A Study of Smartphone Using on Students at Public Junior High School 55 Palembang

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Abstract—**This study aims to describe the use of smartphones on the students at Junior High School 55 Palembang. The population consisted of 200 students selected by total sampling technique. A quantitative approach with a survey method was employed in this study. The data collection technique used a questionnaire with the scale of Guttman. The data were analyzed using a quantitative descriptive method. The results show that most subjects use Android, which is connected to the Internet through a SIM Card. The smartphone content is mostly used for communication. Utilization of the content can be an entertainment medium. A smartphone produces positive effects on users i.e. It increases the knowledge of the users about technological developments, it facilitates communication, it is a medium of entertainment, and its stores the data. It also has negative effects including it poses physical and mental disorders, it becomes a communication barrier, and it changes lifestyles.**

Keywords — smartphone, junior high school

I. INTRODUCTION

Current development of technology and information has experienced a very rapid progress. Various communication technology devices have been produced in line with the demands of the needs of human life. A widely-used technological product is a smartphone device. A smartphone is an innovation of mobile technology with various advantages to help the activities of its users. Williams & Sawyer [1] stated that a smartphone is a cellular phone with a microprocessor, a memory, a screen and a built-in modem. It is a multimedia phone that combines PC and handset functionality to produce a luxurious gadget with text messages, cameras, music players, videos, games, email access, digital TV, search engines, personal information managers, GPS features, Internet telephone services and even phones credit-card functions.

According to the Minister of Communication and Information, Tifatul Sembiring, in 2014 [2] in the International One-Day Seminar on the Use of Digital Media in Children and Adolescents in Indonesia, the use of social and digital media became an integral part of the daily lives of Indonesian young people. This study found that 98% of the children and adolescents surveyed knew about the Internet and 79.5% of them were Internet users. The data revealed by the Indonesian Internet Service Providers Association (APJII) showed that the number of Internet users in 2018 in Indonesia with the highest penetration from the age of 15 to 19 years reached 91% [3].

Hurlock [4] stated that adolescence is a transitional period marked by physical, emotional, and psychological changes. Santrock [5] revealed that most teenagers spend their happy time discussing the environment with their peers by telephones and in school activities. Teenagers who have the task to learn often play games as an entertainment. Besides, many teenagers are addicted to social networking applications that help them to communicate with their peers more often such as sharing activities and sending photos and videos to each other [6].

Junior high school students use more than 10 hours a day. The smartphones are mainly used for shopping online. The use of a smartphone has a negative effect on the physical aspect, back pain, due to students being bent over for too long [7]. Smartphones are used by students for social media easily because they have many features that facilitate their users to connect to the Internet more easily anytime and anywhere so that the content on smartphones can be more easily accessed to understand the utilization of the content. The good use of smartphones will have a positive effect on students and vice versa [8].

The observations made in junior high school X in Palembang found several students' smartphones containing pornographic videos showing the students' lack of moral awareness. In some schools, the use of smartphones is not permitted in the classroom in the learning process due to the fear that students will access pornographic and other contents that may have a negative effect on their morality and personality and on them being unfocused and confused. The evaluation process on the use of smartphones as a tertiary need is categorized as low in the learning process. The collaboration between teachers and students in the use of technology must be able to produce good social interactions that lead to the good use of smartphones.

During the exam, the students search the answer key via smartphones and write it on the exam sheet, so the students have the same answers. They become lazy to learn and only rely on smartphones. However, the use of smartphones also has a positive effect. The use of smartphones can motivate the students to learn

independently. For example, smartphones can facilitate them to learn English skills at school and independently at home [9]. If moral values are well instilled among students, the use of smartphones actually has a positive effect. We, especially students, unconsciously become dependent on communication tools. There are people who are nervous and cannot live without smartphones.

NSW Government [10] states that mobile digital devices can improve social relations between peers and relatives. This will affect both mental and physical health. In addition, students can use mobile digital devices to explore information and knowledge without limits under school supervision and control, but the use of mobile digital devices can have a negative effect on students including increasing cyberbullying, diverting students' attention in the learning process, and inhibiting social interactions.

