



Digital Map Media: The Needs of Digital Media for Social Studies Learning in Grade IV Elementary School

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ABSTRAK

Pengembangan media pembelajaran peta digital dalam pembelajaran IPS di sekolah dasar mempunyai beberapa urgensi yang perlu diperhatikan, terutama dalam konteks perkembangan teknologi informasi dan kebutuhan pendidikan modern. Penelitian ini bertujuan untuk menganalisis kebutuhan pengembangan media pembelajaran peta digital pada pembelajaran IPS di sekolah dasar. Penelitian ini menggunakan desain penelitian kualitatif dan kuantitatif. Partisipan dalam penelitian ini adalah guru dan siswa SDN Mangunan 02. Teknik pengumpulan data adalah wawancara, angket, dan observasi. Temuan penelitian dari wawancara dengan guru menunjukkan bahwa guru mengetahui tentang peta digital namun hanya sebatas google map dan google earth. Guru menjelaskan bahwa peta digital cocok untuk dikembangkan dalam memudahkan pemahaman materi Kerajaan Hindu Budha dengan memperhatikan tampilan yang menarik, isi materi singkat dan jelas, serta terintegrasi dengan teknologi. Temuan penelitian dari hasil angket siswa menunjukkan bahwa 90% siswa tertarik mempelajari materi Kerajaan Hindu Buddha dengan menggunakan peta digital. Dengan demikian, hasil analisis kebutuhan guru dan siswa menunjukkan bahwa media peta digital sangat dibutuhkan oleh siswa. Penelitian ini dapat dikembangkan untuk pengembangan media peta digital materi Kerajaan Hindu Budha menjadi media pembelajaran IPS untuk siswa kelas IV SD.

ABSTRACT

The development of digital map learning media in social studies learning in elementary schools has several urgencies that need to be considered, especially in the context of developments in information technology and modern educational needs. This research aims to analyze the needs for developing digital map learning media in elementary school social studies learning. This research uses qualitative and quantitative research designs. Participants in this research were teachers and students. The sample in this research was 1 teacher and 11 students at elementary school. Data collection techniques included interviews, questionnaires and observations. Research findings from interviews with teachers show that teachers know about digital maps but only limited to Google Maps and Google Earth. The teacher explained that digital maps are suitable to be developed to facilitate understanding of Hindu Buddhist Kingdom material by paying attention to an attractive appearance, short and clear content, and combining it with technology. Research findings from the results of student questionnaires show that 90% of students are interested in learning material about the Hindu Buddhist Kingdom using digital maps. Thus, the results of the analysis of teacher and student needs show that digital map media is needed by students. This research can be developed to develop digital map media based on Hindu Buddhist Kingdom material as a social study learning medium for fourth grade elementary school students.

1. INTRODUCTION

Education is the process of developing the skills, knowledge and understanding needed by individuals to be active, productive and socially minded. Good education can improve the quality of human resources (Viet & Hanh, 2021; Zurqoni et al., 2018). A good education will produce a capable and progressive generation. Learning today is strongly influenced by technological developments, especially

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information and communication technology. Some activities in learning are inseparable from technological assistance or digitalization (Marshall, J. C. et al., 2017; Suryawan et al., 2021). With digitalization, the learning process will be easier to do anywhere and anytime. Through the internet network. All kinds of information can be accessed quickly and easily. The implementation of education in Indonesia today is based on the implementation of the Merdeka curriculum, which refers to the principle of innovation in education which aims to develop students' learning potential and interests. The learning process in the independent curriculum must utilize technology, information and communication to increase the effectiveness and efficiency of learning that occurs in the classroom (Maryono et al., 2018; Sari, 2017). The role of teachers, especially in dealing with technological developments, is very important. Teachers not only channel knowledge to their students but are also required to be creative and innovative in learning activities. In order to create a pleasant learning atmosphere, teachers can use learning media in the learning process (Rahelly, 2018; Rahmat et al., 2019). In this case, a teacher is obliged to choose and develop appropriate and innovative media in order to prepare graduates who are creative, productive, and innovative so that they can face various problems and challenges in their day.

