Analysis of Android-Based Learning Media Needs in Social Sciences (IPS) Learning

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Article Info	Abstract
	This study aims to determine the needs of students for android-based learning media in social studies. This research method is quantitative with research subjects homeroom and class IVB students at SDN Pabuaran 1 Tangerang. The instruments used in this study were a questionnaire and a structured interview. Based on the results of interviews with teachers, it shows that teachers have never designed android-based learning media. Meanwhile, based on the results of student needs, it shows that 100% of students use Android smartphones, 61.9% use them every day (morning, afternoon, and evening), but it is unfortunate that 45% use it to watch YouTube and only 10% of students use it to study. Meanwhile, based on the subjects of interest, it was shown that 47.6% Indonesian, 19% Natural Studies, 19% Mathematics, and 0% Social Studies. In addition, 95.2% of students agree with the development of android applications. Based on the results of these studies, it can be concluded that it is necessary to consider android-based learning media in social studies in elementary schools.

INTRODUCTION

There are a number of challenges that must be overcome as the field of education develops to meet needs from throughout the world. Of course, if educational institutions do not contribute to the development of instructors' quality, then nothing will be accomplished in addressing these difficulties. Apart from educational institutions, teachers must also be aware of their main role in improving their skills and changes in the field of education. For example, with the skills to face global demands, teachers must be able to utilize technology and science and technology in carrying out the learning process (Phelia et al., 2021).

When paired with additional educational resources such as media, methods, models, and so on, the use of technology can show how education has evolved throughout time. For example, the use of technology in education, which must be considered as one way to encourage improvements in the quality of education in this era (Phelia et al., 2021). the media is a tool that is able to deliver messages for learning purposes (Rusman, 2012). When the use of technology as a medium is said to be a messenger, then an teacher must make every effort to use media during the teaching and learning process as much as possible so that learning objectives can be achieved. This is because learning media is the most important element in the teaching and

learning process in order to improve student learning outcomes.

The linkage of learning outcomes with learning media certainly brings benefits to students. There are several benefits that students can receive when learning to use learning media, namely: (1) As a contribution to making it easier for students to understand principles, ideas and abilities by using appropriate media according to the material; (2) As a learning vehicle that has varied and contemporary experiences so that students are enthusiastic when learning; (3) Improve students' psychomotor and affective skills in using and operating media; (4) Creating a learning atmosphere so that students do not forget easily; (5) Strengthen the information or messages contained in learning, and (6) Improve the quality of learning and teaching activities. These six benefits of media are certainly very important for students (Rosyid, 2019).

Apart from having benefits, currently learning media does not only use books, pictures or software on laptops or computers, but can also be combined in mobile learning. According to Purnomo (2006), The field of education is always dynamic, especially in the creation of increasingly extensive and interactive teaching materials, methods and media (Yunus & Fransisca, 2020). A teaching medium that uses content created as an application and utilized on mobile devices (Android phones) is known as mobile learning (Putri et al., 2020)

One form of utilizing mobile learning is Android smartphone-based learning media (Yahya et al., 2019). Android is an open-based operating system that is developing very rapidly, especially on mobile devices (Nugraha, 2016). The use of Android as a learning medium is based on the number of smartphone owners who currently use the Android operating system, which has reached 91.03% of users (StatCounter, November 2020). Apart from Android being widely used by the public, Android is also effectively used in the process of learning and teaching activities. This is based on previous research in elementary schools on Android applications and the results obtained were 93.4% of respondents in the very feasible category (Ayun, 2018).

Based on the results of initial observations made by researchers, it was found that SDN Pabuaran 1 has WiFi facilities for carrying out distance learning activities. Other than that, throughout the Covid-19 period, some teachers are still not making much use of technology-based learning media. This is because the majority of teachers only use WhatsApp Group as a medium for delivering material. However, there are teachers who use computer-based media as a means of delivering material in the learning process which is carried out via Google Meet.

It is hoped that the use of media assisted by Android smartphones can attract attention (Bastari, 2018) and challenge students in using new media that is adapted to student habits, namely by using the Android platform. Apart from that, the use of Android as a means of teaching and learning processes is expected to make teachers familiar and able to follow every existing technological development, so that both parties, both teachers and students, can understand, process information, convey, or carry out evaluations as feedback from the success of the teaching and learning process.