Furthermore, in the school context, the use of smartphones has a high enough significance. It has a positive effect on the students' achievements at school [11]. Individuals who have smartphone addictions are more likely to experience high anxiety compared to those who are not addicted, and individuals who have high anxiety are more likely to have significant clinical problems in their family relationships [12].

Students who have anxiety are more likely to have significant problems can be helped by guidance and counseling in school. Prayitno [13] revealed that guidance and counseling is one component of education. It is an activity of assistance and guidance given to individuals in general and students in particular in schools in order to improve their quality. Education is a conscious effort that aims to develop one's personality and potential. Personality concerns problems of behaviors or mental attitudes and abilities, including academic and skill problems [14].

Guidance and counseling services are a series of activities designed by counselors to help counselees develop themselves as optimally as possible in both their personal, social lives, learning activities, and career planning and development. Students can use smartphones as learning aids. Teachers are advised to use smartphones in integrating technology into the learning process.

Guidance and counseling services facilitate student's self-development, both individually and in groups according to their needs, potentials, talents, interests, developments and opportunities [15]. These services also aim to help overcome weaknesses and obstacles faced by the students. Guidance and counseling services facilitate the development of individual, group and classical students according to their needs, potentials, talents, interests, developments, and conditions so that they can control themselves using technology advances to the best of their ability.

II. METHODS

This study used a quantitative approach with a survey method. The data collection technique used a questionnaire with the Guttman's scale. The data were analyzed using a quantitative-descriptive method.

III. RESULTS AND DISCUSSION

Results

The following are the results of the study that has been carried out on the students of Junior High School 55 Palembang on the use of smartphones.

Table 1. Types of Smartphones Used by Students of Public Junior High School 55 Palembang

No.	Brands	Total	%
1.	Apple iOS	1	0,5
2.	Android	198	99
3.	Windows Phone	0	0,5
4.	Blackberry OS	1	0
	Total	200	100

Table 2. Smartphone Brands Used by Students of Public Junior High School 55 Palembang

No.	Brands	Total	%
1.	Samsung	74	36
2.	iPhone	1	0,5
3.	Oppo	35	17,2
4.	Advan	38	18,7
5.	Vivo	17	8,4
6.	Xiaomi	18	8,9
7.	Asus	17	8,4
	Total	200	100

Based on the results of the study in table 1, the commonly-used type of smartphones is Android of 99%. In table 2, the smartphone brand commonly used is Samsung with a percentage of 36%.

Table 3. Internet Connection Used by Students in Public Junior High School 55 Palembang

No.	Internet Connection	Total	%
1.	SIM Card	179	88,2
2.	Wi-Fi	24	11,8
	Total	203	100

Table 4. Internet Connection Used by Students in Public Junior High School 55 Palembang

No.	Internet Connection	Total	%
1.	Telkomsel	54	25,6
2.	Indosat	17	8,1
3.	XL	34	16,1
4.	Axis	18	8,5
5.	3	73	34,6
6.	Home Wi-Fi	15	7,1
7.	School Wi-Fi	0	0
	Total	211	100

Based on the results of the study in table 3, the Internet-connection type widely used by the students is via SIM-Cards with a percentage of 88.2%. In table 4, the type of SIM Card used is Three of 34.6%.

Table 5. Duration of Smartphone Use by The Students of Public Junior High School 55 Palembang

No.	Duration of Smartphone Use per Day	Total	%
1.	1 jam	53	26,5
2.	2 jam	72	36
3.	3 jam	52	26

No.	Duration of Smartphone Use per Day	Total	%
4.	4 jam	8	4
5.	5 jam	11	5,5
6.	6 jam	4	2
	Total	200	100

Based on the results of the study in table 5, the duration of smartphone use is 2 hours per day with the percentage of 36%.

Table 6. Features Used by The Students of Public Junior High School 55 Palembang

No.	Features	Total	%
1.	Google	167	15,8
2.	Facebook	171	16,2
3.	Instagram	118	11,2
4.	Whatshap	124	11,7
5.	SMS	103	9,7
6.	Microsoft Office	17	1,6
7.	Kalkulator	108	10,2
8.	Galeri	143	13,5
9.	Kamus	73	6,9
10.	Games	24	2,3
11.	Email	3	0,3
12.	BBM	3	0,3
13.	Youtube	4	0,4
	Total	1058	100

Based on the results of the study in table 6, the commonly-used smartphone feature is Google by 16.2%.