Learning media is anything that can be used as a tool to convey messages from the sender (teacher) to the receiver (student) in the learning process. Learning media is a tool or means used during the learning process to help students understand the material easily and effectively, and can provide direct learning experience (Arkadiantika et al., 2020; Yasin & Ong, 2020). Besides being able to help students in learning, learning media can also make it easier for teachers to explain material in order to create an interesting, memorable, and memorable learning atmosphere for students. Learning media is said to have good quality, if it can motivate students to be enthusiastic in participating in learning activities. The use of learning media has undergone many transformations, starting from physical form, to now in digital form (Al Mamun et al., 2022; Gupta et al., 2022). Thus, the use of digital-based media in learning is needed because it not only supports learning activities, but can also provide experience to students about the use of technology in learning. One way to make learning media more interesting is by packaging it in the form of educational games (Bosica et al., 2021; Oktaviane et al., 2021). This game allows students to learn while playing by developing material conceptually.

Technological developments have produced various types of learning media, one of which is digital-based learning. Digital maps are one example of digital-based learning media (Dudu & Vhurumuku, 2012; Rizaldi et al., 2020). A digital map is a visual illustration of a geographic phenomenon or an area that is stored and presented in digital format to be displayed and analyzed with the help of a digital computer, so that it can provide an accurate representation of a particular area, detailing the main roads and other points of interest (Cole & Feng, 2015; Zaneldin et al., 2019). With the advancement of technology, today's digital maps not only display basic geographic information such as area shape and location, but can also be equipped with various additional information layers such as images, videos, games and links. Digital maps are an example of digital-based learning media that are expected to be used in the learning process of Social Sciences (IPS), especially in elementary schools. In the currently implemented curriculum, namely the Merdeka Curriculum, Social Science (IPS) subjects are combined with Natural Science (IPA) subjects into Natural and Social Science (IPAS) subjects. Social Studies is a science that integrates various fields of social science, including economics, history, sociology, anthropology, or geography (Saripudin et al., 2022; Abrosimova, 2020). The material in social studies is theoretical, the material is quite a lot accompanied by long reading texts, so it seems less interesting. In addition, the discussion on social studies material is often abstract with respect to space and time, so teachers need media to support the delivery of material in a more interesting way. One of the materials in the content of social studies lessons that have quite a lot of material and related to the past time is the material of the Hindu Buddhist Kingdom (Arphattananon, 2021; Pratiwi et al., 2023).

Based on the results of observations and interviews with class IV teachers UPT SD Negeri Mangunan 02 regarding the material of the Hindu Buddhist Kingdom, that the learning media used in the material of the Hindu Buddhist Kingdom is quite varied, but still requires learning media innovations that involve students directly, such as the use of alternative media so that students are more interested and enthusiastic during learning activities. Teachers usually explain the material using the lecture method, using pictures as learning media, books, LKS, whiteboards, and Power Point. The response given by students if the teacher uses learning media during learning activities is very positive.

The things that can be done to overcome the above problems are to develop an interesting learning media so that it can increase students' enthusiasm for learning and can also provide direct experience to students (Anggraini & Reinita, 2021; Suwartono & Aniuranti, 2019). Learning media at the elementary school level needs to be innovated so that learning is more fun and effective. One of the things that can create fun learning and provide direct experience for students is by using game-based media (Andini & Yunianta, 2018; Rohma, 2021). In line with the nature of elementary school students who still like to play and have fun. So,

the use of game-based learning media can be used as a solution to overcome the above problems. One of the suitable media in overcoming the above problems is developing digital maps as learning media to improve students' understanding of the material of the Hindu Buddhist Kingdom.

Previous research that has been done by developing digital maps as learning media that are effective, efficient, and feasible to use on the material of Indonesian Geographical Characteristics (Cahyadi et al., 2021; Pelullo & Di Giuseppe, 2018). Based on the results of this study, digital maps can be developed and applied as learning media on the material of Indonesia's Geographical Characteristics. However, there is still no development of digital maps for learning social studies material on Hindu Buddhist Kingdoms. Therefore, it is necessary to analyze the needs of digital maps in social studies learning in elementary schools, especially the material of the Hindu Buddhist Kingdom. The novelty of this study is focused on the needs analysis of digital map media development with the aim of analyzing information in the field related to the needs of learning media to be developed, namely the development of digital map media on the material of the Hindu Buddhist Kingdom.

2. METHOD

This research uses a qualitative approach method to describe the problems and research focus. The qualitative approach method is a research method that features assessment procedures that produce descriptive data in the form of written or spoken words from people and observed behavior. While quantitative research is used when determining the percentage of questionnaire entries (Creswell & Creswell, 2018). In this case, researchers interpret and explain the data obtained by researchers from interviews, observations, and questionnaires so as to get answers to problems in detail and clearly. This qualitative research is used to explore the needs analysis of digital map media development in social studies learning in elementary schools. This research was conducted at SDN Mangunan 02, Udanawu District, Blitar Regency, with grade IV students totaling 11 children as data sources.

