



The Influence of Using Smartphone to Interesting Learning and GPA in Students at Physics Education Department

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ABSTRACT

Research using a quantitative descriptive approach aims to determine the effect of smartphone usage on learning interest and GPA of Physics Education students at Universitas Syiah Kuala. The samples in this study were all physics students in academic year 2016 and 2017. Data collection was obtained by using a questionnaire for smartphone usage and interest in learning, while documentation for student GPA. Data processing using percentage analysis and multiple linear regression test. The results of the statistical test show that there was an influence of the use of smartphones on student interest and GPA. It was obtained that the calculated r_{count} was greater than r_{table} that was equal to 17.38.

Keywords: Influence, Smartphone Usage, Interests and GPA

INTRODUCTION

Along with the development of information and communication technology, mobile phones are increasingly developing until now mobile phones are better known as smartphones. Nursina (2016: 8) "Smartphone is a multimedia mobile phone that combines the functionality of personal computers and handsets to produce a luxurious gadget, where there are text messages, cameras, music players, videos, games, email access, digital tv, search engines, information managers personal, global positioning system features, and internet telephone services".

Smartphone is one of the results of the development of advanced technology that has sophisticated capabilities where students are one of the smartphone user groups. Research on this smartphone itself is still carried out until now, this is due to the many negative impacts caused by smartphones. As for the negative impact that is like a smartphone can cause users to be anti-social, smartphones become the cause of traffic accidents, smartphones can causes syndromes or crazy, can break concentration while studying, cause undisciplined when learning, dependence on smartphones. Using a smartphone with a high intensity will disrupt the discipline of learning, Regina & Adi (2016: 1) " There is a relationship between the

intensity of smartphone use and the discipline of learning. This means that the higher the intensity of smartphone usage, the lower the discipline of learning". The higher the intensity of smartphone usage, the lower the discipline of learning so that it impacts on the GPA, Maria (2013: 653) "One of the factors that can determine the GPA is the time used for learning. Therefore, the division of time on the use of smartphones enables the use of time spent on learning where the study time also determines the GPA that students will get".

Problem of Research

Among Physics Education students at the Faculty of Teacher Training and Education, Universitas Syiah Kuala, nowadays were very interested in using smartphones, in addition to being used as a cellular communication tool, students also using smartphones as tools to exist in cyberspace and to search for lecture materials. Based on observations many of the students use smartphones in the lecture room when lectures take place. Maria (2013: 658) "Using a smartphone can increase the academic value of students as long as the use of a smartphone is used in the context of learning".

High student interest in the use of smartphones was based on the facilities provided by such a large smartphone. As a result of the existing facilities on smartphones, it will trigger students to be lazy to learn so that learning interest was very low and will have an impact on student learning outcomes. Many students were disturbed by the concentration of using a smartphone in lectures. As a result of addiction to the usage of smartphones, this could reduced interest in learning and disrupted the concentration and learning outcomes. This greatly affects the success of learning to be achieved by students, especially students of Physics Education. Based on the description of these problems, the problem of this research was the positive influence and also the negative effect of smartphone usage in carrying out ongoing lectures, so that it affects the interest in learning and student learning outcomes (GPA). Therefore the author was interested in wanting to proved through a study by raising the title "*The Influence of Smartphone Using toward Learning Interest and GPA on Physics Education Students*".

Research Focus

This research focuses on smartphone usage, interest in learning and GPA. This was because the usage of a smartphone has positive and negative impacts for its users. So the usage of smartphones for students could increased or decreased students' GPA.

METHODOLOGY OF RESEARCH

General Background of Research

The type of approach used in this research was descriptive quantitative in the form of correlational to see the effect of smartphone usage on students' interest and GPA.

Sample of Research

The sampling technique used in this study was saturated sampling. Saturated sample was a sampling technique when all members of the population were used as a sample (Sugiyono, 2013). The number of samples in this study were 121 students.

Instrument and Procedures

Data collection techniques by observation in the field, documentation and by using a questionnaire. Questionnaire was a data collection technique by giving members a set of questions or written statements to respondents to be answered (Sugiyono, 2012). In this study using 2 questionnaires with each questionnaire totaling 25 statements for the questionnaire of interest in learning and 13 statements for the questionnaire of smartphone usage.

