIT Widya school scholar . Sheet the handed over by

Mr. _ Representative Head School , and for Head School only accept letter application permission teach from us.

3) Day / Date Observation Third : Tuesday , November 29, 2022

Met with the Guardian Teacher Class 6 Widya Scholar : Mrs. Ma'e.

Before activity started , we already get permission especially formerly by Mr. _Tedi as representative head school , however because he currently there is meeting then we were directed security school for meet guardian class 6 SDIT Widya scholar . We started learning at 11.00-12.00, we do it with as good maybe , kids enough Enthusiastic , teachers too watching us when teach . We ordered children for read lafadz " Basmalah " especially first , then introduce self before do teaching , introducing application assembly and warning smartphone use for Assemblr , we commemorate smartphone use because school forbid the use of the smartphone alone . After that , we started teaching with assembly and enough walk with fine , then after teaching done they order for fill in questionnaire that we have made and about text understanding text . On Basically , activity the enough walk with fine , though still many experience deficiency start from number of students no in accordance attendance because many are absent and sick , and teaching done _ at break time them . Activity closed with distribution gifts , reading lafadz " Hamdalah " , session photo together , submission sign thank you for guardian class and party school as well as reading regards and gift message for children because want to face Evaluation End of Semester (PAS).

e. Previous Results

In presentation results research, researcher describe with accompanying pie chart and image calculation results percent in it . Results the obtained from questionnaire the researcher 's questionnaire for before learning going on , then participant fill it when learning already done . On the side it , researcher also serve table as results from understanding read participant in read text English use application assembly .Not only that , the results of the data also supported with interview data results researcher to a number of participant related use application assembly as a learning medium English text.

CONCLUSION

Thus, it can be concluded that English is an international language that is widely used by all people in the world in communicating. In the current process of learning English in the era of digitalization, it is very diverse, one of which is using Augmented Reality-based learning. Therefore, this research was conducted to find out the use of the Assemblr application as a learning medium for 6th grade students at SD IT Widya Cendekia for the 2022-2023 academic years. In addition, this study used a descriptive qualitative method and the participants in this study were an English teacher and 10 grade 6 students. Based on this, the researcher obtained data through observation, questionnaires, and interviews. The observation research process was carried out passively and questionnaire processing was used as descriptive statistical data processing. Meanwhile, 6 students gave their views on Assemblr through the interview instrument. Therefore, the results showed that students were interested in using the Assemblr application as an English learning media with the results of the percentage answering interested more than the percentage answering not interested. Meanwhile, the percentage of students agreeing that the Assemblr application improves reading

comprehension is more than the percentage answering disagree. Furthermore, the Assemblr application can make it easier for them to understand English reading text.

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