The aim of this research is to analyze students' needs for Android-based learning media in social science (IPS) lessons. This research is also to find out whether in the future Android-based learning media will be developed for social science lessons that are adapted to the results of a needs analysis based on student aspects and media use both in

terms of students as users and teachers as media developers.

RESEARCH METHODS

This research is quantitative research. Quantitative research methods are research methods which involve numbers and analysis using statistics (Sugiyono, 2017). Data collection is carried out using certain research instruments by considering benchmarks for making research decisions.

Apart from that, this research was conducted at SDN Pabuaran 1 Tangerang with a total of 21 students. This research only focuses on analyzing students' needs for Android-based learning media in social science lessons at SDN Pabuaran 1 Tangerang.

This research uses an instrument that contains information from respondents regarding the need for Android-based learning media in the teaching and learning process. An instrument is a tool for collecting data (Sugiyono, 2015). Without this tool, the data cannot be retrieved. Apart from that, the instruments in this research are only to describe the reality that will be obtained in the field in quantitative form and translated into qualitative form.

The techniques for collecting information for this research are structured closed interviews and questionnaires. The questionnaire is used to analyze students' learning needs, especially in the use of Android smartphones in social science lessons. Meanwhile, structured interviews were used to find out teacher information regarding the development of IT-based media, especially using Android smartphones. The questionnaire results were analyzed using a percentage formula (Sugiyono, 2015):

$$p = \frac{f}{n} \; x \; 100\%$$

Information:
p : Percentage of student scores
f : Frequency of student scores
n : Number of students

RESULTS AND DISCUSSION

The following are the results of an analysis of students' needs for smartphone use in class IVB at SDN Pabuaran 1 Tangerang, as follows.

Table 1. Questionnaire Results on Smartphone Use

No	Question	Alternative Answers	Percentage (%)
1.	Do you have a smartphone?	Yes	100
		No	0
2.	If yes, what brand of smartphone do you use? If No, skip it.	Samsung	42,9
		Oppo	9,5
		Vivo	9,5
		Xiomi	23,8
		Advan	4,8
		Realme	4,8
		Evercross	4,8
3.	How often do you use Android?	Every day (morning, afternoon, night)	61,9
		Every day (morning and afternoon)	14,3
		Every day (morning and night)	4,8
		Others	19
4.	What do you usually use it for?	Watching youtube	45
		Study	10
		Playing games	4,8
		Playing games	4,8
		Others	35,4

Based on table 1, the results presented show that all students use Android smartphones and 61.9% of students use them every day in the morning, afternoon and night. However, it is a shame that as many as 45% of students only use it to watch YouTube. Meanwhile, 35.4% (others) said that they used smartphones for WhatsApp, playing games, studying and watching YouTube alternately.

After carrying out the first step, the researcher then carried out a needs analysis of students' learning interests. The analysis of interest in lessons carried out by researchers aims to find out what lessons are less popular. This is done so that researchers can combine Android-based learning media with less popular subject matter. The following are the results of an analysis of student needs regarding interest in lessons in class IVB.

Table 2. Hasil Kuesioner Terhadap Minat Pelajaran

No	Question	Alternative Answers	Percentage (%)
1.	What lesson do you like?	Bahasa Indonesia	47,6
		Mathematics	19
		Social Sciences	0
		Natural science	19
		Sport	9,5
		English	4,8
2.	Why do you like this lesson?	Easy to understand	47,7
		Good teacher	0
		Love it	52,3

Based on table 2, it is known that social studies lesson are not liked by students. This is evident from the fact that no one chose it as their favorite lesson. Se

It is known that social science (IPS) lessons are less popular, then further analysis is carried out regarding interest in social science lessons.

Table 3. Questionnaire Results on Interest in Social Studies Lessons

No	Question	Alternative Answers	Percentage (%)
1.	What social studies material is difficult for you to understand?	iversity of ethnicity, culture and religion	47,6
		Historical heritage	14,3
		Natural appearance	23,8
		The entire materials	9,5
		Others	4,8
2.	Why is this material difficult for you to understand?	Difficult to understand	90,4
		Others	9,65

Based on table 3, it is known that almost all students do not like ethnic, cultural and religious diversity material. This is because the material is difficult to understand. In the 21st century, education should not only be about technology, but the importance of introducing character values, one of which is introducing local culture in the area where students live.