Data Analysis

Data processing techniques in this study use percentage analysis, according to Sudjono (2009) as follows:

$$P = \frac{\text{the number of student responses}}{\text{total number of students}} \times 100\%$$

Furthermore, the results of calculations using multiple linear regression test. According to Sugiyono (2017) multiple linear regression test as follows:

$$Y = a + b_1X_1 + b_2X_2$$

RESULTS OF RESEARCH

1. The influence of smartphone usage on interest

Based on the results obtained in the analysis of student responses it was found that the usage of a smartphone affects the interest in learning. This was evident in the indicators arising of feelings of pleasure when studying there as many as 50.55% of students answered agree. While indicators of interest in learning there were 56.33% answered agreed, 51.86% of students answered agreed to the indicator of concern arising in learning and as much as 62.34% of students answered agreed to indicators of involvement in learning processes individually or in groups. The results of testing the hypothesis in this study found that the influence of the use of smartphones on student interest in learning. The results of the statistical test showed that the influence of the use of smartphones on student learning interest and GPA. It was obtained that the calculated r_{count} was greater than r_{table} that was equal to 17.38. In addition, the percentage obtained on each indicator of interest was also seen in the "influential" category.

If the quality of education was poor, it was certain that the country will not be able to compete in the global arena (Ayunthara, 2016). There were many factors that affected student learning outcomes, one of which was motivation. High motivation could increased interest in learning, so that by having an interest then students will be able to achieved. Interest was a sense of liking and interest in a thing or activity without the presence of commands that can be expressed through statements that show a fondness for a thing. To

realize this, we need media that was appropriate to this period, one of which was the usage of smartphones. Smartphones were used to see the latest information and show that teens can open smartphones up to dozens of times a day and open them when they were free (Hafni, 2018). In addition, various applications could present a variety of social media, so that it was often misused by students which can adversely affected their academic grades or achievement levels (Manumpil et al., 2015). Excessive use of gadgets on students sometimes causes problems (Hasnah & Kumalasari, 2015) on students. Research conducted by Etnanta & Irhandayaningsih (2017) found that based on the results of hypothesis testing showed that the calculation of the t_{count} of the smartphone usage variable was 5.953, greater than the t_{table} of 2,000, and the value of sig. of 0,000 less than 5%, so H_1 was accepted which means the use of a smartphone has a statistically significant effect on reading interest. The results of a study conducted by Sukarno & Hardinto (2018) showed that there was a significant influence between the variables of student interest in learning outcomes of students of class XI IIS at State High School 1 Kepanjen.

2. The Influence of smartphone usage on GPA

The results of testing the hypothesis in this study found that the influence of the usage of smartphones on students' GPA. The results of the statistical test show that there was an influence of the usage of smartphones on students' interest and GPA. It was obtained that the calculated r_{count} was greater than r_{table} that was equal to 17.38. Academic achievement was influenced by learning and self-discipline. Apart from learning and self-discipline which were some of the internal factors that influence GPA, there were also environmental factors which were external factors. One external factor and becoming a trend now was the usage of technology that continues to grow rapidly, making it easier for humans to carry out daily activities, one of which is to communicate.

Academic achievement was the result of learning in the form of oral or written problem solving, and direct skill and problem solving that was realized in the form of numbers (Mandias, 2017). Learning achievement was the result or level of ability that students have achieved after attending the teaching and learning process within a certain time, either in the form of changes in behavior, skills, and knowledge (Hidayat & Junianto, 2017). Based on research conducted by Maria (2013) test results calculated using SPSS, the mean IPS obtained before students using a smartphone is 2.77, while after using a smartphone was 3.10. This condition indicates an increased in student IPS after the use of a smartphone. The test results also showed a correlation of 0.652 with a significance of 0.000 which showed a significant correlation between smartphone usage of student social studies where student social studies increased.

