### Study of The Use Smartphones as A Geography Learning Media Case Study of Senior High School Students in Bengkulu

Nurmintan Silaban<sup>1</sup>, Dihamri<sup>1</sup>, Warsa Sugandi<sup>1</sup>, Zairin<sup>1</sup>, Edwar<sup>1</sup>, Dodo Sutardi<sup>2</sup>

Geography Education Study Program, Universitas Prof. Dr. Hazairin SH, Bengkulu, Indonesia Public Administration Masters Study Program, Universitas Prof. Dr. Hazairin SH, Bengkulu, Indonesia

E-mail: silabannurmintan@gmail.com

#### Abstract

Smartphone technology can support geography learning at the high school level and in everyday life. However, it may be the fact that currently, many students use it in the learning process. Many students have difficulty using this technology so it has an impact on acceptance and sustainable use in learning with a focus on geography. Online learning is currently being adopted by educational institutions around the world to provide students with continuing education on adaptive patterns during a pandemic. Although research on online learning using smartphone technology has made progress in uncovering student experiences in a variety of settings (i.e., in high schools in education, in adult societies, and in the professional world), very little progress has been made in understanding experiences in the context of learning geography in school and community environment, especially if it is narrowed down to different academic year segments, namely, elementary and middle school students in the application of geography learning with smartphone strategy patterns and the use of technology in learning geography is more applied and contextual in the field.

#### Introduction

The use of smartphones as a geography learning medium can generate interest and interest in students participating in lessons (Deda et al., 2023; Wang, Hsieh, & Kung, 2023), generate motivation and stimulate learning activities and continue to increase student learning outcomes (Kurniawati & Priyanto, 2018). A smartphone is a mobile device equipped with an operating system like a computer. It can also implement various forms of multimedia like computers, except that smartphones have high mobility and can be operated effectively (Darko-Adjei, 2019; Puspitasari, Juhadi, Suyahmo, Wijayanto, & Saadah, 2022; Wang et al., 2023) . Smartphones as a form of learning media, in general, are based on the theory that has been described as a tool in the teaching and learning process. Learning media is needed to achieve learning and learning achievement targets assisted with smart media. On the other hand, the level of knowledge and speed of teacher smartphone technology must be able to take advantage of current technological advances such as Android, which can be an alternative medium for teachers to facilitate the delivery of subject matter to students.

The use of smartphones in the teaching and learning process is one of the developments of learning media whose benefits for teachers can be used as learning tools. There are many research findings through device technology that the use of smartphones in education has a central role as a means of conveying information to students (Ubben, Kremer, Heinicke, Marohn, & Heusler, 2023). Using a smartphone as a learning medium provides more in-depth learning opportunities for

students because by using smartphones students can develop learning through searching for information from the internet, as well as train their skills in carrying out practicums because of the mobility principle possessed by smartphones. It is further said that by using smartphones students are able to build their competencies in a dynamic way. This is in line with the statement (Sunday, Adesope, & Maarhuis, 2021) that the findings of the smartphone study highlight the educational benefits of smartphone use, such as reducing the digital divide, completing homework, peer collaboration, fast information accessibility, and increasing vocabulary. These benefits lead to dependence on smartphone use to complete education-related tasks (Sunday et al., 2021).

The use of smartphones as educational tools can enhance learning. When students are allowed to use their smartphones as learning aids in class, this can increase academic achievement and benefit the educational environment. In summary, smartphone addiction has generated mixed findings among researchers. Therefore, the main objective of this meta-analysis was to reconcile inconsistencies in the literature regarding the size and direction of the impact of smartphone addiction on student academic performance. The same thing also states that the use of the internet using a smartphone has many advantages. In the field of education, the internet has many learning methods, namely online learning and e-learning (Deda et al., 2023). The results of research on the use of new learning methods (Sahrina et al., 2022).

Thus this study states that smartphones are learning media because there are teaching materials in them that function to deliver a series of solutions to the teaching and learning process. This makes smartphones referred to as new media in the midst of the 4.0 era (Puspitasari et al., 2022). Among the existing facilities on the Internet, there are five Internet standard applications that are used for educational needs, namely: world wide web (www), file transfer protocol (FTP), email, mailing lists, and newsgroups. Of the existing facilities in cyberspace, the findings also highlight that the most common internet users among teenagers are doing homework (73%), e-mail (59%), playing games (38%), and chat sites (32). ), and Hobbies and interests (31%). Along with the changing times and technology, the Indonesian people have started using information and communication technology in their daily lives. .4% of Indonesia's population uses and has access to the internet.

