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## Development of Digital Social Studies Teaching Materials in The Era of Pandemic Emergency Learning

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### Abstrak

Penelitian ini bertujuan untuk menjelaskan pengembangan bahan ajar digital IPS yang dapat digunakan untuk meningkatkan kemampuan berpikir kritis dalam masa pandemi. Dengan fokus dalam, 1) Bagaimana penerapan bahan ajar digital dalam pembelajaran, (2) Bagaimana respon siswa terhadap bahan ajar, dan (3) Bagaimana efektivitas bahan ajar. Data dikumpulkan dengan observasi, wawancara, dan tes. Lokasi penelitian terletak di salah satu SMPN di kota Surabaya. Uji efektivitas menggunakan Mann Whitney pada kelas kontrol (tidak menggunakan bahan ajar yang dikembangkan) dan eksperimen (menggunakan bahan ajar yang dikembangkan). Hasil dari penelitian menunjukkan; 1) Pembelajaran IPS lebih optimal dilakukan dengan asinkron, (2) Respon siswa terhadap bahan ajar positif, dan (3) hasil uji beda antara kelas kontrol dan eksperimen menunjukkan perbedaan. Pada kelas kontrol kemampuan berpikir kritis cenderung tetap dan jawaban hasil tes bersifat homogen dan teksbook, sedangkan pada kelas eksperimen menunjukkan peningkatan kemampuan berpikir kritis dan jawaban hasil tes bervariasi sesuai dengan lingkungan siswa masing-masing.

**Kata Kunci:** Bahan Ajar Digital, Pendidikan IPS, Pandemi, Pembelajaran Daring

### Abstract

*This research aims to explain the development of digital IPS teaching materials that can be used to improve critical thinking skills during a pandemic. With a focus on, 1) How is(X) the application of digital teaching materials in learning, (2) How do(X) students respond to teaching materials, and (3) How are(X) the effectiveness of teaching materials. The Data were collected by observation, interviews, and tests. The research location was located at one of the junior high schools in the city of Surabaya. The effectiveness test used Mann Whitney in the control class (not using the developed teaching materials) and the experiment (using the developed teaching materials). The results of the study show; 1) Social studies learning is more optimally carried out asynchronously, (2) The students' response to teaching materials is positive, and (3) the results of the difference test between the control and experimental classes show a difference. In the control class, the critical thinking ability tends to be constant and the answers to the test results are homogeneous and textbook, while in the experimental class it shows an increase in critical thinking skills and the answers to the test results vary according to the environment of each students.*

**Keywords:** Digital Teaching Materials, Social Studies, Pandemic, Online Learning.

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## **INTRODUCTION**

The world of education is currently undergoing a tremendous transformation. Since the announcement from the World Health Organization (WHO) regarding the determination of Corona Virus Disease 2019 (COVID-19) as a pandemic (Jebril, 2020). Various countries around the world are starting to make policies in their interactions. This policy touches various fields, including in the field of education. In 2020, through a decree from the minister of education, Indonesia stipulates that learning in schools must be done online (KEMENDIKBUD, 2020). Face-to-face learning is prohibited to reduce the spread of the COVID-19 virus. The emergence of this policy has an effect on learning that usually occurs in schools, from face-to-face learning to online learning. In this era of education 4.0, humans must be able to adapt to the demands of the times (Khoiron, 2020).

This condition is certainly not a normal situation, but a learning emergency. Many teachers and students are facing problems in the sudden transformation process. Various problems that arise include the unstable internet network, one-way interaction, and reduced concentration (Handayani, 2020). The problems that arise are not only that, there are also those who think that online learning has a lower responsibility (Putra, 2018). Seeing such conditions, new things are needed that can help in the online learning process. Especially those that can specifically help the learning process in each subject in school including in the subject of Social Studies (IPS).

