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The Influence of Learning Media Using the Assemblr Edu Application on Student Learning Interest in Class V Science Subjects at SD Palembang

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Abstrak

Penelitian ini bertujuan untuk melihat pengaruh aplikasi Assemblr Edu terhadap minat belajar siswa kelas V SD 226 Palembang. Penelitian ini menggunakan metode kuantitatif dengan tipe pre-experimental dengan One Group Pretest-Posttest Design. Data menunjukkan bahwa pada uji t sampel berpasangan nilai signifikansi adalah 0,005 yang < 0,05 dan nilai signifikansi 2-tailed adalah 0,082 yang >0,05 dan skor rata-rata pretest adalah 78,75 dan posttest adalah 81,13. Hasil penelitian menunjukkan bahwa terdapat pengaruh media pembelajaran menggunakan aplikasi Assembler Edu terhadap minat belajar siswa walaupun tidak signifikan.
Kata Kunci: *Media Pembelajaran, Aplikasi Assemblr Edu, Minat Belajar*

Abstract

This study aims to see the influence of the Assembly Edu application on students' learning interests in the fifth grade of elementary school 226 Palembang. This study used quantitative methods with a pre-experimental type with Group Pretest-Posttest Design. The data showed that in the paired sample t-test, the significance value was 0.005, < 0.05; the significance value of the 2-tailed was 0.082,>0.05; the average pretest score was 78.75, and the post-test was 81.13. The results show an influence of learning media using the Assembler Edu application on students' learning interests, although it is insignificant.
Keywords*: Learning Media, Assembly Edu Application, Interest in Learning*

INTRODUCTION

We have entered the era of sociaty 5.0, an era where technology is becoming more closely related to humans (Sukatin, 2022). Many innovations and various breakthroughs in science and technology have contributed to facilitating and prospering human life (Rohmaya, 2022). In this era, education also plays a fundamental role in facilitating students to have learning skills, use technology, and various other life skills to survive the times' challenges (Pratiwi, 2019). Ideally, in science learning, students are trained in complex intellectual activities, not just remembering information (Yessy, 2020). Science learning should be directed to mastering various skills students need to face the challenges of this era, such as science literacy and technology (Pratiwi, 2019).

One crucial factor that can affect the effectiveness of a learning process is interest in learning (Eveline &; Hartini, 2015). If students are interested in learning, then these students will follow the learning process with focus and volunteering (Yessy, 2020). This interest will also encourage students to learn something and see how their learning material relates to themselves. If students realize the benefits, they will be satisfied, more interested, and motivated to learn it (Slameto, 2021). The sense of satisfaction and fun experienced by students will ultimately strengthen the learning outcomes obtained from a learning process (Khodijah, 2016). This also applies to science learning. If students have an interest in learning, the learning outcomes will be better than those who do not have an interest in learning.

Some research shows that many students find learning science difficult and unpleasant. Research conducted by (Rumiati &; Wahyudi, 2022) shows that out % of 43 students, 63% of them, or around 27 students consider learning science difficult. Another study by Andira et al. states that many students feel bored or bored with science learning, causing a lack of interest in the learning (Andira et al., 2022). Based on the research above, we can conclude that it is challenging for teachers, especially elementary school teachers, to be motivated to create more exciting and fun learning. Creating fun learning can be done with learning tailored to elementary school children's characteristics.

One of the characteristics of elementary school children is understanding something through tangible things (Santrock, 2017) and feeling happy to use objects in the form of images of concrete objects so that in learning, teachers can use semi-concrete media (Yessy, 2020). In line with J. Bruner's theory that students acquire knowledge through three main modes, namely

enactive (direct experience), iconic (indirect experience through visual), and symbolic (indirect experience through symbols) (Sundari, 2021).