The results of initial observations in the field showed that 839 students at SMAN 6 Bengkulu, 70% use smartphones of the total number of students at SMAN 6 Bengkulu. The question that may arise is whether a smartphone is indeed a means or media needed in learning activities at school. For Geography subjects, smartphones may be needed as learning media and a means to access the internet via mobile phones. Smartphone media as a means of finding information on learning materials. As is well known, a smartphone is a means of communication, entertainment, and internet browsing media. As a technology product, a smartphone is an important, practical, and portable tool that it is easy to use at any time (Sweeney, 1995). If indeed learning activities in schools require mobile devices. Students may bring smartphones to school. Usually, smartphones that can be used as media and learning resources are smartphones so they are used to access educational information through these devices (Widyastuti, Soegiyanto, & Yusup, 2018). The most fundamental problem is the extent to which subject teachers are able to manage students who bring smartphones to school so that they are really useful for supporting smooth learning.

The high number of smartphone users among students is not followed by the ability of teachers to use smartphones as a medium for learning geography. The teacher group at SMAN 6 Bengkulu in general still applies conventional learning methods given by teachers in the learning process to catch up, Smartphones are learning media innovations such as Android-based remote sensing learning media material is the development of old remote sensing learning materials.

Android-based remote sensing learning media can be used as an appropriate alternative to help students understand the material. Precisely remote sensing learning media lies in the ease of operation when used by students. In addition, the media is also adapted to the needs of students to accommodate different types of learning and abilities. This media functions as an alternative learning resource that students can use individually so as to facilitate student learning according to the type and ability of the student. The effectiveness of this Android-based learning media can be seen from the ease of operating the media reviewing the ease of remote sensing both independently and in class (Sahrina et al., 2022). Furthermore, there are conveniences that can be seen from learning media that can be used immediately after being installed and is also fun for students. This situation prompted the writer to be interested in finding an interesting study to discuss in a case study at a middle school in Bengkulu with the theme "Utilization of Smartphones as a Media for Geography Learning at SMAN 6 Bengkulu" as learning media material when used appropriately.

#### **Research Method**

The location used in carrying out this research is a high school, namely SMAN 6 Bengkulu. This is an educational unit with a high school level which is located in the community environment at the location in the Bajak sub-district, Teluk Segara District, Bengkulu, Bengkulu. However, in the structure of this school, in carrying out its activities, SMAN 6 Bengkulu is under the auspices of the Ministry of Education and Culture and is a public school in Indonesia. The following provides information on the state of the SMAN 6 Bengkulu school.



Picture. SMAN 6 Bangkulu

This research is qualitative research. Qualitative research methods are quite new research methods because their popularity is not long enough. Qualitative research methods are often called naturalistic research methods because their research is based on natural conditions. qualitative research method because the data obtained is qualitative data. Qualitative Research Using Research Instruments and Descriptive Data Analysis According to (Kurniawati & Priyanto, 2018; Sutisna et al., 2020) Qualitative Research is research based on the philosophy of post positivism used to research on natural object conditions (as opposed to experiments) where the researcher is the key instrument data collection technique. Qualitative analysis techniques consist of data collection, data reduction, data presentation, and drawing conclusions, used on data obtained from suggestions, input, and corrections by-product validators, namely media experts, material experts, and learning experts. Then a series of qualitative stages. This stage is the data obtained then analyzed and re-

evaluated to improve the product being developed is said to be feasible or not based on observations, and interviews (Insani, Haenilah, Hariri, & Sinaga, 2023).

Interviews are used as a data collection technique if the researcher wants to conduct a preliminary study to find problems that must be studied, and also if the researcher wants to know more in-depth respondents and the number of respondents is small or small. This data collection technique is based on self-reports or self-reports, or at least on personal knowledge or beliefs. Hadi (2000) suggests that the assumptions that need to be held by researchers in using the interview method and the questionnaire (questionnaire) are as follows: a) That the subject (respondent) is the person who knows best about himself, b) That what is stated by the subject to the researcher is true and reliable, c) That the subject's interpretation of the questions posed by the researcher to him is the same as what the researcher meant

Data analysis in qualitative research is carried out when data collection takes place, and after completing data collection in a certain period. At the time of the interview, the researcher had conducted an analysis of the answers being interviewed. If the answers after being analyzed are not satisfactory, the researcher will continue the questions again, up to a certain stage until credible data is obtained. He stated that the activity in qualitative data analysis is carried out interactively and continues continuously until complete so that the data is saturated. Activities in data analysis are data reduction, data display, and conclusion drawing/verification.