Currently, we know that IPS is one of the less popular subjects at the Junior High School (SMP) level. This could be due to the fact that social studies learning tends to be taught in conventional ways, for example memorization (Jenanu & Maksum, 2014). In this way, students will only focus on understanding the material and only get knowledge from the truth of social science disciplines in a textbook (Hasan, 2007). Social studies learning tends to be monotonous (Rusmawan, 2012). If social studies learning is carried out in this way in a pandemic learning emergency, do not be blamed if students increasingly do not understand social studies learning in schools.

Social studies learning should be able to teach students in developing character, not just cognitive (Khoiron et al., 2020; Sardiman, 2010). Thus, the question is how to make social studies learning during the pandemic not only focuses on the dimensions of knowledge but also builds **the** critical students character and be able to engage in the community where they are. Because like it or dislike, the social studies learning trend will be confronted with various social realities that occurred in the environment. It is beneficial to human resources with social skills (Wahyudi, 2011). It must be able to adapt in existing environmental conditions, as now many aspects of human life are starting to change to digital. It is suitable both in the field of communication (Frank et al., 2019; Muhuri et al., 2019) and economic activities (Amin & Pramestri, 2017; Setiawan, 2018).

One alternative that can be used to create social studies learning that is in accordance with current conditions during the pandemic is to use online learning. However, there are several things that need to be considered in online learning. Based on the explanation from Moore et al (2011) that online learning requires an internet connection, flexibility, and the ability to generate various kinds of interactions. In addition, online learning is also able to increase students learning motivation because of its interactivity (Kosasi, 2015).

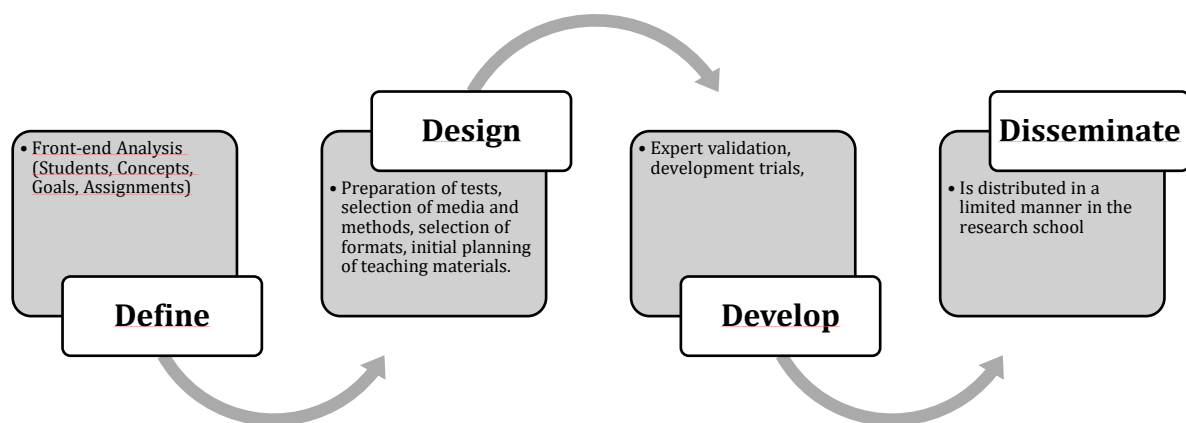
Based on various existing considerations, researchers developed a teaching material that could be used in social studies learning in the emergency pandemic era. Teaching materials that remain of quality in substance, and can also be applied in learning emergencies in the pandemic era. The teaching materials were used in class VIII social studies learning at a public junior high school located on Jl. Dupak Rukun, Asem Rowo, Surabaya. From the results of the survey and preliminary studies at the research location, it shows that online learning is already running in class VIII social studies subjects. Online learning at these schools is carried out asynchronously and still uses teaching materials sourced from teacher and students books

The school chose to use asynchronous learning because many students objected to learning synchronously. Class VIII social studies teacher once held synchronous learning, attended by only 6 students out of a total of 42 students in one class. Therefore, learning is carried out asynchronously with the help of Whatsapp messages, Microsoft 265, and Bit.ly. The results of the narrative of class VIII social studies teachers tend to be passive. Students are less active in interacting in Whatsapp class groups, many students also do not do daily assignments given by the teacher for evaluation materials.