The data collection techniques used were observation, interviews and questionnaires. The first data collection technique is interview. Interviews were conducted directly with the fourth grade teacher at SDN Mangunan 02 to explore more in-depth information related to learning media that had been used. The interview instrument used to see the teacher's needs for digital map media is shown in Table 1.

Table 1. Interview Instrument for Teachers' Needs for Digital Map Media

No	Question
1	Do you use learning media in teaching social studies? If you have used the media, what media are often used by Ibu in teaching social studies? (Books, worksheets, whiteboards, PPT, learning videos, educational games, etc.)
2	Is the learning media used at this time sufficient in supporting the social studies learning process?
3	Is there a difference in student responses when learning social studies using learning media and not using learning media?
4	How do students react and respond when using the learning media?
5	What obstacles do you feel in the process of learning social studies material of the Hindu Buddhist Kingdom, especially when teaching about the relics of the Hindu Buddhist Kingdom?
6	What are the media that you often use in teaching social studies content about the Hindu Buddhist Kingdom, especially when teaching about the relics of the Hindu Buddhist Kingdom?
7	What kind of learning media do you need for social studies content related to the material of Hindu Buddhist Kingdoms?
8	Do you know learning media in the form of digital maps?
9	If you know about digital map learning media, whether digital maps can be used as a social studies learning media, especially on the material of Hindu Buddhist Kingdoms?
10	Do you agree if a digital map learning media is developed for the material of Hindu Buddhist Kingdoms in social studies learning to facilitate student understanding and create fun learning?

In addition, the second data collection technique used is a questionnaire. Questions in the questionnaire were given to fourth grade students to obtain information related to social studies learning, especially the material of the Hindu Buddhist Kingdom. The distribution of questionnaires was carried out by filling in directly on the questionnaire sheet by fourth grade students of SDN Mangunan 02. The questionnaire used to see the needs of students on digital map media is shown in Table 2.

Table 2. Indicators of Student Needs for Digital Map Media

No.	Question	Statement	
		Yes	No
1.	Do you like and are you interested in social studies content?		
2.	Are you interested in learning about Hindu-Buddhist Kingdoms in social studies content?		
3.	Was the material on the Hindu Buddhist Kingdom difficult to learn?		
4.	Do you understand the material on the Hindu Buddhist Kingdom well?		
5.	Do you ever feel bored or bored when learning social studies content?		
6.	Do teachers use learning media in class when teaching social studies?		
7.	Do you ever use game-based media in class when teaching?		
8.	Are you interested in learning social studies content using game-based digital media?		
9.	Do you know digital maps?		
10.	Are you interested in learning about the Hindu Buddhist Kingdoms using digital maps?		

The third technique is observation. Observation is carried out in the classroom as an effort to observe the learning process and the extent to which students' ability to capture material. The focus in this study is the analysis of the needs for the development of digital map media on the material of the Hindu Buddhist Kingdom with the sub-topic of the relics of the Hindu Buddhist Kingdoms in the form of temples found in the surrounding area in class IV SDN Mangunan 02.

3. RESULT AND DISCUSSION

Result

The needs analysis of digital map media development on the material of Hindu Buddhist Kingdoms is designed based on preliminary analysis. The purpose of this study is to determine the appropriate learning media and needed by grade IV students. The first step taken by the researcher is to conduct an interview with the fourth-grade teacher to analyze the needs of the teacher which contains indicators of the need for digital map learning media on the material of the Hindu Buddhist Kingdom. Based on the results of the review of teacher needs for digital map media on the material of the Hindu Buddhist Kingdom in table 1, questions 1, 2, 3, and 4 discuss the use of learning media in social studies content and student reactions when teachers use learning media in the implementation of social studies learning in class. The fourth-grade teacher explained that when social studies lessons have used learning media. Learning media that are often used are pictures, LKS, whiteboards, books, and there are some that are based on digital technology such as power point. In line with that, technology in learning should already be used in facilitating the learning process and creating interesting and fun learning, so that learning objectives can be achieved. Thus, learning media with technology needs to be used during learning.