There are various ways to test the credibility of the credibility of data, including Extending observations, Increasing persistence, and Triangulation. In testing the credibility of the data in this study, researchers used a triangulation test. Triangulation is qualitative cross-validation. it assesses the sufficiency of the data according to the coverage of multiple data sources or multiple data collection procedures (Sugiyono, 2016). Triangulation in testing this credibility test is defined as checking data from various sources in various ways, and at various times. Thus there is a triangulation of sources, data collection techniques, and time. However, in this study, the researcher used Source Triangulation. Source triangulation to test the credibility of the data is done by checking the data that has been obtained through several sources. For example, to test the credibility of data about a person's leadership style, the collection and testing of the data obtained is carried out by subordinates who are led, to superiors who assign them, and co-workers who are working groups.

#### **Result and Discussion**

The findings of this study indicate that not much different from the joint research for the 2013 academic year, the Child Research Net (CRN) and the seminar by Masanao Takeyama at the Faculty of Economics, Keio School, conducted a collaborative study of a new information service based on media contacts from middle and high school students. This research was conducted by a team of six junior and senior-level students at the school. The results show that research creates services that are very satisfying for both customers and providers or is called geography learning service design using smartphones that are more interactive and provide direct experience by students during the learning process. current needs indeed lead to the Z generation where everything is on a smartphone. However, the findings of this collaborative study were possible due to the shared interests of CRN, which focused on child-media relations, and seminars exploring the possibility of creating new digital media services (Adlit et al., 2023; Puspitasari et al., 2022; Rathakrishnan et al., 2021; Sweeney, 1995).

The results show (Chatel & Falk, 2017) that middle and high school students who were born around the 2000s, called the "smartphone-native generation", have grown from childhood to adolescence in the era of rapid development of smartphones, so they are accustomed to using smartphones. even before using cell phones and cell phones. Personal Computer (PC). In contrast, the students, who were about four to eight years older than them and did the research, started using smartphones after regularly using PCs and cell phones. Because the age of the students is closer to the age of junior high school students, communication media for junior and senior high school students should be more accessible to them. Likewise, differences between present and later features can be more easily identified because students have fresh memories of their middle and high school days. In addition, the results of this survey research include chat logs with stickers sent between high school students and students, which students can interpret.

In carrying out the research, the student team began to develop a new research method that combines instant messaging applications on smartphones, apart from conventional group interviews, the findings prove that this idea is very innovative as a method of social investigation (Deda et al., 2023; Sutisna et al., 2020). This allowed the researchers to naturally step into the lives of high school students, through the mediums many of them use on a daily basis, to observe how they actually use them. This also allows high school students who are not used to being research subjects to easily reveal their daily lives. This research collects data about communication between high school and high school students through pictures called "stickers", which apparently can also be interpreted by students. As mentioned in the report written by the students, we identified several interesting features of high school students compared to the students' high school years (Adlit et al., 2023; Kurniawati & Priyanto, 2018; Puspitasari et al., 2022; Robert & Brown, 2015; Sutisna et al., 2020; Sweeney, 1995).

For example, when students were still in high school, they would search for information online, conduct video conferences and chat with their classmates using PCs, and gather information about fashion trends from magazines, all of which are now being done by high school students using computers. only smartphone. Furthermore, this fact also marks a big difference: direct longdistance communication through pictures, photos, short films, as well as text through the use of video chat applications and instant messaging applications covers many aspects of high school student's lives. The popularization of this kind of in-person communication led to a new phenomenon that could be termed "the ubiquitous extended classroom" where high school students continue to interact with their classmates even after school hours. Classmates have always been a very important reference group for students. However, the phenomenon mentioned above today, where high school students are always aware of the relationships in class, seems to be a characteristic of the era where smartphones are widely used.

Students in learning today use the Internet as a means of intra- and inter-generational interaction, outside the scope of their own school and their status as students. They move between different communities and take advantage of opportunities to engage in hobby- and volunteer-oriented activities, study, or find work. On the other hand, high school students' use of the Internet tends to strengthen close ties within the community in which they are located. Given that the "ubiquitous bonding environment" is closely related to classmate bullying or sleep deprivation, we considered it a challenge to provide increased opportunities for secondary school students, who tend to concentrate on chatting with classmates, to experience excitement and fascination. . various types of online communication. In fact, students who conduct research have the same awareness regarding this problem (Darko-Adjei, 2019; Widyastuti et al., 2018).

