

## THE IMPLEMENTATION OF AUGMENTED REALITY-BASED LEARNING MEDIA ON CIVICS SUBJECT TO INCREASE LEARNING MOTIVATION OF ELEMENTARY SCHOOL STUDENTS

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### Abstract

*This research is motivated by the low motivation of students to learn because the learning process tends to use traditional methods. The development of science and technology that is increasingly sophisticated can be utilized by teachers in using learning media. However, in reality, many teachers do not utilize the use of technology in teaching and learning activities. One of the media that can be used in the learning process is Augmented Reality-based media. The purpose of this study is to determine the implementation of Augmented Reality-based learning media to increase the learning motivation of VI grade students at SDN 01 Kenokorejo. This research employed a quantitative study with a quasi-experimental design using Single-Group Interrupted Time-Series Design. This type of design only uses one class, namely the test class. The sample involved 14 students consisting of: 10 male students and 4 female students. The instrument used was a learning motivation questionnaire. Data collection techniques were through observation and questionnaires. Prerequisite tests, namely normality test and homogeneity test and homogeneity test (T-test) through SPSS was used as the data analysis technique. The results of the univariate normality test were 0.16, which means > from 0.05, the data was declared "Normal". The univariate homogeneity test was 0.804, which means > from 0.05, it was declared "Homogeneous Data" and the homogeneity test (T-test) was 0.000 < 0.05. This shows that there is a significant influence on the difference in the results of the learning motivation questionnaire. Based on the results of the study, it can be concluded that student learning motivation has increased. This is evident from the average score obtained by students from 68,14 to 83,92; so that the implementation of this learning media is effective in increasing student learning motivation.*

**Keywords:** *Augmented Reality; Learning media; Learning motivation*

### Abstrak

Penelitian ini dilatarbelakangi oleh rendahnya motivasi belajar siswa karena proses pembelajaran yang cenderung menggunakan cara tradisional. Perkembangan ilmu pengetahuan dan teknologi yang semakin canggih dapat dimanfaatkan oleh guru dalam menggunakan media pembelajaran. Namun, pada kenyataan banyak guru yang kurang memanfaatkan penggunaan teknologi dalam kegiatan belajar mengajar. Salah satu media yang dapat digunakan yaitu media berbasis *Augmented Reality*. Tujuan dari penelitian ini untuk mengetahui penerapan media pembelajaran berbasis *Augmented Reality* untuk meningkatkan motivasi belajar siswa kelas VI SDN Kenokorejo 01. Penelitian ini merupakan penelitian kuantitatif dengan desain kuasi-eksperimen. Adapun desain yang digunakan yaitu *Single-Group Interrupted Time-Series Design*. Desain jenis ini hanya menggunakan satu kelas, yaitu kelas tes. Sampel yang digunakan berjumlah 14 siswa terdiri dari: 10 siswa laki-laki dan 4 siswa perempuan. Instrumen yang digunakan yaitu angket motivasi belajar. Teknik pengumpulan data menggunakan observasi dan angket. Teknik analisis data menggunakan uji prasyarat yaitu uji normalitas dan uji homogenitas serta uji homogenitas (uji-T) menggunakan SPSS. Adapun hasil uji normalitas univariat sebanyak 0,16 artinya > dari 0,05 maka data dinyatakan "Normal" dan uji homogenitas univariat sebanyak 0,804 artinya > dari 0,05 maka dinyatakan "Data Homogen" serta uji homogenitas (uji-T) sebanyak 0,000 < 0,05 maka hal ini menunjukkan terdapat pengaruh yang bermakna terhadap perbedaan hasil angket motivasi belajar. Berdasarkan hasil penelitian menunjukkan bahwa motivasi belajar siswa meningkat, hal ini terbukti dari rata-rata skor yang diperoleh siswa dari 68,14 menjadi 83,92; sehingga penerapan media pembelajaran ini terbukti efektif mampu meningkatkan motivasi belajar siswa.