In this study, researchers will use iconic mode, learning through visualization of concrete objects or other semi-concrete senses. Based on this theory, the characteristics of elementary school children can be met through the learning process using various kinds of semi-concrete media. The learning media will be designed and adjusted to the learning or material to be taught. With these learning media, students will be interested and motivated to learn. One of the learning media that fits these criteria and can be used in a learning process is Augmented Reality learning media.

Augmented Reality is defined as a combination of Virtual Reality (visual Reality) with World Reality (actual Reality) in which 2D and 3D objects can be inserted so that they look natural and blend with our world (Syahruddin &; Syafaat, 2022). This Augmented Reality technology has been applied in various fields, including education (Yessy, 2020). In education, Augmented Reality can facilitate the learning process, one of which is in science subject matter, because it can make the learning process more meaningful and exciting for students (Hindun, 2022).

Augmented Reality-based learning media can increase students' interest in learning by attracting and stimulating their interest in learning through visual projections that they can observe directly (Karunia, 2022). This is confirmed by various research results, such as those conducted by Tony Wibowo and Sophia Loren, that Augmented Reality as a learning medium can improve the learning process and increase students' interest in learning and research results (Wibowo &; Loren, 2021). Alfares &; Murwonugroho state that Augmented Reality can optimize the enthusiasm and interest of students so that it has enormous benefits to increase the interest of students) (Alfares &; Murwonugroho, 2021).

Several previous studies above represent that Augmented Reality-based learning media can increase students' interest in the learning process, one of which is science subjects. However, unlike previous studies, our research brought novelty, namely using the Assmblr Edu android application for science learning at the elementary school level in Palembang. Based on this background, researchers will conduct research on the Influence of Learning Media Using the Assemblr Edu Application on Student Learning Interest in Science Subjects at SD Palembang.

RESEARCH METHODS

This study uses quantitative research methods with the type of experimental research, which is a quantitative research method that can test causal relationships correctly (Emzir, 2020). The research design used, namely Pre-experimental design with One group pretest-Postest model. This model has one group where the group will be given a pretest before getting treatment (treatment) and a post-test to compare the condition before and after treatment (Sugiyono, 2019). In this study, the group will be given treatment by using the Assmblr Edu application as an Augmented Reality-based learning medium on class V material, namely the benefits of water.

O_1	X	O_2

Figure 1. One Group Pretest Post-test *Research Design*

Information:

O1 = Pretest

O2 = Postest

X = Treatment

In this study, the sampling technique is a probability sampling technique with a type of Simple Random Sampling, where sampling is taken randomly or randomly from a homogeneous population (Darwin et al., 2021). The data collection instrument in this study used a questionnaire, which is a tool used to collect data by dividing a list of questions or statements to respondents to get answers (Kurniawan &; Puspitaningtyas, 2016) in the form of twenty statements to measure students' interest in learning.

Table 1. Learning Interest Indicators and Sub-Indicators

Learning interest indicators	Sub indicators	
Attention	1.	Pay attention when the teacher teaches.
	2.	Have a sense of curiosity.
Feeling happy and not happy	1.	Follow the learning process happily
	2.	Bored
Awareness	1.	Study hard.

	2.	Respect for opinions or works
Desire	3.	Take your work hard
	4.	Want to solve problems?

The measurement scale used is the Likert scale, which is a scale that can be used to measure the opinions, perceptions, and attitudes of an individual or group regarding an event or social symptom (Sudayono, 2018: 190).

Table 2. Learning Interest Questionnaire Assessment Score

Information	Shoes
Strongly Agree (SS)	5
Agree (S)	4
Disagree (KS)	3
Disagree (TS)	2
Highly Disagree (STS)	1

Before the author gave a questionnaire on student learning interest, the author conducted a validity and reliability test using SPSS 25 software whose results from twenty statements were five statements with low validity, namely in points 1, 2, 5, 9, and 10. Thus, the author did not include these items. For reliability, it was also tested with SPSS 25 software, and a calculated Rcalculate value of 0.748 was obtained, which is greater than Rtabel, which is 0.6, so that the instrument is reliable or consistent.