The aim of introducing this culture is so that they understand and know the existing culture and can appreciate the cultural differences of people from different backgrounds.

This is in line with Redhana (2019), who argued that in the 21st century education is not just about information, communication and technology (ICT)

literacy, but also the need to instill social and cultural skills so that students are able to appreciate cultural differences and work effectively with people from different backgrounds. .

The second step taken by the researcher was to conduct a needs analysis of the IVB class teacher regarding the use of learning media used during/before Covid 19 occurred using structured interviews..

Table 4. Results of Structured Interviews for Class IVB Teachers

No.	Question	Alternative Answers	√
1.	Do you use media in learning?	Yes	√
		No	
2.	What type of media do you use?	Picture	√
		Real object	√
		Computer	√
		Others	
3.	What is the appearance of the learning media used? (reviewed in terms of language, images and colors)	Very interesting	
		Interesting	√
		Not Appropriate	
		Appropriate	
4.	Do you use a computer/laptop as a learning medium to present material that requires visualization?	Yes	√
		No	
5.	If used, what software is used as learning media?	Powerpoint	√
		Powtoon	
		Others	
6.	During distance learning, what facilities do you get at school?	*WiFi*	√
		Computer	
		Others	
7.	How many Androids do you have?	1-2	
		2-4	√
8.	Are you familiar with the Adobe Flash CS6 application for creating technology-based media?	Yes	
		No	√
9.	Have you ever created Android-based learning media?	Ever	
		Never	√

Based on the results of the interview with the class teacher of IVB SDN Pabuaran 1 named Mrs. Sri Rahayu in table 4, information was obtained that the teacher was good at designing learning media. The learning media used are pictures, real objects and computers. It's just that for computer-based media, he only uses Power Point to create learning media. Teachers also take advantage of the wifi facilities available at the school in distance learning via Google Meet. However, teachers have never designed an Android-based application. So there was no finding of Android smartphone-assisted learning for social science lessons on ethnic, cultural and religious diversity material in class IVB.

Even though teachers are good at utilizing learning media, teachers should develop and utilize learning media that is adapted to students' habits, especially in online learning such as Android smartphone-based learning media. This is in line with Saddam Husein (2018) which states that media should be used in accordance with advances in educational technology and learning technology so that it requires the use of various learning media with increasingly sophisticated equipment, one of which is smartphone devices.

The final step in analyzing these needs is that students are asked about their desires for innovation in Android-based learning media in Social Sciences (IPS) subjects with material on ethnic, religious and cultural diversity. Here's the diagram:.
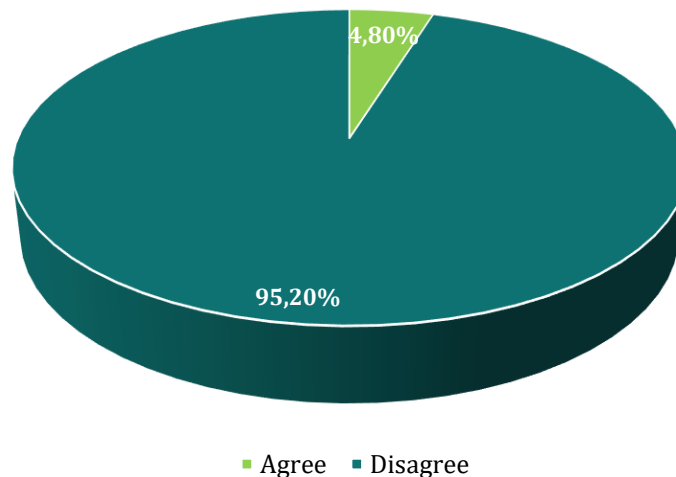

Figure 1. Students' Opinions Regarding the Development of Android-Based Learning Media

Based on Figure 1 above, it was found that the majority of students agreed that an Android application should be developed for Social Sciences (IPS) learning on ethnic, cultural and religious diversity material in class IVB at SDN Pabuaran 1 Tangerang.

This will certainly make the learning media that is developed further become more interesting and challenging because students not only learn by using YouTube or books, but also use the Android platform as a new vehicle for learning process activities. This is in line with Munadi (2013), stated that interactive multimedia can increase students' learning motivation to continue learning.