**Kata Kunci:** *Augmented Reality; Media pembelajaran; Motivasi belajar*

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## Introduction

Civic Education (*PKn*) is one of the subjects studying a series of processes that guide students to be responsible and able to play an active role in society in accordance with the provisions of Pancasila and the 1945 Constitution of the Republic of Indonesia. Civic Education is able to prepare students to become citizens who are strongly committed and consistent in defending the Republic of Indonesia (Madiong, 2018). According to Suswanto dalam (Magdalena et al., 2020) Civics Education has a strategic and important role in shaping democratic and responsible Indonesian citizens, that students and attitudes in their daily behaviour so that they can be the better people. Students' interest in learning Civics requires special attention because interest is one of the factors supporting the success of learning. In addition, interest arising from students' need become an important factor in student activities or efforts.

Education today is inseparable from the development of science and technology that is increasingly sophisticated. All forms of learning process can be carried out easily because of technological assistance. According to (Almufarreh & Arshad, 2023) technological advancements have significantly influenced the education landscape, propelling traditional teaching methodologies into immersive and interactive learning experiences. Researchers continued comparing newly developed technologies to traditional media hoping for an educational revolution because now this technology will change learning fundamentally (Bozkurt, 2020).

One way that can be applied in today's technological developments is learning media. This is a tool that can be used by teachers to make students are easy to understand learning material (Yullys et al., 2019). Media has an indispensable role as an intermediary in delivering material, messages, and communication between students and teachers. The development of the current era is followed by the development of science and technology that is increasingly sophisticated. As a result, teachers are required to update their skills to encourage the success of the learning process. In addition, teachers must also be skilled in making and using learning media that will be used in the learning process.

Learning media is the crucial thing to use during the learning process. Elementary school learning is no exception, because elementary school students include children who are in the condition of concrete operations, (Kiswanto, 2017). According to (Yudhi, 2013) learning media can be interpreted as anything that can convey and channel a message from a planned source to create a conducive learning environment where the recipient can carry out the learning process efficiently and effectively. Researchers, and practitioners, should acknowledge that augmented reality can be used to design effective and engaging learning environments, but so can ineffective and poor learning environments be developed using augmented reality (Buchner & Kerres, 2023).

Through the interesting media, it will foster student motivation and enthusiasm for learning. Motivation to learn is an encouragement that exists within so that it creates a desire to learn, (Pratama et al., 2019). According to Lauermaann et al in (Jud et al., 2023) the context of teaching, motivation is defined as an internal state which activates and guides (teaching) behaviour. However, students often feel bored and find it difficult to understand the material being taught. Therefore, an interesting and innovative media is needed in learning Civics. The

implementation of Augmented Reality-based learning media can help increase student involvement in understanding Civics material so that it can improve the quality of learning in the classroom and outside the classroom because the media is easy to access and use. One of these interesting media is Augmented Reality-based technology.

This technology combines 3-dimensional real objects with 3-dimensional virtual objects with the same duration and place, where the distance of real objects and virtual objects is put together so that they can be connected in real time in a 3-dimensional display (Atmajaya, 2017). Many researchers have studied Augmented Reality, but each researcher has its own character related to the theme. Both from the causes of occurrence, who is involved, the stages passed during collaboration, the obstacles overcome and the authority of each party involved. As with research conducted by (Larasati & Widiasari, 2021) which examines augmented reality-based media focused on learning styles in mathematics subjects. The researcher's findings are that the use of Augmented reality media tends to lead only to visual learning styles, while students with kinesthetic and auditory learning styles are less interested. AR media results are only in the form of images that can be enlarged and reduced.

Based on the results of the above research, researchers try to apply augmented reality-based Civics learning media in the form of Instagram filters that can be used by all students with diverse learning styles because it is equipped with images, sounds and movements when using this media. This Instagram filter media is used using Spark AR and Instagram applications which can later be accessed by other schools easily. This media is in the form of practice questions equipped with an answer key, but there is a time duration for answering which causes students to be challenged in using this media.