Table 7. Commonly Accessed Contents by The Students of Public Junior High School 55 Palembang

No.	Contents	Total	%
1.	Information/Knowledge	168	19.9
2.	Education	139	16.5
3.	Life style	66	7.8
4.	Business	17	2
5.	Communication	181	21.5
6.	Entertainment	160	19
7.	Creativity	112	13.3
	Total	843	100

Table 8. Content Utilization by The Students of Public Junior High School 55 Palembang

No.	Contents	%
1.	Increasing information and knowledge	13%
2.	Facilitating learning	17%
3.	Supporting life style	9%
4.	Business	5%
5.	Facilitating communication	20%
6.	Entertainment media	22%
7.	Training creativity	14%

Table 9. Positive Effect of The Use of Smartphones on Students of Public Junior High School 55 Palembang

No.	Positive Effect	%
1.	Increasing knowledge about technological development	24%
2.	Facilitating communication	26%
3.	Entertainment media	27%
4.	Storing data	23%

Based on the results of the study in table 9, the positive effects of smartphone use on students of Public

Junior High School 55 Palembang include increasing knowledge about technological development by 24%, facilitating communication by 26%, becoming an entertainment media by 27%, and storing the data by 23%.

Table 10. Negative Effect of The Use of Smartphones on Students of Public Junior High School 55 Palembang

No.	Negative Effect	%
1.	Physical disorder caused by smartphone use	30%
2.	Mental disorder caused by smartphone use	25%
3.	Inhibiting communication	28%
4.	Changing life style	17%

Based on the results of the study in table 10, the negative effects of smartphone use on students of Public Junior High School 55 Palembang include physical disorder by 30%, mental disorder by 25%, inhibiting communication by 28%, and changing lifestyle by 17%.

Discussion

This study is aimed to describe the use of smartphones in students of Public Junior High School in Palembang. This study used a survey. The students were given questionnaires in the form of statements that they have to respond by themselves. The results of study are discussed in this part. The study conducted with regard to the use of smartphones in students of Public Junior High School Palembang includes the types of smartphones, Internet connections, content accessed, utilization of content, positive and negative effects of smartphone use on the eighth-grade students of Public Junior High School Palembang.

The students already have different types of smartphones with different uses as technology advances. They can understand smartphone usage by playing an active role in utilizing smartphones. With smartphones, students can also connect directly to the Internet, so they can access the contents to understanding the utilization. The students can use smartphones with many features and contents by being active on social media and often communicating with anyone. Smartphones also facilitate users to connect to the Internet more easily anytime and anywhere. When students are interested in learning new things and can control themselves well, the use of smartphones will have a positive effect on their lives.

The use of good contents will have a good effect on students and vice versa. With a variety of features and contents on smartphones, students are encouraged to find out whatever contents on the smartphone. Lacking self-control in the use of smartphones makes students dependent on smartphones. They have used the smartphones well, mostly for entertainment. The use of smartphones can have positive effects. The students can more easily access learning resources and communicate through social media with anyone and anywhere. The good use of smartphones can also improve their thinking powers in understanding current phenomena in society. The negative effect includes physical disorder for long-time use, such as experiencing sore-eye cause by the radiation and headache. Besides,

smartphone addiction behaviors can be experienced by students due to the features in smartphones, so when playing with their smartphones, students do not pay attention to the surrounding environment that will have an impact on their social lives. Guidance and counseling services can take advantage of technological advancements by providing services regarding the proper use of smartphones.

The process of evaluating and instructional use of smartphones for tertiary students is due to the lower use of student smartphones for learning activities. Collaboration between teachers and students in the use of technology must result in social interactions so students can use smartphones well [16]. Various sciences contribute to the formation and development of theories of guidance and counseling and the practice of its services [13]. Guidance and counseling services actively provide guidance and counseling programs to be implemented to improve learning so that smartphone use can have positive effects on students. Not only guidance and counseling teachers, but also subject teachers can also apply the use of smartphones in the learning process such as the use of calculators for mathematics lessons.