Table 3. Instrument Reliability Test Results

Reliability Statistics

Cronbach's Alpha	N of Items
,748	15

To analyze and test the data of students' learning interests, the author will conduct a pre-incision test first, namely a normality test using One sample Kolmogorov-Smirnov test on SPSS 25. Then if the data is normally distributed, it will be continued with a paired sample t-test using SPSS 25 to see the effect of the treatment on students. As for this study, the hypothesis was

formulated with statistical symbols, namely H0 and H1. The explanation is as follows:

1. H0: The Augmented Reality-based Assmemblr Edu application has no influence on students' interest in science lessons.
2. H1: There is an influence of the Augmented Reality-based Assmemblr Edu application on students' interest in science lessons.

The paired sample t-test (t_{count}) results will be compared with the t_{table} value with a significance of 5%. The basis for decision-making based on GIS is as follows:

1. If the significance value < 0.05, then H_1 is accepted H_0 is rejected.
2. If the significance value > 0.05, then H_1 is rejected H_0 is accepted.

RESULTS AND DISCUSSION

The treatment provided using the augmented reality-based Assembler Edu Application was based on learning materials on water benefits in class V theme eight sub-theme 1. The display of these learning materials in the Asmmbler Edu application is as follows:

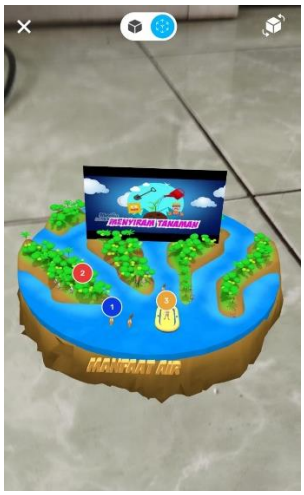

Figure 2. Augmented reality display on assembly edu application

Statistical Results Data

Based on the results of the questionnaire on student learning interest in science learning, the material benefits of grade V water in elementary schools are as follows:

Table 4. Results of Student Learning Interest Data

Analysis results	Pretest	Analysis results	Post
Mean	78,75	Mean	81,13
Median	80	Median	81
Maximum	91	Maximum	96

Minimum	62	Minimum	67

Based on Table 3 above, we know that before the treatment was carried out on the students, the highest score obtained was 91, the lowest score was 61, and the average score was 78.75. While after treatment was given, the highest score obtained was 96, the lowest was 67, and the average score was 81.13. Then a prerequisite test is carried out. Namely, the normality test using the sample Kolmogorov-Smirnov test on SPSS 25, where if the significance value > 0.05, the data is usually distributed, and a paired sample t-test will be carried out. In contrast, the Wilcoxon signed test will be carried out if the significance value < 0.05, and then the data is not normally distributed. The data of the normality test results are as follows.

Table 5. Normality Test Results Data

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		29
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	6,23025804
Most Extreme Differences	Absolute	,087
	Positive	,087
	Negative	-,085
Test Statistic		,087
Asymp. Sig. (2-tailed)		,200[c,d]

Based on Table 4 above, we can know that the significance value of the data is 0.200, where the significance value is > 0.05, so the data can be concluded to be normally distributed. Then after the prerequisite test, a paired sample t-test is carried out because the data is usually distributed. The basis for decision-making is if the significance value < 0.05, then H1 is accepted, H0 is rejected, and if the 2-tailed significance value is < 0.05, then there is a significant difference. The paired sample t-test result data are as follows:

Table 6. Test Paired Sample T-test

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PRETEST & POSTEST	29	,506	,005

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRETEST - POSTEST	-2,379	7,098	1,318	-5,079	,321	-1,805	28	,082

Based on Table 5, it is known that the significance value is 0.005 where the value is < 0.05, so it can be concluded that H_1 is accepted, which indicates an influence between the Assembler Edu application on student learning interest and the 2-tailed significance value, which is 0.082 which > 0.05 indicates no significant influence.