#### 1. Utilization of Smartphones as a medium for learning geography at SMAN 6 Bengkulu

#### a. For Teachers

The use of smartphones as a geography learning medium in the teaching and learning process can generate interest and interest in students participating in lessons, generate motivation stimulate learning activities, and continue to improve student learning outcomes. The media used by the teacher is a complement or helper for the teacher in teaching and helping students understand the subject matter presented, so as to obtain good learning outcomes, in this case, the media has a very important role in learning (Darko-Adjei, 2019; Kurniawati & Priyanto, 2018; Nana Supriatna, 2020; Puspitasari et al., 2022; Robert & Brown, 2015; Widyastuti et al., 2018). In the Geography learning process, teaching media is a container and channel for messages from the source of the message, in this case, the teacher, to the recipient of the message, in this case, the students. The development of information technology in the field of science has influenced various types of learning media including the use of smartphones (Nofirman, Cakranegara, Yusuf, Mayasari, & Arifin, 2022; Puspitasari et al., 2022).

Based on the conclusions from interviews on the use of smartphones as learning media at SMAN 6 Bengkulu, it has been carried out at SMAN 6 Bengkulu. This was stated by AS as a teacher at SMAN 6 Bengkulu, one of the Tenth Grade Geography Teachers. According to him:

"The use of smartphones by the teacher is when the teacher teaches with books on grade 10 material about the dynamics of the planet Earth, the teacher only explains humans and the lithosphere theory in the book, which is used. Whereas when using the WA group the teacher can send videos and pictures related to learning "

This is in line with the opinion of Rogozin (2012: 913) who states that using smartphones as learning media provides more in-depth learning opportunities for students because by using smartphones students can develop learning through searching for information from the internet, as well as train their skills in carrying out practicums because the principle of mobility possessed by smartphones.

SMAN 6 has utilized Smartphone Media, especially in learning Geography. Through this smartphone, the teacher can find information that is not in the book. this is in accordance with AR's statement as a teacher who teaches about how to use smartphones in learning geography.

"I have used smartphones as learning media. Such as Browsing and the use of WA Groups when teaching subject matter on the dynamics of population problems with the subject matter of population data sources, quantity and demographic analysis in Indonesia and the quality of population in Indonesia SMAN 6 uses WA Groups to disseminate information to students. I teach geography for class X and class XI already uses the wa group. on the material chapter on the distribution of flora and fauna in Indonesia and the world, namely on the material on the factors that influence the distribution of flora and fauna in the world and when I teach biodiversity in Indonesia I distribute material to the wa group and after that I gave an assignment to my IPS class XI students before starting learning to first browse the geographical potential material in Indonesia for teaching materials when teaching tomorrow at class XI IPS schools, namely the subject matter is broad and territorial boundaries, physical and social potential, potential geography and food security."

Based on interviews with geography teachers at SMAN 6 Bengkulu, it is true that SMAN 6 Bengkulu has used or utilized smartphones as learning media such as Zoom or Google Meet as geography learning media, wa group smartphones as a tool for communication for students, browsing as a tool to add insight. Thus the researchers concluded that many applications operate on smartphones such as Zoom or Google Meet as geography learning media, wa group smartphones as a tool for communication for students, and browsing as a tool to add insight.

#### b. For student

Surfing the internet is much more comfortable when using a smartphone. Surfing in cyberspace will feel faster with smartphones that use the latest generation of wireless internet

connections such as 3G, 3.5G, 4G, 4.5G, 5G, and so on. Coupled with the latest web browser that can translate HTML and web programming languages as well as other latest technologies with this smartphone, students can search for various knowledge on the internet. Bro, the internet can access information or other sources. Several sites have provided learning materials for free that can be utilized, including computer science sites that contain learning materials. The internet also makes it easier to access various knowledge from knowledge sources or expert sources, because it is not limited by distance and time. This is in line with the Opinion of R who is a student at SMAN 6 Bengkulu. According to R:

"When I took lessons in class 10 material on the dynamics of the planet Earth, the teacher only explained the theory in my book. It was different when students used WA, the student group could see videos related to learning. Likewise, if students only used books, when human learning material with the lithosphere, only the material was When browsing books, there are pictures, for example, on the lithosphere. By browsing, we can see first-hand examples of the shape of the lithosphere and even more varied material."

