



## The Effect of ArcGIS Story Maps Media on Students' Understanding in Social Studies Learning

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### Abstract

*The lack of visualization of the social studies material being taught is the cause of students in the field still having difficulty in understanding it. The aim of the research was to analyze the effect of the application of ArcGIS Story Maps on the understanding of grade 8 students of SMPN 29 Bandung on social studies material. This study used a non-equivalent control group design. Based on the results of the study, it was found that there were differences in students' understanding both in the pre-test and post-test. In the pre-test there was no difference in understanding between the experimental and control classes with a probability of  $0,939 > 0,05$ , while in the post-test there was a difference in understanding with a probability of  $0,045 < 0,05$ . The N-Gain value for understanding is  $1,622 > 1$ , indicating that the ArcGIS Story Maps media is more capable of increasing students' understanding. Suggestions from this study, social studies teachers can develop ArcGIS Story Maps media adapted to learning needs.*

**Keywords:** ArcGIS Story Maps, Comprehension, Social Studies Learning Media.

### Abstrak

Kurangnya visualisasi materi IPS yang diajarkan, menjadi penyebab peserta didik di lapangan masih mengalami kesulitan dalam memahami materi IPS. Tujuan dilakukannya penelitian, untuk menganalisis pengaruh dari penerapan ArcGIS Story Maps terhadap pemahaman peserta didik kelas 8 SMPN 29 Bandung pada materi IPS. Penelitian ini menggunakan desain penelitian *non-equivalent control group design*. Berdasarkan hasil penelitian, diperoleh bahwasannya baik di kelas eksperimen maupun kontrol terdapat perbedaan pemahaman peserta didik pada *pre-test* dan *post-test*. Pada *pre-test* tidak terdapat perbedaan pemahaman antara kelas eksperimen dan kontrol dengan probabilitas  $0,939 > 0,05$ , sedangkan pada *post-test* terdapat perbedaan pemahaman dengan probabilitas  $0,045 < 0,05$ . Nilai N-Gain pemahaman  $1,622 > 1$ , menunjukkan bahwa media ArcGIS Story Maps lebih mampu meningkatkan pemahaman peserta didik. Saran dari penelitian ini, guru IPS dapat mengembangkan media ArcGIS Story Maps disesuaikan dengan kebutuhan pembelajaran.

**Kata Kunci:** ArcGIS Story Maps, Media Pembelajaran IPS, Pemahaman.

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## Introduction

Social studies learning activities in the implementation of the 2013 curriculum which should be able to create an active and interactive learning atmosphere, in practice in the social studies learning field still seem monotonous and uninteresting. Several problems in

IPS learning in the field, one of which is the difficulty of students in understanding IPS material. Based on the results of Nurani research (2015) the difficulties that are still experienced by 61.04% of students in understanding social studies material, are influenced by internal factors which include interest of 51.05%, motivation of 50.75%, and talent of 49.38%. External factors which include, the social studies learning process has an impact of 52.71% and learning facilities/infrastructure of 61.77%. The results of another study conducted by Fajriati (2018) also describe that students who have difficulty understanding IPS material are seen from: internal factors which include (1) interest factor of 26.05%, (2) motivational factor of 15.63% , and (3) readiness factor of 12.50%; while the external factors which include (1) the teaching method factor is 6.25%, (2) the teacher interaction factor with students is 4.17%, (3) the learning media factor is 21.87% and (4) the community factor is 7.29%. Both of these studies can be understood that interest and facilities/infrastructure or learning media are factors that have a greater influence on students' understanding abilities of social studies material.

Sasmita et al. (2022) describes that the use of instructional media has an effect of 21.88% on the level of understanding of students. Understanding is the ability to read and understand descriptions, reports, tables, diagrams, directives, regulations, and so on. For example, people at this level can understand what is described in fish bone diagrams, Pareto charts, and so on (Lafendry, 2023). The use of varied and interactive learning media can be the teacher's choice in increasing student understanding. IPS material presented using varied and interactive learning media will be more interesting so that it can stimulate students to learn and can improve student performance in accordance with the goals to be achieved (Asnawir & Usman in Said & Hasanuddin, 2019).