There are three characteristics of a technology applying the concept of Augmented Reality that it is able to: (1) combine the real world and the virtual world, (2) provide information in real-time and interactive, and (3) display into three-dimensional form (Billinghurst et al., 2014). Augmented reality technology in learning is able to increase student motivation and interest in learning so that it can support the learning process (Pérez-López & Contero, 2013). Basically, the development of Augmented Reality in learning media is created to increase the students' motivation to learn abstract material. Augmented Reality can be used by working, such as detecting images from cameras from certain devices then appearing a 2-dimensional or 3-dimensional image, sound, video according to the media device used (Lee, 2012). AR is the fusion of digital information with the physical environment, allowing users to interact with virtual elements effortlessly without concentrating on a device's screen (AlGerafi et al., 2023).

Research related to the implementation of Augmented Reality-based learning media has been carried out by several researchers including: According to (Usada, 2014) implementing Augmented Reality technology media to create digital engineering learning media in the form of practicum modules where the technique used is Leybold Kit, similar to the Leybold trainer board along with logic gates. (Gede et al., 2015) mentioned Augmented Reality media to introduce animals to kindergarten students using markers printed on paper with the results of three-dimensional objects that when the application is directed at the marker, it is as if there are three-dimensional animals coming out of the paper accompanied by its movement.

Based on initial observations conducted by researchers at SDN 01 Kenokorejo Polokarto District, Sukoharjo Regency, a problem was found namely there is no motivation to learn due to several things, such as the lack of interest of students in certain subjects, boredom, the teacher's teaching style which tends to be monotonous, less interesting learning media, and the lack of students' motivation. This happens because the teacher only conveys the learning process, especially Civics, using the lecture method, question and answer, as well as assignment

methods which are carried out conventionally, making the students lack motivation to learn. One way to overcome this problem is to make learning media that is interesting, effective, and fun so that it can increase students' learning motivation. With the right media, learning can run effectively and optimally. Therefore, one of the learning media that can be used in the learning process is Augmented Reality-based media.

This research is in line with previous research conducted at SD Kanisius Bedono, it was found that the learning process only uses material books without the use of learning media, making it difficult for students to understand the existing theory and decreasing student learning outcomes, (Susetya & Harjono, 2022). Another problem that occurs at SD Negeri Ujong Tanjong, not a few students are not focused during the teaching and learning process, students rarely do assignments and are easily discouraged, students are often quickly satisfied with the results obtained and do not have a competitive spirit. researchers suspect that low learning motivation is influenced by the use of learning media, (Ulfa & Nasryah, 2020).

Regarding to the above problems, the implementation of learning media based on Augmented Reality is very necessary for the development of increasingly sophisticated times. This is because the learning motivation of students is influenced by the learning media used by the teacher. Learning motivation is the driving force for a person to carry out the learning process. Motivation is an important factor in learning so that students are motivated and excited about learning. Motivation and learning influence each other, and the task of motivation is to encourage effort and achieve the desired success (Sari et al., 2021). In addition, motivation provides students the desire to do something for the achievement of the expected goal (Cavilla, 2017).

Indicators of learning motivation according to the theory of Uno in (Nasrah, 2020) do not take all theories, only some that are considered appropriate to the needs of researchers, including the existence of (1) desire to succeed, (2) encouragement and needs in learning, (3) future expectations and ideals, (4) appreciation in learning, (5) interesting activities in learning, and (6) a conducive learning situation, thus enabling students to learn well. According to the theory of (Sardiman, 2012) it include (1) persevere in facing tasks, (2) tenacious in facing difficulties, (3) show interest in various problems for adults, 4) prefer to work independently, (5) get bored quickly on routine tasks, (6) can defend his opinion, (7) difficult let go of things that are believed, and (8) love to find and solve problem problems. Through this media, it is expected to be able to increase the students' motivation to learn, especially in Civics lessons for VI grade in elementary schools.

The purpose of this study is to obtain information related to the implementation of Augmented Reality-based learning media to increase the learning motivation of elementary school students. The general objective was then elaborated in specific objectives, namely: (1) the implementation of Augmented Reality-based learning media to students and (2) the effectiveness of using Augmented Reality-based learning media to increase student learning motivation. The media used in this study is Instagram filter media in the form of quizzes equipped with time and answer keys that are easy to access.