In learning Geography, the use of smartphones is very helpful for students to see how a Geography process occurs. This smartphone can be a learning resource for students. Learning resources are anything that can be used as teaching aids to enhance students' insight into students' abilities (Chatel & Falk, 2017; Deda et al., 2023; Gromik & Litz, 2021; Insani et al., 2023; Kurniawati & Priyanto, 2018; Ubben et al. al., 2023). This is also in line with the opinions of other students about whether SMAN 6 Bengkulu has used smartphones in the learning process. According to R, namely

"We as students have used smartphones as learning media for geography subjects. We have used Internet Browsing to find more information from the Internet and through WA groups. There is a lot of material that is not available in books, so we as students use smartphones to find more information when studying with a geography teacher in the subject of CHAPTER 2 class X Social Sciences material on the dynamics of planet Earth as a living space online or during a pandemic. the geography teacher at SMAN 6 sends the subject matter of the effect of volcanism on life and then geography gives students practice questions regarding the material given Students use browsing to help find material for the chapter on natural disaster mitigation and adaptation in grade 10 because I can easily find related material as I browse the subject matter types and characteristics of natural disasters, distribution of natural disaster areas natural disaster risk reduction efforts natural disaster management institutions and answering questions given by the teacher by browsing ".

From the statements of the informants above, there have been many attempts to utilize smartphones as learning media for geography subjects, the most visible efforts are schools providing computer labs for teachers to Zoom or Google Meet at schools, schools conducting training for teachers to face the teaching and learning process not face to face, the teacher gives students the opportunity to ask questions after the lesson is over by asking on zoom, wa groups in person or class groups. There is collaboration between students and teachers so that the class group is not silent (Chatel & Falk, 2017; Deda et al., 2023; Nofirman et al. , 2022; Puspitasari et al., 2022; Sunday et al., 2021; Sweeney, 1995).

# 2. Obstacle Or Constraint In Usage Smartphone In Learning Geography at SMAN 6 Bengkulu

a. For Teachers

Based on the results of interviews regarding the obstacles that exist for teachers when using smartphones as a geography learning media, namely: teachers who find it difficult to supervise students when teaching, students who turn off the camera when zooming, students who do not respond to group WA when the teacher disseminates information, students who do not submit assignments it has been sent to the wa group for various reasons, students who don't understand the material but don't want to ask questions, . This is like an informant

"Students don't open WA groups when the teacher teaches the dynamics of planet Earth and when browsing human material and lithosphere students sometimes like to open material that isn't about the material and there are even students who play games"

The use of Android mobile phones in SMAN 6 has been going on for about the last year. It is hoped that the use of these learning supports can make students more active in learning and can make students more accomplished than they were before using these learning support facilities, especially in Geography education lessons. By utilizing an Android mobile phone students can easily find the information needed. By using the browsing application to the Google account address. Students can easily access anything with just one click, such as searching for books, so students can search for or access learning materials with sophisticated internet facilities contained in their Android mobile phones which they use to support learning achievement. However, at this time there are still many obstacles to using Android mobile phones, starting from how to operate, how to browse, how to download, how to install, and so on. This is also in line with AS, one of the teachers at SMAN 6 Bengkulu who was interviewed about the obstacles or obstacles faced by using smartphones in learning Geography at SMAN 6 Bengkulu, according to AS, namely:

"There are students who are not serious when studying students who do not open WA groups for various reasons in the subject of human and environmental relations due to lithosphere dynamics because they do not pay much attention to WA groups browsing material geography of different natural disaster mitigation and adaptation in books, some students who open the smartphone not to browse but only to play games"

Various problems that occur at this time are things that are often felt by the school, both problems that come from within the school and from outside the school. however, all problems must have a way out, it just depends on the teacher's attitude towards students or vice versa, students towards teachers. The teacher is the main source of knowledge for his students. Teachers are not just giving knowledge to their students in front of the class, but are professionals who can make students able to plan, analyze and conclude the problems they face. b. For student

This internet media can improve understanding of educational lessons in general, and can also act as a substitute for teachers in providing additional knowledge. By utilizing the internet, we can automatically find out the values and developments of education, making it easier for students to get the information needed in the educational process. According to R, one of the students at SMAN 6 Bengkulu encountered various obstacles in using smartphones in the learning process

"Students don't understand the material, for example on the dynamics of the planet Earth and Humans with the Hydrosphere, sometimes the teacher's voice is also not clear because it is not face to face, it is not clear, usually in the form of elaborating material because it is not face to face, learning is less effective due to the short time factor, the group wa is silent due to the lack of cooperation between teachers and students, there are students who lack material because they don't understand the material but are embarrassed to ask. There are students who do not pay attention and are busy with other activities on their cell phones. There are even students who play games when giving material via WA "

Basically learning activities provide opportunities for students to develop optimally, both in cognitive, affective, and psychomotor development, but in reality problems or obstacles often arise in learning such as teachers not mastering learning material, teachers not using media, students' learning motivation lacking, and inadequate learning facilities. Obstacles in learning can be interpreted as obstacles or obstacles that can interfere with the smooth running of learning activities in achieving learning goals. With the emergence of these obstacles, learning becomes less smooth.