Also supported by the findings of researchers after conducting a preliminary study at SMPN 29 Bandung on Wednesday, January 25, 2023. Most social studies learning in grade 8 still relies on the lecture method and giving assignments. Students seem less enthusiastic in participating in social studies learning, because the delivery of material is less attractive to students for learning. As a result, the social studies learning process in grade 8 seems monotonous and uninteresting. Students consider social studies learning as less interesting learning because it is boring, indoctrinative, and second class (Karima & Ramadhani, 2018). This of course will affect the understanding of grade 8 students of SMPN 29 Bandung on social studies material delivered by the teacher. The results of interviews with 4 students (2 girls and 2 boys) in grade 8 also showed that students were often confused by the teacher's explanations regarding social studies material, moreover the social studies learning process

was not supported by learning media. Students also want to observe what they are learning through visualizations or images that can be presented with the application of learning media so that it will make it easier for students to receive and understand IPS material.

Based on this description, an alternative media is needed that can visualize IPS material on the Geographical Location of ASEAN Countries, namely by using ArcGIS Story Maps media in the IPS learning process. ArcGIS Story Maps is one of the features found on the ArcGIS Online platform, a web-based GIS (Geographical Information System) program application that can be accessed without the need to download it first. This platform was developed by ESRI (The Environmental Systems Research Institute) to help users create interactive digital story maps by combining elements such as text, images, video, audio, and other elements that can present information effectively (Vojteková et al., 2021). ArcGIS Story Maps media facilitate the integration of narration, images and maps in an easy-to-use format (Alemly et al., 2017).

Previous research that describes the use of ArcGIS Story Maps media in the social studies learning process can be seen from the results of research by Egiebor and Foster (2018) in their research entitled Student's Perception of Their Engagement Using GIS Story Maps, that the use of ArcGIS Story Maps in the United States in the social studies learning process can increase student involvement and learning outcomes. Unlike the case in the United States, the ArcGIS Story Maps media in Georgia can be applied to develop students' inquiry abilities in the social studies learning process (Hong & Melville, 2018). Research conducted by Alazmi (2020) describes that the use of ArcGIS Story Maps in social studies learning can support AIW (Authentic Intellectual Work) for high school students in Kuwait.

Based on the description of the previous research, it is understood that research results regarding the use of ArcGIS Story Maps in helping to increase students' understanding are still minimal. So the purpose of this study was to: (1) analyze the differences in understanding of students in the experimental class in the pre-test and post-test in social studies learning using ArcGIS Story Maps media, (2) analyze the differences in the level of understanding of control class students in the pre-test and post-test in social studies learning without using ArcGIS Story Maps media, and (3) analyzing the differences in the level of understanding of students in the experimental and control classes in the pre-test and post-test in social studies learning about the geographical location of ASEAN countries.

## Method

### 1. Research design

The research approach used by researchers is a quantitative research approach with experimental research methods. The experimental research design applied was a quasi-experimental design. Quasi-experimental or also known as quasi-experimental is a research design that is often used in educational research. According to (Cohen et al., 2018) quasi-experiment is field research, meaning research conducted outside the laboratory, where the researcher has control over "the who and to whom of measurement" but has no control over "the when and to whom of exposure". The research design involved two sample classes, namely the experimental class and the control class, so that the quasi-experimental research design used was a non-equivalent control group design which can be represented by the following formula.

Experimental	O <sub>1</sub>	X <sub>E</sub>	O <sub>2</sub>
Control	O <sub>3</sub>	X <sub>K</sub>	O <sub>4</sub>

**Figure 1. Schematic of Non-Equivalent Control Group Design**

Source: Cohen et al. (2018)

### 2. Population and Research Sample

The research population is a collection of individuals who have the same characteristics that can be identified and studied by researchers. While the sample is a subgroup of individuals from the population that can represent the entire study population.

The technique used in taking the sample of this research is random sampling. Samples were taken randomly from the existing population and every grade 8 at SMPN 29 Bandung had the opportunity to be used as a research sample. The population in this study were all 8th grade students at SMPN 29 Bandung in 10 classes (8A to 8J). The researcher took two classes out of the ten existing classes, namely class 8G (experimental class) and 8H (control class) as research samples.

**Table 1. Recapitulation of the Number of Class 8G and 8H Students**

Class	F	M	Amount
8G	16	16	32
8H	16	15	31
<b>Total</b>			<b>63</b>

Source: Research Data (2023)

### 3. Data Collection Techniques

Data collection techniques in this study used research instruments. The research instrument is a tool used by researchers to collect research data (Cohen et al., 2018). There are various types of research instruments offered, but in this study, researchers used comprehension tests. The comprehension tests in this study consisted of pre-tests and post-

tests which were conducted to determine differences in understanding between students in the experimental and control classes. The pre-test is an initial understanding test that is carried out before students are given treatment, while the post-test is a final understanding test that is carried out after students are given treatment. If the experimental class is given treatment using ArcGIS Story Maps media, then the control class is not given the same treatment but uses interactive Power Point.