## Research Methods

This research used a type of quantitative research with experimental methods, and the research design used quasi-experiment. According to Campbell & Stanley, 1963; Creswel, 2017 in (Gerbing, 1984) there are three designs in quasi-experimental research designs, one of which was used by researchers, namely: Single-Group Interrupted Time-Series Design. This design

procedure is carried out more than once or several times, that was before and after learning activities. Usually, this type of design was used to observe the impact or effectiveness of a model, approach, or learning strategy by providing several measurements (which may or may not be tested), before and after treatment. This type of design is usually used to see the consistency of a particular topic based on the treatment given and is usually also used when a researcher wants to develop a learning tool or model. This type of design uses only one class, namely the test class.

The sampling used is Nonprobability sampling. It is a sampling technique in which the researcher does not provide equal opportunities for each population selected to be sampled. The technique used saturated sampling, which is a sampling technique where all members of the population were used as samples. This is because the population is relatively small, less than 30 people. The research was conducted at SDN 01 Kenokorejo, Polokarto District, Sukoharjo Regency. The research was conducted in the even semester of 2023/2024 with research subjects in VI grades totalling 14 students, namely 10 male and 4 females. sampling was carried out at the school because it wanted to obtain information about the object of research by observing only part of the population. this was done because of several factors to consider such as the number of students less than 30. Sampling was taken at SDN Kenokorejo 01 because the school has never used Augmented reality-based learning media so that the application of the media needs to be done to provide a novelty in the school.

The data collection techniques used were questionnaires and observations. The questionnaire in this study used in this study is a closed questionnaire. The questionnaire is given at the beginning and at the end during the data collection process about student learning motivation where the researcher has provided a choice of answers then the respondent just chooses the conditions according to what he experiences. The questionnaire sheet is attached in the form of a column, where column 1 contains a number, column 2 contains indicators in the form of statements and column 3 contains answers from respondents consisting of *SL* (Always) with a score of 5, *SR* (Often) with a score of 4, *KD* (Sometimes) with a score of 3, *JR* (Rarely) with a score of 2 and *TP* (Never) with a score of 1. According to the circumstances and abilities of the respondent by giving a check mark (√) in the appropriate column. observation techniques are used to observe the application of Augmented Reality-based learning media prepared through observation or observation sheets. Observations were made during the learning process by the observer. The observation sheet is attached in the form of columns, where column 1 contains numbers, column 2 contains student names and column 3 contains observation indicators during the process of using learning media. The researcher only fills in the check mark (√) in the indicator column according to the researcher's observation. In determining the questionnaire instrument is valid or invalid, then the questionnaire was tested for validity and reliability tests in advance in other elementary schools other. Then, the data were obtained from the validity and reliability tests.

The sample used for the validity test involved 34 students, so  $df = n - 2$ ,  $df = 34 - 2 = 32$ . Based on the table *r product moment* at 5% significance, the number is obtained  $r_{tabel} = 0,339$ . The validity test results are listed in the following table:

Table 1. Validity Test Results

$r_{table}$	Description	Count of items
0,339	Valid	19
- 0,339	Invalid	7
<b>Total</b>		<b>26</b>

Based on table 1 above, it can be concluded that of the 26 statement items, there are 7 items that are declared invalid, namely question items number 4, 5, 7, 15, 16, 18 and 20.

The reliability test was calculated from the items that are declared valid of 19 items. The reliability test is said to be reliable if the Cronbach Alpha value is  $> 0,60$ .

Table 2. Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0,909	19

Based on table 2 above, the reliability test conducted using SPSS obtained a Cronbach Alpha value of 0,909 so that the results of the questionnaire of learning motivation of VI grade students are said to be reliable and will keep consistent even though repeated measurements are made. Before conducting data analysis, the researcher used a prerequisite test in the form of a normality test using the *Shapiro-Wilk test* method and a homogeneity test using the Levene Statistic test. This prerequisite test was carried out before the research conducted. After that, the T-test was carried out using the Paired Simple Test method.