"The obstacle that may occur is that there are students who do not use this smartphone properly in class 11 material about population and Indonesia's Geographical Potential. There were some students who didn't join the WA group so these students missed lessons, there were also students who didn't pay much attention and didn't play games when the teacher asked eleventh-grade students and girls to read material that the teacher sent via the link there were students who didn't browse accordingly. with those who were ordered to search for things that are not related"

Jauharil Makmumi 2020 (Monovic): Obstacles faced by teachers during the teaching and learning process by using smartphones as learning media during a pandemic: a) Internet, Internet media can improve and understand educational lessons in general but the Internet is less effective because we have to buy quotas, b) Students do not have smartphones, it cannot be denied that in this digital world not all parents equip their children with smartphones. Based on interviews with geography students at SMAN 6 Bengkulu, the quota is an obstacle when we use smartphones because not all students can afford to buy quotas, and not all students have smartphones because some of our friends cannot afford smartphones.

## **3.** Efforts to reduce obstacles when using a smartphone as a geography learning medium a. For Teachers

Based on the results of interviews, the teacher's efforts to reduce obstacles when using Smartphones as a medium for learning geography were students directed to the computer lab, adding MBPS by the school, teachers collaborating between students and teachers so that class groups were not silent. This statement is supported by the teacher's opinion of the teacher. According to one of the Geography subject teachers with the initials AS. Efforts to reduce obstacles when using a Smartphone as a Geography Learning Media are:

"Teachers supervise students on the dynamics of planet Earth. The teacher invites students to open the WA group so students don't miss information on human material. But previously the teacher had informed in advance that the 10th grade Geography lesson was about humans and lithosphere so that students could prepare themselves in advance"

According to (Nana Supriatna, 2020; Puspitasari et al., 2022; Robert & Brown, 2015; Sahrina et al., 2022; Tusiana, Karyanto, & Sarwono, 2022) a learning media that can be used as a source of learning in learning activities, so students can obtain information or study materials effectively on time. efforts to reduce obstacles when using a smartphone as a Geography learning medium the teacher ensures that the student is indeed using a smartphone for learning, not for other purposes. This is in line with the opinion of one teacher, namely:

"In grade 11 on the subject of population dynamics and Indonesia's Geographical Potential, the efforts made by the teacher so that students continue to study even online, namely the teacher informs 30 minutes early that learning will begin. The teacher supervises through the WA Group to find out which students are present in the WA group and students who are not present. The teacher will ask students to see their activeness in the online learning process and give assignments as an effort to see whether the student is paying attention to the teacher or not, students can browse.

For students and teachers, the existence of smartphones is very challenging, not only to have expectations of change for teachers. Students are expected to change for teachers, but students are also expected to learn more at the beginning of class than before. The development of smartphones today is extraordinary, even those who use them have gone far too remote places, including eliminating the age limit of their users. Smartphones have become a necessity for students and teachers, but there are many obstacles that occur. One of the obstacles to overcoming this is that the school provides WIFI and previously there was a quota from the education office, the Ministry of Education and Culture for students.

b. For students

Smartphone describes the ever-growing electronic sophistication. In fact, it is said that this smartphone is a communication tool that has many functions. Can be used to make calls, write messages, write notes, play games, and send an email (Gromik & Litz, 2021; Insani et al., 2023; Rathakrishnan et al., 2021; Ubben et al., 2023). However, various obstacles were felt by students. The constraints felt by students can be identified through the opinion of F, one of the students at SMAN 6 Bengkulu. The efforts or constraints felt by F are:

"Try to follow the actual learning and focus on learning, especially on the subject of chapter 2 class 10 social science material on the dynamics of the planet Earth as a living space seriously so that students understand that they contact the teacher when there is subject matter on human and environmental relations due to lithosphere dynamics in class 10 social sciences." sent to the WA group. Be more serious and not play games during the teaching and learning process begins"

This was also felt by one of the students in learning Geography. The constraints he felt could be identified through the results of R's interview. According to R

"Doing online learning truthfully, asking questions when there is material on the dynamics of population problems in Indonesia, contacting the teacher directly regarding how to download thematic maps on related sites, contacting the teacher concerned when there is a problem in the learning process if you don't understand the material my teacher give when studying subjects on the distribution of Indonesian and world flora and fauna I ask my geography teacher or browse the internet, I always turn on WA group notifications so I don't miss lessons I also answer questions when the teacher gives assignments in the wa group Look for other sources such as in the library geography subject material for the chapter on Indonesia's geographical potential."