Based on the conditions occurred in the field, researchers conducted experiments in class VIII D to be given special treatment in social studies learning. Researchers developed digital social studies teaching materials based on contemporary problems with the aid of the Genially platform designed to improve students' critical thinking skills, a teaching material that does not only focus on cognitive abilities. Critical thinking skills that are the focus on this study are 1) the ability to get good information, (2) the ability to ask questions, (3) the ability to analyze an argument; and (4) Ability to make conclusions. These four abilities are taken from several indicators of critical thinkers from Ennis (2011).

## RESEARCH METHODS

This research is a Research and development (R&D) because in this study it produces a particular product and tests its effectiveness so that it can be longitudinal (Tuckman, 2012). While the design used is Thiagarajan's (1974) with the stages of define, design, develop, and disseminate. With the details of the flow as follows;



**Figure 1. 4D Development Flow**

At the Define stage, the researcher conducted a preliminary analysis on students, concepts, learning objectives and assignments. The students' component analyzed concerns the condition of students in social studies learning, students characteristics, and students accessibility in technology. **The** concept analysis explored the learning concepts applied in the research location. The analysis of learning objectives explored what learning objectives are to be achieved in social studies learning. Then the task analysis explored the things related to the tasks given in social studies learning.

Then at the Design stage, researchers designed the preparation of tests, media selection, methods, formats, and initial planning of teaching materials. Based on the data at the define stage, the test was arranged in order to determine the level of students' critical thinking skills, therefore the researchers compiled the test with description questions designed so that students can develop their answers according to their respective conditions and abilities. The students test results were corrected by 2 raters who had met the criteria for conducting the test assessment. These criteria **are**; 1) read the assessment guide and are able to do the assessment, (2) did formal studies at least at the bachelor level; (3) understood the concept to

be assessed.

The selected media was dropped on media that can be accessed anytime and anywhere online, namely using the help of the Genially platform, a platform that can display teaching materials digitally with interactive buttons that can present interactive animations. The learning method was carried out online asynchronously according to the conditions of the students and the learning culture at the research location. The format of teaching materials was delivered in digital form so that it is easily accessed by students in online learning.

Entering the development stage, validation from experts was carried out. Experts who validate teaching materials in this study consist of material experts, format experts, and practitioner experts. The material expert was tasked with assessing the feasibility of the material from teaching materials developed from the aspects of content, language, and presentation. Format experts assessed the appropriateness of the format of teaching materials that focus on aspects of the visual appearance and learning design. Then expert practitioners assessed the use of teaching materials.

Researchers measured the use of teaching materials through students' responses after learning using the developed digital teaching materials. The aspects of the response studied were related to the ease of understanding the material, the ease of understanding language, and the attractiveness of teaching materials. With the following assessment criteria:

$$\text{Percentage (\%)} = \frac{\text{Number of positive responses for each aspect that appeared}}{\text{Total number of students}} \times 100\%$$

**Table 1. Students Assessment Interpretation Criteria**

Average Score	Category
76% - 100%	Positive
51% - 75%	Enough
26% - 50%	Less
0% - 25%	Negative

Source: (Riduwan, 2010)

Then to determine the effectiveness of teaching materials in improving students' critical thinking skills, the Independent-Samples T Test for non-parametric statistics (Man Whitney U-Test) was carried out in the control class and the experimental class with a significance level of 0.05. The statistical hitpotesis to be tested according to (Sugiyono, 2017) is:

$$H_0 : \mu_1 \leq \mu_2$$

$$H_a : \mu_1 > \mu_2$$

With details: If the value of the significance of the test results shows > 0.05, then H0 is accepted and Ha is rejected. However, if the significance value of the test results shows < 0.05, then H0 is rejected and Ha is accepted.