**Result and Discussion**

The data obtained from the student learning motivation questionnaire consists of data on the results before and after the use of learning media using the same questionnaire. The statement was tested to the respondent then the data was analyzed. The first questionnaire was provided to respondents before using Augmented Reality-based learning media because it aims to determine the extent of student learning motivation in answering statements. After the first questionnaire given, then the respondent was provided treatment using Augmented Reality-based learning media, then second questionnaire with the same statement was given to measure whether there are differences in the results of before and after using learning media.

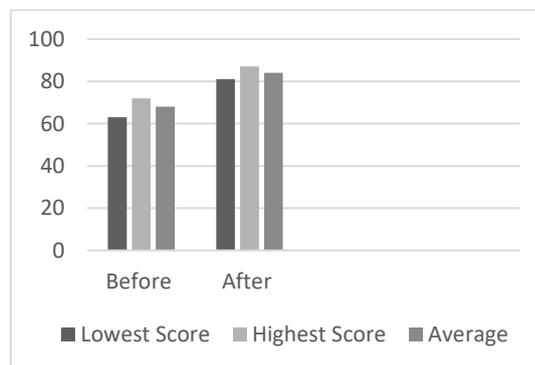


Figure 1. Bar Diagram of Learning Media Implementation Score Results

Based on Figure 1 above, it shows that the scores obtained after using Augmented Reality-based learning media are higher than those before using learning media. This can be interpreted that there is an increase in student learning motivation by using learning media.

The prerequisite tests carried out are normality test and homogeneity test. Data was taken based on the scores of the Midterm Semester Examination (*UTS*) and Final Semester Examination (*UAS*), which were then processed using SPSS.

The normality test was used to determine whether the data is normally distributed in each data. The method used the Shapiro-Wilk test. If the significance value (sig.) of both tests is greater than or equal to 0.05; then it can be concluded that the data is normally distributed. However, if the significance value is less than 0.05; then it can be concluded that the data is not or not normally distributed.

Table 3. Normality Test Results

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
X	.182	14	.200*	.910	14	.160

Based on table 3 above, it shows that the data is declared normal if the significance value is  $> 0,05$ , while the normality test results obtained were 0,16 with a significance level of  $5\% = 0,05$ ; then the Civics exam score data variables of VI grade come from a "Normal" distributed population.

The homogeneity test was used to ascertain whether the data is homogeneous at the level of each variable. One of the statistical tests that can be used is the Levene test. If the significance (sig.) is greater than or equal to 0,05, it can be concluded that the data is univariate and homogeneous. However, if the significance value is less than 0,05, it can be concluded that the data is not homogeneous.

Table 4. Homogeneity Test Results

		Levene Statistic	df1	df2	Sig.
Skor	Based on Mean	.063	1	26	.804
	Based on Median	.072	1	26	.790
	Based on Median and with adjusted df	.072	1	22.911	.790
	Based on trimmed mean	.045	1	26	.833

Based on table 4 above, the results of the heterogeneity test using the Levene Statistic test state that if the significance value (Based on mean)  $> 0,05$ ; it can be concluded the data variant is homogeneous, meaning that the homogeneity test is fulfilled. If the significance value (Based on mean)  $< 0,05$ ; then the data variant is not homogeneous, meaning that the homogeneity test is not fulfilled. Based on Table 4 above, it shows the data from the homogeneity test results on the Based on Mean value of 0,804 which means  $> 0,05$ . It can be concluded that "Homogeneous Data Variants".