The formulation of the questions in this comprehension test is adjusted to the understanding indicators contained in Bloom's Taxonomy, namely translation, interpretation, and extrapolation. The form of the questions on this comprehension test is a multiple choice consisting of 15 questions, including 5 translation questions, 5 interpretation questions, and 5 extrapolation questions. The pattern of answers on this comprehension test uses a four-tier multiple-choice test system and done in writing, where students can choose between answers A, B, C, and D. Each correct answer will get a score of 1 while if the answer is wrong, the score obtained is 0.

#### **4. Data Analysis Techniques**

##### **a) Validity Test**

Validity testing in quantitative research is used to show the extent to which an instrument can measure what it is supposed to measure. The instrument referred to in this validity test is an understanding test. Validity test in two ways, namely expert validity test and empirical validity test. The expert validity test was carried out by the PIPS Learning Evaluation lecturer at the Indonesian University of Education as many as 15 items of understanding test were declared suitable for use. The empirical validity test was carried out on 32 class 8A students at SMPN 29 Bandung who had received material on the Geographical Locations of ASEAN Countries. The basis for making decisions on the empirical validity test is if the person correlation value is greater than the r table ( $r_{\text{count}} > r_{\text{table}}$ ) for a significance level of 5%, namely 0,349. The significance level is known to be 0,344 from the table of r table values which shows that if  $N = 32$ , then  $r_{\text{table}} = 0,349$ . The results of the point biserial validity test show that each item has a value of r count greater than r table so that all items can be said to be valid and can be tested on the research sample.

##### **b) Reliability Test**

The results of the reliability test on the students' understanding test items which include the pre-test and post-test show an alpha coefficient value (Cronbach's Alpha) of more than 0,05 ( $0,818 > 0,05$ ), so it can be concluded that the comprehension test items

are reliable with the interpretation of the degree of questionability included in the high category.

### **c) Difficulty Level Test**

Based on the results of the calculation of the difficulty level of the 15 items on the students' understanding test, there are 2 questions in the difficult category, and 13 questions in the medium category.

### **d) Power Difference Test**

Based on the results of testing the discriminating power of 15 items on students' understanding of the Geographical Locations of ASEAN Countries, there were 12 items in the good classification, 3 items in the sufficient classification.

### **e) Normality Test**

Normality testing was carried out using the help of the SPSS program version 26.0 for windows with the Kolmogorov Smirnov test formula. If the sig. > 0,05, then the assumption of normality is fulfilled so that it can be continued through the t-test. However, if sig. < 0,05, then the assumption of normality is not fulfilled so data analysis is continued using the Mann-Whitney test and Wilcoxon test (Cohen et al., 2018). Based on the results of the pre-test and post-test normality tests in the experimental and control classes, there was only one test result that was normally distributed, namely the pre-test results of the experimental class. Subsequent tests were carried out using the Mann-Whitney and Wilcoxon test.

### **f) Homogeneity test**

Based on the results of the homogeneity test through One Way ANOVA, In pre-tets a significance value of 0,423 > 0,05 was obtained, so it can be concluded that the data variance is homogeneous. And in post-test a significance value of 0,554 > 0,05 is obtained, so it can be concluded that the data variance is homogeneous.

### **g) Mann-Whitney and Wilcoxon test**

The criteria used in making decisions about the Wilcoxon test are as follows, if the probability > 0,05, then there is a significant difference between students' understanding on the pre-test and post-test. But if the probability < 0,05, then there is a significant difference between students' understanding on the pre-test and post-test.

The criteria used in making a decision on the Mann-Whitney test are as follows, if the probability > 0,05, then there is a significant difference between the understanding of students from the experimental class and the control class. But if the probability < 0,05, then

there is no significant difference between the understanding of students from the experimental class and the control class.

**Table 2. Wilcoxon test results in the experimental class**

Test Statistics <sup>a</sup>	
Post-test_8G – Pre-test_8G	
Z	-4,898 <sup>b</sup>
Asymp. Sig. (2-tailed)	0,000

Source: Research Data (2023)

The results of the Wilcoxon test contained in table 2 obtained the Asymp.Sig value. (2-tailed) 0,000. Probability  $0,000 < 0,05$ , indicating that  $H_a$  is accepted and  $H_o$  is rejected. This means that there is a significant difference in the level of understanding of students in the experimental class in the pre-test and post-test in Social Studies learning about the Geographical Locations of ASEAN Countries using ArcGIS Story Maps media.