Additionally, according to Rosyid (2019), the use of media aims to (1) make it easier for students to better understand concepts, principles and material; (2) provide new experiences that are different and varied; (3) foster attitudes and skills in technology so that students are interested in using it; (4) creating a learning situation that students cannot forget, and (5) clarifying the information or message. Apart from that, using an Android smartphone as an alternative means of learning can help students use media that is easy and practical to use without being bound by space and time because it is already available on the smartphone devices they own.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the research that has been carried out, it can be concluded that the analysis of students' needs for the use of Android-based learning media in social science lessons in class IVB at SDN Pabuaran 1 Tangerang assumes the development of Android-based learning media with a percentage of 95,2% agreeing, and 4,8% disagree, this is supported by 100% of students having an Android smartphone, seen from this percentage it can have a positive impact on students.

Apart from that, the learning process in class IVB is carried out online using Google Meet and the school facilitates teachers with WiFi available in the school area. The Android-based learning media that will be developed later is expected to

make it easier for students to master the material so that learning objectives can be achieved easily, and can be accessed anywhere because the media designed is already available on the smartphone devices that students have.

REFERENCE

Ayun, N., & Rahmawati, I. (2018). Pengembangan Media Interaktif Si Pontar Berbasis Aplikasi Android Materi Kpk Dan Fpb Mata Pelajaran Matematika Kelas Iv Sekolah Dasar. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar*, *6*(2), 254773.

Bastari, H. (2018). "Dikomikin Saja" Digitalisasi Komik Pembelajaran Sejarah Perjuangan Bangsa Berbasis Android : (Upaya Meningkatkan Minat Dan Hasil Belajar Siswa Pada Pelajaran IPS Materi Sejarah di SMP Negeri 3 Madang Suku I Mengunakan Aplikasi Pembuatan Komik Digital ber. *UTILITY: Jurnal Ilmiah Pendidikan Dan Ekonomi*, *2*(2), 98–110.

Munadi, Y. (2013). *Media Pembelajaran*. Press Group.

Nugraha, I. C. (2016). Sistem Pakar Tes Minat dan Bakat Jurusan Kuliah Berbasis Android Pada SMA Islam Teratai Putih Global Bekasi. *Jurnal Teknik Komputer AMIK BSI*, *2*(1), 138–147.

Phelia, A., Pramita, G., Susanto, T., Widodo, A., & Tina, A. (2021). Implementasi Project Base Learning Dengan Konsep Eco-Green Di Sma It Baitul Jannah Bandar Lampung. *SELAPARANG: Jurnal Pengabdian Masyarakat Berkemajuan*, *5*(1), 670–675.

Putri, R. A., Utomo, S. W., & Sulistyowati, N. W. (2020). *Buku Panduan Mobile Learning Berbasis Android dengan Pendekatan Saintifik pada Materi Jurnal Umum untuk SMA*. Penerbit NEM.

Redhana, I. W. (2019). Mengembangkan Keterampilan Abad Ke-21 Dalam Pembelajaran Kimia. *Jurnal Inovasi Pendidikan Kimia*, *13*(1).

Rosyid, Z. (2019). *Ragam Media Pembelajaran*. Literasi Nusantara Abadi.

Rusman. (2012). *Belajar dan Pembelajaran Berbasis Komputer: Mengembangkan Profesionalisme Guru Abad 21*. Alfabeta.

StatCounter. (2020). *Mobile Operating System Market Share Indonesia*. November.

Sugiyono. (2015). *Metode Penelitian dan Pengembangan*. Alfabeta.

Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualititafif, dan R&D*. Alfabeta.

Umarella, S., Saimima, M. S., & Hussein, S. (2018). Urgensi Media Dalam Proses Pembelajaran. *Al-Iltizam: Jurnal Pendidikan Agama Islam*, *3*(2), 234–241. https://doi.org/10.33477/alt.v3i2.605

Yahya, W., Bhawiyuga, A., & Pramukantoro, E. S. (2019). *Administrasi Sistem Server Berbasis Linux: Konsep dan Praktik*. Universitas Brawijaya Press.

Yunus, Y., & Fransisca, M. (2020). Analisis kebutuhan media pembelajaran berbasis android pada mata pelajaran kewirausahaan. *Jurnal Inovasi Teknologi Pendidikan*, *7*(2), 118–127. https://doi.org/10.21831/jitp.v7i1.32424