Guidance and counseling services are also preventive measures to prevent negative things from happening along with technological advancements such as guidance and counseling teachers providing information services related to proper use of smartphones so that the students can know and control themselves in using the smartphones that result in the positive effects for them. Guidance and counseling teachers can also use smartphones as a guidance and counseling media in interacting with students such as communicating via social media and chatting using WhatsApp when students want to consult, so guidance and counseling teachers can get closer to them.

Guidance and counseling teachers can take advantage of technological advancements to facilitate student's development in accordance with the needs, potentials, talents, interests, and conditions of students so that they can control themselves as well as possible. Guidance and counseling services can help students overcome the negative effects of using smartphones such as individual and group counseling. With group counseling, students can overcome weaknesses and obstacles experienced by practicing communication skills, expressing opinions, exchanging ideas with one another, and listening to each other's suggestions among group members. With individual counseling, students can consult to solve the problems of using the smartphones they are facing. The role of parents and the community is needed in socializing the proper use of smartphones, so the smartphone use can have good effects on the student's life.

The positive effects of the use of smartphones on children's development include improving visual acuity, stimulating to keep up with the latest technological developments, and supporting academic aspects while negative effects include disruption of social relations, radiation risk, and the risk of psychological development [17]. Teenagers access the Internet through smartphones. The duration of the Internet access outside the school environment via paid card and WIFI connection is 7-11 hours per week or 1-1.5 hours per day, which affects the

learning achievements of students [18]. This study is similar to the study of students accessing the Internet using smartphones and using prepaid cards or SIM CARD. In the latest study, students use smartphones with the Internet access using SIM CARD as a medium to find information that they do not know and the information and knowledge related to school subjects, so they can more easily explore their capabilities which will have a good impact on their achievements in school.

The use of smartphones as a facilitating communication by the needs of students, the use of smartphones as a facilitating communication by focusing on its use can increase user satisfaction [15]. In line with the latest research, the use of smartphones by students has in common the use of content in smartphones as a facilitating communication to produce a positive impact to facilitate communication between students. The positive impact in the use of mobile phones can facilitate communication even though it is located long distances, mobile phones can facilitate the search for information and so forth. While the negative impact generated in the use of mobile phones is the radiation that occurs in the use of mobile phones that are too frequent so that endanger users, adolescents communicate more often through the media than communicate directly face-to-face, adolescents who experience dysfunction in smartphone use can disrupt the quality of teen social interaction, mobile phones make teens hyperpersonal, consumptive, and make teens less sensitive to the surrounding environment [16]. The use of a good smartphone can facilitate communication and add information and knowledge of technological developments by the results of research that has been done, while the use of a smartphone that is not goodwill endanger users, as in recent studies the results obtained are the appearance of physical smartphone disruption such as the head often experiencing dizziness, eyes become irritated due to radiation from smartphone usage, besides that smartphone are also a barrier to communication, because students prefer interaction through social media rather than meeting face to face.

The use of smartphones has negative effects on students, such as smartphone addition on social interaction in adolescents [17]. Students can evaluate the use of smartphones on their own. They hope that they can use the smartphones for themselves and their classmates in the future better than today [18]. When students can control themselves well, they will be able to use smartphones in accordance with their uses, such as facilitating communication with anyone with the features available on smartphones such as social media, so students can practice the ability to interact well with anyone. With smartphones, students can add knowledge about technological developments.

IV. CONCLUSION

The study aims to determine the use of smartphones in students of Public Junior High School Palembang. The results showed that most subjects use Android, which is connected to the Internet through a SIM Card. Smartphones are commonly used for communication and entertainment media. Smartphones have a positive effect on users as a

medium of entertainment and a negative effect, namely physical disorder. This study has some limitations. First, the researcher only conducted the study with the subjects of junior high school students in one school that was not done thoroughly. Second, the researcher only collected the data based only on the questionnaire and did not conduct direct interviews with the students to find out the reason for each answer. The researcher recommends to better understand how to use smartphones in accordance with the procedures. Other researchers may add the problem statement about the amount of credit usage on the smartphone. The data collection should be based on not only the questionnaire, but also interviews with the students to find out clearer reasons for each answer given. Data collection should be done not only at one school but also at several schools in Palembang. Other researchers can conduct the studies on not only junior high school students but also elementary and senior high school students.

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