**Table 3. Wilcoxon Test Results in the Control Class**

Test Statistics <sup>a</sup>	
Posttest_8H - Pretest_8H	
Z	-4,232 <sup>b</sup>
Asymp. Sig. (2-tailed)	0,000

Source: Research Data (2023)

The results of the Wilcoxon test in table 3 obtained the Asymp.Sig value. (2-tailed) 0,000. Probability  $0,000 < 0,05$ , indicating that  $H_a$  is accepted and  $H_o$  is rejected. This means that there is a significant difference in the level of understanding of students in the control class in the pre-test and post-test in social studies learning about the Geographical Locations of ASEAN Countries without using ArcGIS Story Maps (interactive Power Point) media.

**Table 4. Results of the Mann-Whitney Test on Pre-tests**

Test Statistics <sup>a</sup>	
Pre-test Result	
Mann-Whitney U	490,500
Wilcoxon W	1018,500
Z	-0,077
Asymp. Sig. (2-tailed)	0,939

Source: Research Data (2023)

Table 4 shows the Mann-Whitney U value of 490,500 and the Wilcoxon value of 1018,500. When converted to a Z value it becomes -0,077. Asymp.Sig value. (2-tailed) of 0,939. Probability  $0,939 > 0,05$ . This means that  $H_a$  is rejected and  $H_o$  is accepted, so it can be concluded that there is no significant difference in the level of understanding of students between the experimental and control classes in the pre-test in social studies learning about the Geographical Locations of ASEAN Countries.

**Table 5. Results of the Mann-Whitney Test on Post-test**

Test Statistics <sup>a</sup>	
Post-test Result	
Mann-Whitney U	352,500
Wilcoxon W	848,500
Z	-2,009
Asymp. Sig. (2-tailed)	0,045

Source: Research Data (2023)

Table 5 shows the Mann-Whitney U value of 352,500 and the Wilcoxon value of 848,500. When converted to a Z value it becomes -2,009. Asymp.Sig value. (2-tailed) of 0,045. Probability  $0,045 < 0,05$ . This means that  $H_a$  is accepted and  $H_o$  is rejected, so it can be concluded that there is a significant difference in the level of understanding of students between the experimental class and the control on the post-test in social studies learning about the Geographical Locations of ASEAN Countries.

**h) N-Gain test**

The N-Gain test was conducted to analyze the effectiveness of using ArcGIS Story Maps media in increasing students' understanding.

$$N - Gain Pemahaman = \frac{53,6120}{33,0417} = 1,622$$

**Figure 1. Comprehension N-Gain Test Results**

(Source: Researchers, 2023)

Based on Figure 1. the understanding N-Gain value is  $1,622 > 1$  indicates that there is a difference in student understanding where learning using the ArcGIS Story Maps learning media is stated to be more capable of increasing student understanding than learning using interactive Power Point media.

**Result and Discussion**

**1. Level of Understanding of Students in Experimental Class in Social Studies Learning Using ArcGIS Story Maps Media**

Social studies learning activities in the experimental class were carried out by social studies teachers in grade 8 SMPN 29 Bandung, on the other hand during the learning process the researcher acted as an observer who observed the activities of students and teachers from beginning to end. IPS learning activities in the experimental class were carried out in two meetings. At the first meeting the learning activities began with a pre-test, because there was a time limit so that learning only lasted until group discussion activities. The next activity was carried out at the second meeting, namely the presentation of the results of group discussions and ending with a post-test.



The results of data analysis carried out by researchers showed a probability of  $0,000 < 0,05$ , meaning that  $H_a$  was accepted and  $H_0$  was rejected. This means that there is a significant difference in the level of understanding of students in the experimental class (8G) in the pre-test and post-test in Social Studies learning about the Geographical Locations of ASEAN Countries using ArcGIS Story Maps media. The understanding of students in the experimental class has increased. The difference in students' understanding in the experimental class cannot be separated from the role of ArcGIS Story Maps media in the social studies learning process. Story maps regarding the geographical location of ASEAN countries can be well visualized because they are presented in the form of integration of digital maps, narratives, images, videos and audio that are interesting, interactive and user friendly (Alemy et al., 2017; Strachan & Mitchell, 2014; Vojteková et al., 2021), so that it has a significant influence on the level of understanding of students (Sasmita et al., 2022). This is in line with the results of research by Egiebor and Foster (2018) which outlines that the use of ArcGIS Story Maps can increase student engagement and learning outcomes in social studies learning. There are three important points in the findings of this study, namely: (1) through GIS Story Maps allows students to learn about a historical event using geographic tools, (2) there is the development of IPS learning through geographic tools, and (3) students can use information from GIS Story Maps to connect to future situations such as planning trips. Misajet (2020) also emphasized that learning activities using ArcGIS Story Map media are more effective.