## RESULTS AND DISCUSSION

### Define Stage

Initial analysis at the research location showed that the majority of grade VIII students were found to be less active in social studies learning. This was explained by the class teacher. These indicators can be seen when online learning takes place. First, when the teacher distributes learning material in the class Whatsapp group there is no reciprocal communication relationship. Second, many students do not do daily assignments, from 42 students on average 30 students do daily evaluation tasks. Third, if the teacher conducts synchronous learning through the Zoom platform, out of 42 students only 8 students attend.

Fourth, the answers collected from the results of the daily evaluation are mostly textbooks.

Seeing the conditions of class VIII social studies learning at the research location is indeed quite interesting. Regarding the lack of reciprocity in students' communication in the learning process, it can be used as evaluation material for educators. The responsibility of educators is not only to provide learning material, but also must pay attention to other pedagogical competencies such as managing students learning which includes students understanding, designing and implementing learning, evaluating learning outcomes, and developing students to actualize their various potentials (Suhandani & Kartawinata, 2014). Thus, situations such as lack of feedback from students in the learning and evaluation process can be avoided.

The level of participation in synchronous learning cannot be enforced in the emergency learning conditions of the pandemic era. There is a lot to consider in synchronous learning, for example, it requires a large internet package, lack of learning flexibility, and connection stability is also needed. Then regarding the answers to daily assignments which still tend to be textbook in nature, this cannot be avoided if the test questions are not objective. It would be different if the test questions were arranged in an open description, as stated by Smith & Madya (2011), the essay assessment can be used to measure higher thinking skills and can measure complex learning outcomes.

### **Design Stage**

Based on the results of the preliminary analysis, in the question design stage, an open description question type was selected so that the answers written by students were not textbooks. The questions presented invite students to find information in their environment and also on the internet, besides that it also invites students to develop attitudes and knowledge in students' critical thinking such as; 1) Ability to get information well, (2) Ability to ask questions, (3) Ability to analyze an argument; and (4) Ability to make conclusions. With a problem model like this that has its own advantages, as suggested by Smith & Madya (2011), description questions can be used to measure complex learning outcomes and higher thinking skills.

Success in learning is not only determined by the quality of the teaching materials, but also various other components such as. Selection of methods, media, packaging format. The method used in this study uses asynchronous learning, because it can be seen that asynchronous learning has its own advantages in learning in the pandemic era. With its more flexible nature and does not require a large connection. Asynchronous learning can improve the quality of work on assignments (Herlambang & Hidayat, 2016). The media used is the Genially platform, with this platform learning will be much more interesting because it can present interactive content such as images, animations, and videos. As it is known that multimedia learning can help in explaining abstract material to be concrete with the help of visualization and sound (Davis & Summers, 2015). Meanwhile, the packaging is arranged digitally. In a pandemic like this, learning cannot be done face-to-face, so one alternative way of packaging teaching materials that can be used is digital.

### **Develop Stage**

The next process carried out after the defined and design stage is develop **stage**. At this stage the teaching materials that have been developed were tested for their feasibility in various aspects by experts in their fields. The validation results show that the results of the feasibility of the material, format, and practitioners have met the validity criteria and can be used without going through revisions. Both in terms of content, language, presentation, visual appearance, learning design, and use. These results can be seen in the following table;

**Table 2: Cumulative Percentage of Expert Validations**

Validator	Aspect	Percentage	Interpretation
1	Product Contents	85.2 %	Very Good
	Language	92.8 %	Very Good
	Presentation	91.7 %	Very Good
2	Visual appearance	77.9 %	Good
	Learning design	88.4 %	Good
3	User Experience	81.9 %	Very Good
<b>Total</b>		<b>86.3 %</b>	<b>Valid</b>

The next data obtained is the result of students responses after using digital teaching materials. Students responses related to the ease of understanding the material, the ease of understanding the language, and the attractiveness of teaching materials received a positive response from students with a cumulative percentage rate of 78.87%. The details are as follows;