Smartphones as communication technology products has positive and negative impacts in the world of education. Some research shows that students who carry smartphones to classrooms and while listening to lectures or learning are common behaviors. Jacobsen and Forste in their research results also identified that there was a negative correlation between the usage of various kinds of electronic media including smartphones with academic achievement or in other words there was no correlation between smartphone use with the Academic Achievement Index (GPA) of first-year students in the United States (Hafni,

2018). Based on the results of the study it could be seen that the most dominant variable influencing Student Achievement Index was the variable "Content accessed" with a coefficient value of 0.089. Although the coefficient values displayed were relatively small, students should pay attention to this because it could help in improving students' academic achievement (Permata, et al., 2019).

CONCLUSIONS

Based on data analysis and discussion in this study, it could be concluded that there was a significant influence between smartphone usage on learning interest and student GPA. Suggestions for future writers to conduct research better.

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REFERENCES

- Ayunthara, A. (2016). Pengaruh Penggunaan Teknologi Informasi, Lingkungan Sekolah dan Manajemen Waktu Terhadap Prestasi Belajar Ekonomi. *Jurnal Pendidikan dan Ekonomi*, 3(5), 251-257.
- Etnanta, Y.C. & Irhandayaningsih, A. (2017). Pengaruh Penggunaan Smartphone terhadap Minat Baca Siswa SMA Negeri 1 Semarang. *Jurnal Ilmu Perpustakaan*, 1(6), 26-29.
- Hafni, N.D. (2018). Nomophobia, Penyakit Masyarakat Modern. *Jurnal Al-Hikmah*, 2(6), 41-50.
- Hasanah, N. & Kumalasari, D. (2015). Penggunaan Handphone Dan Hubungan Teman Pada Perilaku Sosial Siswa SMP Muhammadiyah Luwuk Sulawesi Tengah. *Harmoni Sosial: Jurnal Pendidikan IPS*, 2(1), 55-70.
- Hidayat, A.R. & Junianto, E. (2017). Pengaruh Gadget Terhadap Prestasi Siswa SMK Yayasan Islam Tasikmalaya dengan Metode TAM. *Jurnal Informatika. Jurnal Informatika*, 4(2), 163-173.
- Mandias, G.F. (2017). Analisis Pengaruh Pemanfaatan Smartphone terhadap Prestasi Akademik Mahasiswa Fakultas Ilmu Komputer Universitas Klabat. *Cogito Smart Journal*, 1(3), 2477-8079.
- Manumpil, B., Ismanto, A.Y. & Onibala, F. (2015). Hubungan Penggunaan Gadget dengan Tingkat Prestasi Siswa di SMA Negeri 9 Manado. *Jurnal Keperawatan*, 1(2), 4-6.

- Maria, N. (2013). Pengaruh Penggunaan Smartphone terhadap Nilai Akademik Mahasiswa. *ComTech*, 4(2), 652-658.
- Nursina, (2017). Penggunaan Smartphone dalam Mengembangkan Pola Belajar Siswa. *Jurnal Ilmu Komunikasi UHO*, 2(1), 33-41.
- Permata, E.G., Harpito, Kusumanto, I. & Zulmiriyanto. (2019). Analisis Perilaku Mahasiswa Sains dan Teknologi dalam Penggunaan Smartphone (gadget) untuk Meningkatkan Prestasi Akademik. *Jurnal Teknik Industri*, 2(9), 1411-6340.
- Sudjono, A. (2009). *Pengantar Statistik Pendidikan*. Jakarta : Rajawali Pers.
- Sugiyono. (2012). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Sugiyono. (2017). *Statistika Untuk Penelitian*. Bandung: Alfabeta.
- Sugiyono. (2013). *Statistika Untuk Penelitian*. Bandung: Alfabeta.
- Sukarno, Z.A. & Prih, H. (2018). Pengaruh Penggunaan Gadget, Minat Belajar dan Kecerdasan Emosional terhadap Hasil Belajar Siswa Kelas XI Iis pada Mata Pelajaran Ekonomi di SMAN 1 Kepanjen. *Jurnal Pendidikan Ekonomi*, 11(1), 9-19.
- Yuni. (2017). Hubungan Intensitas Penggunaan Smartphone dengan Disiplin Belajar Siswa. *E-Societas*, 6(1), 112-115.