The application of varied and interactive features on ArcGIS Story Maps media can help deliver social studies material more effectively. Teacher skills are also needed in order to achieve success in using ArcGIS Story Maps media. Bakar (2015) describes that the use of media does not only include its use which can be seen, heard, read or discussed, but also the media can be used by teachers properly in teaching and learning activities so that it can affect the effectiveness of learning. Basically learning is a series of efforts or teacher activities in order to make students learn (Komalasari, 2014), one of the efforts made by the teacher is by applying ArcGIS Story Maps media in the social studies learning process. Students' assumptions regarding social studies learning that is monotonous and uninteresting so that it affects students' understanding can be overcome by using ArcGIS Story Maps media. ArcGIS Story Maps as social studies learning media certainly cannot be separated from its advantages and limitations (Cope et al., 2018). The advantages of ArcGIS Story Maps media in social studies learning are that they can display interactive story maps that do not need to be downloaded into software because they are web-based GIS

(Geographical Information System), user friendly, and can be operated easily via gadgets or laptops/computers. The limitations of ArcGIS Story Maps media are both when the process of creating or accessing it requires an internet connection, there is no internal review before story maps are published, and there are feature restrictions for users who use free accounts.

## **2. The Level of Understanding of Students in the Control Class in Social Studies Learning Using without ArcGIS Story Maps Media**

Social studies learning activities in the control class did not use ArcGIS Story Maps media. Instead, it uses interactive PowerPoint media as a comparison to the ArcGIS Story Maps media used in the experimental class. This is done because interactive PowerPoint media has the equivalent of ArcGIS Story Maps media. Interactive PowerPoint media can be designed by taking into account the features in ArcGIS Story Maps, so that interactive PowerPoint media can be on an equal footing with ArcGIS Story Maps media so that it can be the right comparison. Interactive PowerPoint designs are equipped with animations, hyperlinks, transitions, narrations, images, videos, and also audio. For example, the ASEAN country map is equipped with animation and hyperlink features. When presenting a map in an interactive Power Point, the teacher will not immediately be presented with a description. The animation feature adjusts the time to display information on the map. Unlike the hyperlink feature, if one of the country pins on the map is clicked, it will take students to the country referred to on that pin.

The results of data analysis carried out by researchers showed a probability of  $0,000 < 0,05$ , meaning that  $H_a$  was accepted and  $H_o$  was rejected. So it can be concluded that there is a significant difference in the level of understanding of students in the control class in the pre-test and post-test in social studies learning about the Geographical Locations of ASEAN Countries without using ArcGIS Story Maps (interactive Power Point) media.

The multimedia display on Power Point which is attractive and interactive and easy to manufacture and use (Sianigan in Herlina & Saputra, 2022), is a motivating factor for control class students who also experience an increase in their understanding of IPS material regarding the Geographical Locations of ASEAN Countries, although not as much as an increase in understanding in the experimental class. Media in a learning process is used as a tool to convey information (learning material) from the communicator (teacher) to the communicant (students) and can stimulate the minds and interests of students to learn so that learning objectives can be achieved properly (Rizal et al., 2016). Sanaky (in Wulandari, 2022) describes that learning using interactive Power Point media has several

technical advantages, namely practical, presentation of material with attractive designs, displaying pictures, sounds, and animated videos that can attract students' learning interest, and can be utilized for repetitive learning activities. However, interactive PowerPoint media also has limitations, namely not all material can be conveyed with this media, special skills are required to design interactive PowerPoint designs, and require more time and preparation to display more complicated animations.

### **3. Differences in Students' Comprehension Levels Between Experimental and Control Classes in the Pre-test and Post-test in Social Studies Learning Using and Without Using ArcGIS Story Maps Media**

Learning is an accumulation of the concepts of teaching (teaching) and learning (learning). Simply put, learning is a series of activities carried out to achieve changes in students which include knowledge, skills, and attitudes through the teaching-learning process with the teacher (Setiawan, 2017). Whereas social studies learning is a subject program in the education curriculum at the elementary and junior high levels which is an integration of the social sciences family which includes history, economics, sociology, geography, citizenship, and so on as well as the results of the participants' personal, social, and cultural reflections students (Nasution & Lubis, 2018; Susanti & Endayani, 2018). In Bloom's taxonomy both knowledge, skills and attitudes, each of which occupies its own domain for the purpose of carrying out a lesson, including the cognitive, affective, and psychomotor domains.