The various obstacles that students go through according to (Adlit et al., 2023; Chatel & Falk, 2017; Sahrina et al., 2022; Sweeney, 1995; Tusiana et al., 2022; Widyastuti et al., 2018) according to several findings, There are several efforts to reduce these obstacles, namely: a. There is an increase in the creativity of the teacher for the ability to present interesting quality material so that it is easy for students to understand, b. Giving homework that is not too heavy so as not to disturb students' psychology c. The willingness of parents to accompany students when students study at home, d. Students who do not have school media (handphones or smartphones, laptops, internet) provide special facilities such as lending school facilities, e. For students who do not have a school quota, they can provide assistance with a tuition subsidy cut or by providing WIFI

#### Conclusion

Excessive use of smartphones will affect students, one of the influencing factors is interest in learning. Interest in studying in Indonesia with smartphones contains both positive and negative aspects, the positive is that smartphones can make it easier for students to find something new and learn it. But the fact is that there are still many students using smartphones for things that are not good, such as chatting while studying or cheating on school exams. The findings show that: online

information, conducting video conferences and chatting with classmates using PCs, and gathering information about fashion trends from magazines, all of which are now being carried out by high school students using computers. only smartphone. Furthermore, this fact also marks a big difference: direct long-distance communication through pictures, photos, short films, as well as text through the use of video chat applications and instant messaging applications covers many aspects of high school student's lives. The popularization of this kind of in-person communication led to a new phenomenon that could be termed "the ubiquitous extended classroom" where high school students continue to interact with their classmates even after school hours. So it can be concluded that there is a positive influence on the use of smartphones on students' interest in learning at SMAN 6 Bengkulu.

#### Acknowledgment

The author expresses his gratitude to all informants for completing this research so that articles can be prepared according to good scientific principles in accordance with findings in the field regarding the information available to informants. The principal of SMAN 6 Bengkulu expressed his many thanks so that this research could find findings for the development of education in Bengkulu. In this case also express many thanks to the Geography Teachers, Students, and Students who helped a lot in providing information on the use of Smartphones as A Geography Learning Media and the establishment of several findings that contributed to increasing understanding of the integration of smartphones into the world of education in Bengkulu. then to the process of analysis and in-depth excavation so that this information and findings can be properly structured, thanks to Dr. Supriyono, M.Pd. from Bengkulu Geography Education Affiliate Universitas Prof. Dr. Hazairin SH who has helped a lot in the preparation of this article.

#### **Conflict of Inters**

In writing this article, the data collection and analysis process were all true, obtained from the informants used in this study. The analysis process of extracting information and the validity of the data goes through several stages according to the procedures in qualitative analysis techniques. So that all authors and informants in this study are fully responsible for the information in the research results and we declare that in this case there is no conflict of interest.

#### References

- Adlit, M. F., Dalit, J., Puzon VIII, D. L., Almirañez, J. R. G., Castres, K. E. B., Beronia, S. M. D., ... Goloran, N. A. (2023). Effectiveness of Mobile Phones as Learning Aid among Senior High School Students. *European Journal of Theoretical and Applied Sciences*, 1(2), 34–46. https://doi.org/10.59324/ejtas.2023.1(2).03
- Chatel, A., & Falk, G. C. (2017). Smartgeo mobile learning in geography education. *European Journal of Geography*, 8(2), 153–165.
- Darko-Adjei, N. (2019). The use and effect of smartphones in students' learning activities: Evidence from the University of Ghana, Legon. *Library Philosophy and Practice*, 2019.
- Deda, Y. N., Nasruddin, N., Bagus, I., Pascima, N., Liunokas, A. B., Ndandara, A., & Supardi, R. (2023). Development of Android-Based Learning Media in Indonesia: A Systematic Literature Review.SAR Journal, 6(2), 110–117. https://doi.org/10.18421/SAR62
- Gromik, N., & Litz, D. (2021). Study benefits of smartphones: Perceptions of female emirati preservice teacher undergraduates. *Education Sciences*, 11(12). https://doi.org/10.3390/educsci11120817
- Insani, M., Haenilah, E. Y., Hariri, H., & Sinaga, R. M. (2023). Audio-visual-based history learning media materials about human life in the literary age. *Journal of Education and Learning* (*EduLearn*), 17(3), 398–407. https://doi.org/10.11591/edulearn.v17i3.20730
- Kurniawati, L. S., & Priyanto. (2018). The Effect of Mobile Learning on Senior High School (SMA): Case Study at Public Senior High School (SMA Negeri) in Yogyakarta. *Journal of Physics: Conference Series*, 1140(1). https://doi.org/10.1088/1742-6596/1140/1/012017
- Nana Supriatna, M. E. (2020). Applying mobile learning in post pandemic for social studies teachers. In *The 5th International Seminar On Social Studies and History Education (ISSSHE)* 2020. Bandung: UPI.
- Nofirman, Cakranegara, P. A., Yusuf, D., Mayasari, N., & Arifin. (2022). Infographic of Internet Usage Data for Learning Process in the Province of Indonesia. *Mantic Journal*, 6(3), 2685–4236.