In questions number 5, 6, and 7 teachers explained related to the constraints felt when learning social studies material on the Hindu Buddhist Kingdoms, including the limitations of the material studied and learning resources that support the depiction of Hindu Buddhist Kingdom material. Learning media that are often used to explain the material of the Hindu Buddhist Kingdom include pictures. In this case, students' knowledge is only about the picture without knowing the location of the relics of the Kingdom, and how to get to that location. Therefore, the teacher explained that the material of the Hindu Buddhist Kingdom requires learning media that is easy to use, supports learning materials, and attracts students' interest in learning the material. In questions number 8, 9, and 10 the teacher explained that the teacher knew about digital maps, but only to the extent such as google maps and google earth. Digital maps can be suitable to be developed to facilitate understanding of the material of the Hindu Buddhist Kingdom by paying attention to an attractive appearance, the content of the material is brief and clear, and integrates with technology. Table 3 and Figure 1, presents the results of the student needs analysis questionnaire on the development of digital maps on the material of the Hindu Buddhist Kingdom.

Table 3. Results of the Student Needs Analysis Questionnaire on the Development of Digital Maps

No.	Question	Percentage (%)	
		Yes	No
1.	Do you like and are you interested in social studies content?	82	18
2.	Are you interested in learning about Hindu-Buddhist Kingdoms in social studies content?	82	18

No.	Question	Percentage (%)	
		Yes	No
3.	Was the material on the Hindu Buddhist Kingdom difficult to learn?	55	45
4.	Do you understand the material on the Hindu Buddhist Kingdom well?	73	27
5.	Do you ever feel bored or bored when learning social studies content?	63	37
6.	Do teachers use learning media in class when teaching social studies?	37	63
7.	Do you ever use game-based media in class when teaching?	45	55
8.	Are you interested in learning social studies content using game-based digitalmedia?	90	10
9.	Do you know digital maps?	82	18
10.	Are you interested in learning about the Hindu Buddhist Kingdoms using digital maps?	90	10
Average		61.1	30.1

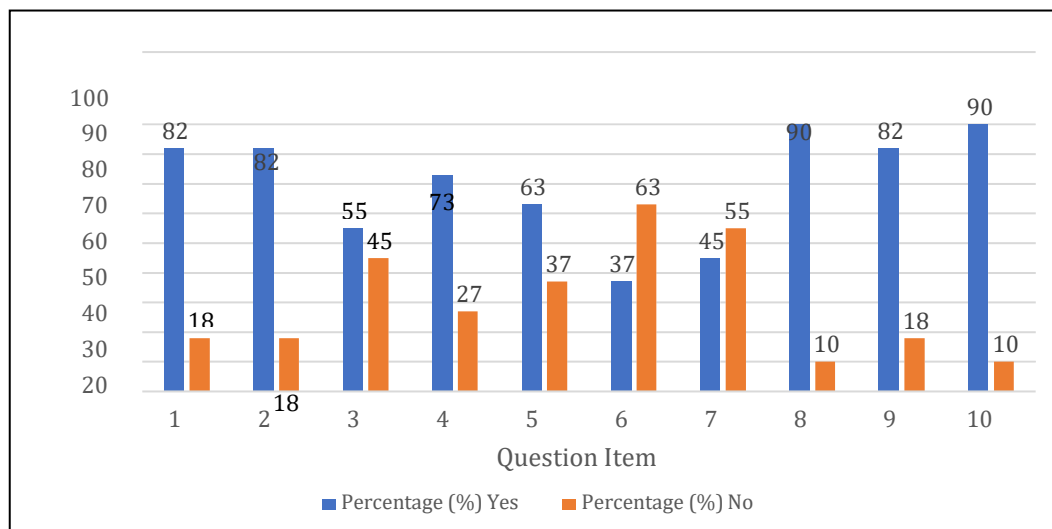


Figure 1. Graph of Student Needs for Digital Map Media

Based on the results of the analysis of student needs for digital map learning media [Table 3](#) question number 1 shows that as many as 82% (9 students) like and are interested in social studies lessons, while 18% (2 students) less like and interested in social studies learning. This is because social studies material *cukum* much and is abstract. Question number 2 shows that 82% (9 students) are interested in learning the material of the Hindu Buddhist Kingdom, while 18% (2 students) are less interested in learning the material of the Hindu Buddhist Kingdom. Question number 3 shows that 55% (6 students) felt that the material of the Hindu Buddhist Kingdom was difficult to learn, while 45% (5 students) felt that the material of the Hindu Buddhist Kingdom was not difficult to learn. Question number 4 showed that 73% (8 students) understood the material on the Hindu Buddhist Kingdom well, while 27% (3 students) did not understand the material on the Hindu Buddhist Kingdom. Question number 5 shows that 63% (7 students) feel bored when learning social studies in class, while 37% (4 students) never feel bored when learning social studies in class. Question number 6 shows that 37% (4 students) stated that the teacher used learning media when teaching social studies in class, while 67% (7 students) stated that the teacher did not use learning media when teaching social studies in class.