Before calculating using the T-test, the researcher had calculated the value obtained from the results of the learning motivation questionnaire conducted twice. The first was done before using Augmented Reality-based learning media and the second after using Augmented Reality-based learning media. The following results are obtained:

Table 5. T-test results

Paired Differences					t	df	Sig. (2-tailed)
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			

Pair 1	Sebelum	-	-	3.9648	1.0596	-	-	-	13	.000
	Sesudah	1.5785	2	4	18.07493	13.49650	14.89	7		
		7E1								

Based on table 5 above, it is known that the results of the T test with if the Sign (2-tailed) value  $< 0,05$ . It means that there is a significant difference between the results of the learning motivation questionnaire on the data before and after using its learning media. If the Sig (2-tailed) value  $> 0,05$ , it means that there is no significant difference between the results of the learning motivation questionnaire on the data before and after. It is known that the Sign (2-tailed) value is  $0,000 < 0,05$ . This shows that there is a significant influence on the difference in the results of the learning motivation questionnaire given at the time before using the learning media and after using the learning media.

In other words, there is a significant difference from the results of the learning motivation questionnaire between before using learning media and after using learning media. In this case, it can also be stated that the use of Augmented Reality-based learning media in the form of Instagram filters is effective and significant to increase the learning motivation of VI grade students at SDN 01 Kenokorejo.

The results of student questionnaires were conducted to determine the effectiveness of learning using Augmented Reality-based media. If the results of student questionnaires have increased, then the Augmented Reality-based Civics learning media is said to be effective. In order to find out the effectiveness, the researcher distributed a closed questionnaire sheet conducted for 2 times, namely before and after using the media. The results obtained are as follows:

Tabel 1. Results of Learning Motivation Questionnaire at SDN 01 Kenokorejo

NO.	Nama	Before using the media	After using the media	Description
1.	ANS	72	81	Increased
2.	BCD	63	87	Increased
3.	FN	70	83	Increased
4.	KMAPS	70	84	Increased
5.	NDA	68	82	Increased
6.	RAN	71	84	Increased
7.	ZAP	71	83	Increased
8.	AS	69	85	Increased
9.	AFRM	66	83	Increased
10.	RIP	64	82	Increased
11.	RW	65	86	Increased
12.	RAA	70	84	Increased
13.	ATAP.	67	87	Increased
14.	UYAKD	68	84	Increased

Based on table 4 above, it shows that there is an increase in scores obtained by students during the process of implementing Augmented Reality-based learning media. Scores were obtained through questionnaires distributed before and after using the learning media. In the percentage value of the increase, almost all students experienced an increase in score. The average score obtained before using the media is 68,14 while the average score after using the

media is 83,92. It reinforces that using Augmented Reality-based learning media is effective to be applied at SD Negeri Kenokorejo 01.

From research conducted at SD Negeri Kenokorejo 01 about Augmented Reality-based learning media that this media is based on the limitations of learning media, especially in Civics subjects. One of the media used is Augmented Reality-based in the form of Instagram filters. In making learning media, researchers have adjusted the characteristics that are in line with the opinion of (Yunanto, 2015) He mentions that there are three characteristics of Augmented Reality, namely (1) combining the real and virtual worlds, (2) interactive is done in real time, and (3) displayed in 3-dimensional form.

The first thing the researcher did was to explain the uses, procedures, and benefits of the learning media that would be applied then provide examples of how to use it. After students have understood the media use, then the researcher provided mobile phones to students in turn. The implementation of Augmented Reality-based Civics learning media in the learning process is quite easy. First, students entered the Instagram account that has been created by the researcher using the researcher's mobile phone considering that students are not allowed to bring mobile phones during school. Then, students selected the filter that will be used. After that, just pressed on the circle where the filter and direct his head to the right or left to choose the answer during the process of using the media. If it finished, just wait for the results of the question that has been selected. During the process of applying Augmented Reality-based learning media, researcher conducted observations as personal stored data to find out several things including: (1) the existence of student interest in using Augmented Reality-based learning media, (2) students are able to use Augmented Reality-based learning media, (3) the existence of increased student learning motivation, and 4) the existence of student satisfaction with the use of Augmented Reality-based learning media.

According to Ilmawan Mustaqim *et al.* in (Farika, 2023) Augmented Reality is not much different from other systems, so it has advantages and disadvantages. The advantages are: (1) more interactive, (2) more effective to use, (3) can be applied to all media, 4) the object displayed is very simple, (5) the cheap cost of making, and (6) easy in its implementation. In addition, the disadvantages or shortcomings of Augmented Reality media include: (1) easy to deform in certain angles, (2) there are still few people who use it, and (3) requires more space memory for installation.