- Puspitasari, J., Juhadi, J., Suyahmo, S., Wijayanto, P. A., & Saadah, N. (2022). Smartphone Learning Media Prototype Model Based on SAC (Smart Apps Creator) For 4.0 Learning. *International Journal of Social Learning (IJSL)*, 3(1), 31–47. https://doi.org/10.47134/ijsl.v3i1.75
- Rathakrishnan, B., Singh, S. S. B., Kamaluddin, M. R., Yahaya, A., Nasir, M. A. M., Ibrahim, F., & Rahman, Z. A. (2021). Smartphone addiction and sleep quality on academic performance of university students: An exploratory research. *International Journal of Environmental Research and Public Health*, 18(16). https://doi.org/10.3390/ijerph18168291
- Robert, B., & Brown, E. B. (2015). Development of Digital Learning Media "Pla-Bio Games" for Grade X Senior High School Student in Learning Diversity of Plantae in Android Smartphone. In *Proceeding of International Seminar on Science Education* (pp. 167–176). Yogyakarta: Yogyakarta State University.
- Sahrina, A., Sumarmi, Purwanto, Rosyida, F., Shafie, A. Bin, Prasetyono, D., ... Labib, M. A. (2022). The Use of Smartphones in Geography Learning: A 21st Century Learning Innovation in Identifying Nature Appearances Based on Fieldwork. *International Journal of Interactive Mobile Technologies*, 16(22), 15–31. https://doi.org/10.3991/ijim.v16i22.36151
- Sunday, O. J., Adesope, O. O., & Maarhuis, P. L. (2021). The effects of smartphone addiction on learning: A meta-analysis. *Computers in Human Behavior Reports*, 4(March 2020), 100114. https://doi.org/10.1016/j.chbr.2021.100114
- Sutisna, D., Widodo, A., Nursaptini, N., Umar, U., Sobri, M., & Indraswati, D. (2020). An Analysis of the Use of Smartphone in Students' Interaction at Senior High School, 465(Access 2019), 221–224. https://doi.org/10.2991/assehr.k.200827.055
- Sweeney, G. (1995). integrating technology with student-centered learning A. *Manufacturing Engineer*, 74(4), 152. https://doi.org/10.1049/me:19950404
- Tusiana, V., Karyanto, P., & Sarwono, S. (2022). Development of Geographic Learning Media with Android for Improving Spatial Thinking Ability Using Subject of Anthroposphere Dynamics. *International Social Sciences and Humanities*, 2(1), 236–242. https://doi.org/10.32528/issh.v2i1.141

- Ubben, M. S., Kremer, F. E., Heinicke, S., Marohn, A., & Heusler, S. (2023). Smartphone Usage in Science Education: A Systematic Literature Review. *Education Sciences*, 13(4). https://doi.org/10.3390/educsci13040345
- Wang, J. C., Hsieh, C. Y., & Kung, S. H. (2023). The impact of smartphone use on learning effectiveness: A case study of primary school students. Education and Information Technologies (Vol. 28). Springer US. https://doi.org/10.1007/s10639-022-11430-9
- Widyastuti, R., Soegiyanto, H., & Yusup, Y. (2018). The Development of Geo Smart Based Android for Geography Learning Media on Hydrosphere Material and Its Impact towards Life on Earth. *IOP Conference Series: Earth and Environmental Science*, 145(1). https://doi.org/10.1088/1755-1315/145/1/012001