Furthermore, in questions number 7 and 8 related to the use of game-based media in class, 45% (5 students) stated that teachers had used game-based learning media in class, while 55% (6 students) stated that they had never used game-based learning media in class. Question number 8 showed 90% (10 students) stated that they were interested in learning social studies using game-based digital media, while 10% (1 child) stated that they were less interested in learning social studies using game-based digital media. Questions 9 and 10 related to digital map media. A total of 82% (9 students) stated that they knew digital maps, while 18% (2 students) stated that they did not know digital maps. Question number 10 shows that 90% (10 students) stated that they were interested in learning material about the Hindu Buddhist Kingdom using digital maps, while 10% (1 student) stated that they were less interested in learning material about the Hindu Buddhist Kingdom using digital maps. Based on these results, students who answered that they were interested in learning the material of the Hindu Buddhist Kingdom using a digital map because they

were curious about the form and content of the digital map that would be developed based on games. This shows that digital maps are known by students and attract students' interest when learning social studies with the material of the Hindu Buddhist Kingdom.

Discussion

In addition, the teacher explained that students' responses were very enthusiastic and happy when learning social studies using learning media, and students became more understanding when getting material from the teacher. Furthermore, the teacher said that learning media is still lacking in supporting the social studies learning process in the classroom. In fact, there are differences when teachers apply or do not apply learning media in social studies learning. Students are more enthusiastic, happy, and better understand the material explained. This is in line with the opinion, the use of appropriate learning media can help students in understanding the material explained by the teacher. The selection of appropriate and interesting learning media will create a positive impact on students in learning activities (Shabri et al., 2017). Meanwhile, when teachers do not use learning media in the learning process, students become less enthusiastic and interested, students are less active during learning, students' understanding of the material is lacking, and learning becomes less fun (Arkadiantika et al., 2020; Yandani & Agustika, 2022).

Observation activities by researchers were carried out to support the results of interviews and questionnaires obtained. Researchers conducted classroom observations in an effort to observe the implementation of learning as well as students' ability to capture material. In learning practice, the use of learning media is limited. Teachers only use learning media in the form of books, blackboards, and pictures displayed on the blackboard (Pool & Hampshire, 2019; Suprianti & Jayanta, 2020). So that causes students' enthusiasm in learning less and makes students less active. Observation activities by researchers were carried out to support the results of interviews and questionnaires obtained. Researchers conducted classroom observations in an effort to observe the implementation of learning and students' ability to capture material. In learning practices, the use of learning media is still lacking. Teachers only use learning media in the form of books, blackboards, and pictures displayed on the blackboard. So that it causes less enthusiasm for students in learning and makes students less active (Sahin et al., 2018; Syaifuddin, 2022). Based on data from interviews, questionnaires and observations of needs analysis of both teachers and students as well as previous research related to digital maps, it can be stated that the development of digital map media is needed with the content of Hindu Buddhist Kingdom material. The limitation of this research is that it only focuses on the needs analysis and digital map media at one research site only and focuses on the needs analysis of digital map media development with the material of the Hindu Buddhist Kingdom in elementary school social studies learning (Darma Putra & Sujana, 2020; Dudek & Heiser, 2017).

The use of digital maps in learning also helps students to develop technological skills that are essential in the modern world. Primary school students learn to interact with information technology, search for information effectively, and use relevant software or applications (Sholahuddin et al., 2021; Yilmaz, 2017). With digital maps, students can access geographical and social information more easily. Students will find it easier to explore the map, find locations, and get additional information quickly and easily via the internet (Syahputri & Murdiono, 2022; Wang et al., 2022). The use of digital maps in learning enables active student engagement. Students can participate in activities such as location search, pattern identification, or even create their own maps, which enables a more meaningful learning experience for students.

4. CONCLUSION

Digital map learning media can increase students' interest and motivation in learning. The use of interesting and interactive technology can make the learning process more fun and attract students' attention. Digital maps can visualise information more clearly and dynamically than conventional maps. It can help students understand geographical and social concepts better through more tangible visual representations. In addition, digital maps allow students to connect with the real world and local context around their neighbourhood. Students can learn about the places around them directly, understand the social and geographical conditions in their area, and relate learning to their daily experiences. Digital map learning media is relatively easy to update and adapt to the latest developments. This allows teachers to update the learning materials with the most up-to-date information or adapt the materials to the needs of the class or individual students.

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