At the end of its implementation, the researcher created a simple conclusion that students have an interest in using the media. In accordance with the conditions in the field, VI grade students at SDN 01 Kenokorejo 01 on average already have mobile phones. Thus, the students are familiar with Instagram media. Therefore, in deploying the use of Instagram filter-based learning media, there were no obstacles found during the implementation process. With this learning media, students feel facilitated in answering existing questions.

Learning effectiveness is able to measure the success of relationships between fellow students or students and teachers in a learning environment in order to achieve learning objectives. Whether a lesson is effective or not can be seen from students' actions during the lesson, students' reactions to learning, and mastery of the material by each student. Effective and efficient learning require a reciprocal relationship between students and teachers to achieve a common goal (Chartier, 1972).

The effectiveness seen in the field is reinforced by the results of Paired Samples Test analysis with a significance value of  $0,00 < 0,05$ , which means that there is a significant difference in student learning motivation before and after the implementation of Augmented Reality-based learning media. The effectiveness of this media aims to increase student learning

motivation in Civics subjects of VI grades at SDN Negeri Kenokorejo 01. It can also be seen from the comparison of the average value between the initial questionnaire and the final questionnaire with an average comparison of the initial questionnaire 68,14 and the final questionnaire 83,92. The average value has increased by 15,78.

This is also reinforced by previous research conducted by (Susetya & Harjono, 2022) about the use of Augmented Reality-based Instagram filter media, which states that the use of Instagram technology media makes the learning process more effective so that it can help students. In research conducted by (Zulfahmi & Wibawa, 2020) the potential of Augmented Reality media in learning media is useful as evidenced by the positive response of students and increased learning motivation in accordance with the journals and articles used in the study. Research conducted by (Naja et al., 2022) stated that the Augmented Reality portal-based learning media development has fulfilled valid criteria. This is evidenced by the value of material experts as much as 85%, media experts of 96,875%, and feasibility of 93,585%.

From the research conducted by (Maha Putra. Angga, 2020) the design of Augmented Reality-based Instagram filters that have been published can be enjoyed by the public to express themselves and become proof that technology acts as a means of entertainment. This is also reinforced by activation evaluation data that the filter has been published and has been viewed by the audience 52,200 times, opened 8,800 times, and used 2,000 times. According to (Farika, 2023) the analysis that has been done regarding the proposed hypothesis is proven to be able to increase motivation and learning outcomes through a realistic mathematics learning approach using Augmented Reality media. Research conducted by (Vargas et al., 2020) by using Augmented Reality-based world heritage games can stimulate students' understanding and knowledge of world history, so that student learning motivation increases when using this media and they can help each other to interact with their friends. The results of research conducted by (Larasati & Widyasari, 2021) states that with various learning styles, there is no difference in the use of Augmented Reality-based learning media. Based on the results of the hypothesis test, the significance value is 0,065 greater than 0,05. Through Augmented Reality media, it can determine the understanding ability of students with different learning styles.

Based on previous relevant research above, it can be concluded that Augmented Reality-based learning media is effective to increase student learning motivation in Civics subjects for VI grades students at SDN 01 Kenokorejo.

## Conclusion

Based on the results of the analysis and discussion of the research above, the implementation of Augmented Reality-based learning media as a Civics learning media is able to increase the learning motivation of VI grade students. In the process of its implementation, the researcher did not experience any significant difficulties. Through Augmented Reality-based learning media, it is effective to be applied in elementary schools. This is evident from the comparison of the average value of the initial and final questionnaire that is from 68,14 to 83,92. This means that the use of media has increased by 15,78. As a result, the use of Augmented Reality-based learning media is able to increase the learning motivation of VI grade students at SDN 01 Kenokorejo. researchers can improve their abilities and skills in making other learning media that can be used and utilized by students and teachers.

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