In this case understanding is included in the cognitive domain. Understanding is the ability of students to translate, explain, interpret, generalize, give examples, estimate, and conclude (Arikunto, 2015; Susanto, 2014). Students' understanding of IPS material regarding the Geographical Position of ASEAN Countries in this study was measured by taking into account research indicators. This understanding indicator refers to Bloom's Original Taxonomy namely translation, interpretation, and extrapolation. First, translation, in assessing students' ability to translate students are divided into three forms of translation patterns, including translating abstract concepts into concrete concepts, symbolic forms into other forms or vice versa, and from one verbal form to another verbal form. Second, interpretation, the ability to interpret is identical to analysis because students are asked to identify, understand the main ideas, can recognize the boundaries where interpretation can be drawn, and make appropriate qualifications when interpreting data. And third, extrapolation (extrapolation), extrapolation assessment can be seen from the students' ability to draw conclusions, the ability to estimate or predict, and the ability to differentiate.

The results of data analysis that has been carried out by researchers in the pre-test obtained a probability of  $0,939 > 0,05$ , that there is no significant difference in the level of understanding of students between the experimental class and the control on the pre-test in social studies learning about the Geographical Locations of ASEAN Countries. While the results of data analysis on the post-test of students' understanding in the experimental and control classes obtained a probability of  $0,045 < 0,05$ , that there was a significant difference in the level of understanding of students between the experimental and control classes in the post-test in social studies learning about the Geographical Locations of ASEAN Countries.

ArcGIS Story Maps media can improve the understanding of experimental students more significantly compared to the control class without ArcGIS Story Maps. The effectiveness of ArcGIS Story Maps media in increasing students' understanding can also be seen from the interpretation of the N-Gain value of understanding which states that ArcGIS Story Maps media is more capable of increasing students' understanding of social studies material about the geographical location of ASEAN countries. The success of the ArcGIS Story Maps media as a more effective medium in increasing students' understanding of IPS material about the Geographical Locations of ASEAN Countries, is confirmed by the findings of previous studies which describe that the development and design of learning using ArcGIS Story Maps, the learning process becomes more interactive, attractive, and user friendly (Strachan & Mitchell, 2014).

The results of previous research also revealed that the development and design of learning using ArcGIS Story Map is more effective (Misajet, 2020), students prefer ArcGIS Story Maps as a learning medium because it provides an augmented reality learning experience that can enhance learning spatially (Cope et al., 2018). Marta and Osso (2015) describe that learning activities through the use of ArcGIS Story Maps can increase students' learning motivation, in this case students are actively involved in making story maps, they learn to be creative. Students feel their graphic skills have increased, student performance is more visible, honing student creativity (Treves et al., 2021).

Material Geographical Locations of ASEAN Countries can be presented more effectively using media that uses ArcGIS Story Maps, of course with several considerations, namely: (1) the visualization of ASEAN country maps will be seen more clearly using digital maps, (2) the natural appearance of each ASEAN country can be observed at close range through pictures or videos and even using interactive digital maps such as map tours, (4) the socio-cultural and economic conditions of each ASEAN country can be packaged more

attractively using videos, pictures or narration with interactive slides, and (5) the history of the formation ASEAN can also be presented through films, videos, pictures, or narration with interactive slides.

## **Conclusion**

Based on the results of the research that has been done, it can be concluded that first, the results of the data analysis show that there are differences between students' understanding in the experimental class on the pre-test and post-test about the Geographical Locations of ASEAN Countries using ArcGIS Story Maps media. Second, there is a difference between the understanding of students in the control on the pre-test and post-test about the Geographical Locations of ASEAN Countries using ArcGIS Story Maps without media. And third, the ArcGIS Story Maps media is more capable of increasing students' understanding of the Geographical Locations of ASEAN Countries.

## **Suggestion**

Social studies learning using ArcGIS Story Maps media is still rarely done by teachers, even though the results of this study indicate that the use of ArcGIS Story Maps media can improve students' understanding of social studies material in the experimental class. ArcGIS Story Maps media were considered more effective in helping to increase student understanding. Based on this, the use of ArcGIS Story Maps media can be developed according to the needs of social studies teachers in the field.

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