**Table 3: The cumulative percentage of students responses**

Indicator	Aspect	Percentage	Interpretation
1	Ease of understanding the material	73,7 %	Enough
2	Ease of understanding the language	81,1 %	Positive
3	The attractiveness of teaching materials	81,8 %	Positive
<b>Total</b>		<b>78,87 %</b>	<b>Positive</b>

Based on these data, it can be seen that students give positive assessments of teaching materials. It should be noted that the learning materials arranged in the social studies teaching materials of this study are not textbooks or only sourced from teacher books and students books. But also sourced from the environment and society. This is in line with the concept of Contextual Teaching and Learning (CTL), which links learning material with students' real life (Hasibuan, 2014; Sulfemi, 2019). In addition, it is directly linked to problem-based learning or PBL. What we know is that PBL can improve thinking skills, problem solving, and intellectual skills (Wijayanti & Wulandari, 2016). In addition, it can also raise students' critical thinking skills (Wasonowati et al., 2014).

A positive response was also seen in the presentation of teaching materials which showed 81.8%. This means that the teaching materials presented have succeeded in making students interested in the learning process. By packaging digital teaching materials with the help of the Genially platform, students can access interactive and interesting teaching materials. As is known with the help of multimedia, abstract information can be packaged to be more concrete. This is conveyed in the cone of Edgar Dale's experience (Davis & Summers, 2015).

Based on research data, it is necessary to know that in emergency learning in the pandemic era, social studies learning must be packaged as flexibly as possible by paying attention to many components, such as students conditions, learning concepts, assignments, availability of technology access, methods, media and learning packaging formats. The effectiveness of the teaching materials developed can also be seen from the results of different tests between the experimental class and the control class. In the experimental class the learning used the teaching materials developed in this study, while the control class used the usual teaching materials used by class teachers. The results of the Independent-Samples T Test for non-parametric statistics (Man Whitney U-Test) in the control class and the experimental class with a significance level of 0.05. Shows the Asymp value. Sig. (2-tailed) of 0,000 is smaller than

the probability value of 0.05. Thus it can be said that between the experimental class and the control class there are differences in learning outcomes  $H_0$  accepted.

Some other interesting things found in this study from the control and experimental classes are qualitative data in the form of differences in the number of students who respond to daily assignments and the characteristics of the answers given. In the control class, the total number of 42 students who did the daily evaluation task was 30 students. Meanwhile, in the experimental class there were 39 students from a total of 42. This means that 12 students in the control class did not do daily assignments, and only 3 students did not do daily assignments. Then the second is the characteristics of students' answers. In the control class the characteristics of the answer are textbook, meaning that it is like the answers listed in a book. However, in the experimental class the characteristics of the students' answers were much more varied, adjusting to their respective environmental conditions. More details can be seen in the following table;

Class	Difference	Information
Control	The number of students who did the test questions	30 of 42 students
	Characteristics of student answers	Textbook
Experiment	The number of students who did the test questions	39 of 42 students
	Characteristics of student answers	Contextual

## CONCLUSION

It can be concluded that the development of digital social studies teaching materials **are** based on contemporary problems assisted by the Genially platform include, among others, it can be seen that in the emergency period of learning pandemic, our social studies learning as teachers can still create social studies learning that is of interest to students and can improve critical thinking skills. During the preparation of teaching materials, **teachers should** pay attention to various components, such as students' conditions, students' characteristics, learning concepts, assignments, media, methods, and teaching material packaging formats. This is evident from the results of expert validation, pupil's responses, and the results of the effectiveness test that have been carried out in this study. Then in order to create a positive learning culture, we as educators should keep trying to improve our quality, especially in mastering pedagogical abilities. Researchers believe that even though the world is faced with difficult times such as a pandemic, as long as teachers master pedagogical competences well, this will not be a big problem.

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