Discussion

Based on the research results above, it can be seen that there is an influence between learning media using the augmented reality-based Assemblr Edu application on the learning interest of grade V.2 students of SDN 226 Palembang. The influence of learning media using the Assembler Edu application on students' learning interests is in line with the research (Yessy, 2020) which shows that augmented reality-based learning media can increase students' interest in learning.

Augmented *Reality-based media* can positively influence science learning because when the learning process students become interested, it is easier to understand the learning material to observe the material that appears on the *mobile screen*. This means that this application can provoke students to be scientific, such as the emergence of curiosity, confidence, objectivity to facts, and honesty (Jannah &; Atmojo, 2022). In line with research conducted by (Midik et al., 2023), augmented reality media can have a positive influence, such as a sense of pleasure, active participation, interest, and attention of students in the learning process so that it can increase students' interest in learning.

Interest is a tendency, interest, or liking for something without being forced or ruled by someone (Slameto, 2021). That is in line with research conducted by (Nadela et al., 2022), saying that augmented Reality that can display objects can attract students and increase their interest in learning. The science learning process in class V.2 of SDN 226 Palembang, which is collaborated with learning media using the augmented reality-based Assemblr Edu application, can bring a new atmosphere and spirit to the learning process. This is because this application can display objects that seem natural in front of them, making it easier for them to observe and study the objects or learning materials in them. This is also reinforced by the studies above so that this can prove that learning media applications using the Assemblr Edu application can affect the learning interest of students.

CONCLUSION

Based on the results of data analysts that the significance value of the paired sample t-test test is 0.005, which is < 0.05 and an increase in the average value of 2.38 and reinforced by several previous studies shows that the influence of learning media using the augmented reality-based Assemblr Edu application on student learning interest is not significant. Based on this conclusion, the researcher suggests that future researchers use this type of accurate experimental research because this study is only pre-experimental, so research can be carried out more in-depth.

REFERENCES

Alfares, Y. J., & Murwonugroho, W. (2021). Penerapan Teknologi Augmented Reality untuk Media Pembelajaran Interaktif Pada Anak. Jakarta: Lembaga Penelitian Universitas Trisakti. Jurnal Penelitian dan Karya Ilmiah. 6(2). 211.

Andira, P. A., Utami, A., Astriana, Mirli., & Walid, A. (2022). Analisis Minat Siswa Terhadap Hasil Belajar Siswa dalam Pembelajaran IPA. Bengkulu: Universitas Fatmawati Sukarno. Jurnal Pendidikan. 11(1). 50.

Darwin, M., Mamondol, M. R., & Sormin, S. A. (2021). Metode Penelitian Kuantitatif. Bandung: Media Sains Indonesia.

Emzir. (2020). Metodologi Penelitian Pendidikan: Kualitatif dan Kuantitatif. Jakarta : RajaGrafindo Persada.

Hindun, A. S. (2022). Implementasi Teknologi Augmented Reality Berbasis Android: Sebagai Media Pembelajaran IPA yang Bermakna. Bali: Yayasan Jaringan Kerja Pendidikan. Jurnal Perspektif. 1(5). 458

Jannah, D. R. N., & Atmojo, I. D. R. W. (2022). Media Digital dalam Memberdayakan Kemampuan Berpikir Kritis Abad 21 Pada Pembelajaran IPA di Sekolah Dasar. JurnalBasicEdu. 6(1). 1071.

Khodijah, N. (2016). Psikologi Pendidikan. Jakarta: PT RajaGrafindo Persada.

Kurniawan, A. W., & Puspaningtyas, Z. (2016). Metode Penelitian Kuantitatif. Bantul: Pandiva Buku.

Midik, R. R. D., Prasetya, F., Yufrizal, A., & Rifelino. (2023). Efektifitas Media Pembelajaran Augmented Reality untuk Meningkatkan Minat Belajar Siswa Pembelajaran CNC Pada Kelas XI SMKN 5 Padang. Padang: Universitas Negeri Padang. Jurnal Vokasi Mekanik (Vomek). 5(2). 23.

Nadella, E. A., Permana, N. D., Berlian, M., & Vebrianto, R. (2022). Pembelajaran Augmented Reality untuk Meningkatkan Pemahaman Hakikat Sains Sistematis Literatur Review. Padang: UIN Imam Bonjol. Natural Science: Jurnal Penelitian Bidang IPA dan Pendidikan IPA. 8(2). 107.

Oktaviani, Y., Lusa, H., & Noperman, F. (2020). Pengaruh Augemented Reality sebagai Media Pembelajaran terhadap Minat Belajar Siswa Mata Pelajaran IPA SD Kota Bengkulu. Bengkulu: Universitas Bengkulu. Jurnal Riset Pendidikan Dasar. 2(3). 103, 203-204.

Pratiwi, S. N., Cari, C., & Aminah, N. S. (2019). Pembelajaran IPA Abad 21 dengan Literasi Sains Siswa. Surakarta: Universitas Sebelas Maret. Jurnal Materi dan Pembelajaran Fisika (JMPF). 9(1). 39-40.

Rohmaya, N. (2022). Peningkatan Literasi Sains Siswa Melalui Pembelajaran IPA Berbasis Socioscientific Issues (SSI). Bali: Universitas Pendidikan Ganesha. Jurnal Pendidikan MIPA. 12(2). 107.

Rumiati, Wahyudi, & Ngatman. (2022). Analisis Kesulitan Belajar IPA Materi Energi Alternatif Pada Siswa Kelas IV SD Negeri 5 Bumirejo Tahun Ajaran 2020/2021. Surakarta: Universitas Sebelas Maret. Jurnal Ilmiah Kependidikan. 10(1). 8.

Santrock, J. W. (2017). Child Development, eleventh edition. Jakarta: PT Gelora Aksara Pratama.

Selfia, K. D. (2022). Pengembangan Media Pembelajaran Dasar Desain Grafis Berbasis Augmented Reality bagi SMK Kelas X. Pontianak: Universitas Tanjungpura. Jurnal VISI Ilmu Pendidikan. 14(2). 165.

Siregar, E., & Nara, H. (2015). Teori Belajar dan Pembelajaran. Bogor: Ghalia Indonesia.

Slameto. (2021). Belajar dan Faktor-faktor yang Mempengaruhinya. Jakarta: Rineka Cipta.

Sugiyono. (2019). Metode Penelitian Kualitatif, Kuantitatif, dan Rnd. Bandung: Alfabeta.

Sukatin, Hasanah, S. A. N., Ningsih, O., Pratiwi, R. I., & Subagia, W. (2022). Perkembangan di Era 5.0. Jambi: Insitut Agama Islam (IAI) Batang Hari. PIJAR: Jurnal Pendidikan dan Pengajaran. 1(1). 80.

Sundari & Fauziati, E. (2021). Implikasi Teori Belajar Bruner dalam Model Pembelajaran Kurikulum 2013. Surakarta: Universitas Muhammadiyah. Jurnal Papeda. 3(2). 103.

Syahruddin, A. Z., Syafaat, F., & Zakiyabarsi,F. (2022). Media Pembelajaran Interaktif Berbasis Augmented Reality (Studi Kasus: Mata Pelajaran Fisika Besaran dan Satuan). Makassar: Universitas Islam Negeri Alauddin. Jurnal INSYPRO (Information System and Processing). 7(2). 2.

Wibowo, T., & Loren, S. (2021). Perancangan dan Implementasi Media Pembelajaran Aplikasi

Desain Grafis dengan Menggunakan Augmented Reality. Batam: Universitas Internasional Batam. Conference on Management, Business, Innovation, Education and Social Sciences (CoMBInES). 1(1). 736.