

The Impact of Using Technology in Improving Student Achievement in Intensive Reading at St Augustine Hippo Catholic University

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ABSTRACT: The development of technology greatly influences human life, as well as in the world of education. The use of smartphones has become a necessity for students even in increasing achievement. The purpose of this study was to describe the effect of Smartphone use on Intensive Reading learning achievement in St Augustine Hippo Catholic University students. The rapid development of information technology has affected all aspects of human life. In addition, the development of information and communication technology has a positive impact on humans but can also have a negative impact, especially on mobile communication devices (smartphones). The method used in this research is quantitative research with a survey design. The results of the study show several important points, namely: (1) Increasing student learning outcomes in Intensive Reading, (2) Students are more active in carrying out learning activities in class, and (3) The quality of the teaching and learning process increases significantly. It can be concluded that the use of smartphones can improve student achievement.

Keywords: Smartphone, Technology, Student Achievement, Intensive Reading

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INTRODUCTION

The development of communication technology is currently increasingly rapidly being felt in almost all dimensions of life, in urban centers people are increasingly sophisticated using communication devices (Smartphones). Nowadays cell phones are no longer expensive, even for students and Smartphones students have become "basic needs" to socialize and go through the learning process at school or on campus. Because Smartphones have become a basic necessity, Smartphones are disrupted. In terms of functionality, cell phones complete many of the same tasks as Internet-connected computers. As such, today's cell phones allow users to call, text, e-mail, video conference, microblog, interact on social networks, surf the Internet, watch and share videos and pictures, play video games, and utilize a tremendous array of software-driven applications. In contrast to traditional notions of the computer, the mobile nature of the cell phone allows these services to be accessed almost anywhere and at almost any time. (Lepp, 2014)

Among St Augustine Hippo Catholic University students, the conditions are not much different from the conditions of students at other campuses. Although the St Augustine Hippo Catholic University campus is located almost at the end of the island of West Kalimantan, the Wi-Fi network is already on this campus, so students can access all information from both domestic and foreign countries easily accessible using standard Smartphones, such as Android or other smartphones. Previously, Smartphone's function was limited to sending Short Message System (SMS) messages or just making calls. But now with the advancement of information technology, Smartphone has developed functions with a variety of services. Almost all human activities from morning to night have been helped by using Smartphones. In today's Smartphone applications that are standard can already serve small to large things.

The proliferation of mobile technology provides a myriad of opportunities to support learning and performance both inside and outside the classroom. With mobile technology, the learning environment can go with the student to the field site, to the laboratory, and beyond. There is an opportunity to leverage mobile technology to better support students not only in the classroom but also as students navigate the context of their learning. (Martin, 2013)

People can use this Smartphone service for various purposes such as: sending email, trading online, and social media with friends and family, even cell phone is already used in banking services using SMS Banking services. There are still many applications available on smartphones that can be used to do a lot of activities. The conveniences that can be obtained in the Smartphone service make people more efficient in utilizing time, for example, first people ordering flight tickets had to come to a travel agent by spending time and energy to get 1 flight ticket, now it is far different people can order tickets airplane without having to move from home by ordering tickets through Smartphones that sell tickets and other items online.

The last time, if people were going to eat their favorite food, they had to queue at stalls, which certainly took a lot of time, now people just order their food via cell phone. The convenience found in cell phones will have both positive and negative effects. One positive impact is that people will save time in doing all their activities. The negative impact caused by cell phone applications, among others, people tend to be lazy because it is facilitated by the facilities of smartphones. This sometimes makes the young generation will be lazy to move and socialize directly because all of the activities can largely be assisted by smartphones.

In the past decade, many studies have demonstrated the benefits of web-based learning. Various learning methodologies or tools have been developed for enhancing the effectiveness of web-based learning, such as the assessment and feedback mechanism. (Hwang, 2011).

The relation between the influences of the use of Smartphones among St Augustine Hippo Catholic University students of English Education Program first semester with 46 respondents. The use of Smartphones among students will bring negative and positive impacts depending on the student concerned. In the English Education program cell phone is useful to be used as an online dictionary by using Google Translate. By using this facility students will be greatly helped if they experience difficulties in interpreting new words (new vocabularies). In addition, students can use the application on their cell phones to do the assignments given by the lecturer via email, browsing, searching, Google drive, etc. Most importantly students can use applications on Smartphones to get the material taught. In addition, students can access the latest information through Smartphones that have provided many applications.

Information and communication technology has many benefits and services for human beings, but its negative impact on the community increases daily. One of these aspects is dependency or addiction to these technologies. The addictive use of mobile cell phones is one of the factors influencing student achievement. (Amidtaher, 2016). The effect of life stressors on smartphone addiction is also examined. Smartphone addiction is defined in our study as "excessive use of smartphones that interferes with the daily lives of the users" (Lee et al., 2014).

LITERATURE REVIEW

Smartphone History

Mobile phones have become the most prevalent communication devices which are utilized for interpersonal communication, socialization, and professional tasks. According to International Telecommunication Union's report (2014), the global mobile-cellular penetration rate reaches 96% in 2014 and the Asia-Pacific region leads the growth. With 3G/4G network advancements, affordable smartphones which integrate feature phones' communication functions, mobile internet, and mobile applications diffuse rapidly in recent years. (Lin, 2017). With the emergence of the fourth industrial revolution, educational reform utilizing information and

communication technology (ICT) devices has attracted more attention. The smartphone has arisen as one of the most prevalent ICT devices. (Han, 2018)

Smartphones often called cellular phones are electronic telecommunications devices that have the same basic capabilities as conventional fixed-line telephones but can be carried everywhere (portable, mobile) and do not need to be connected to telephone networks using cables. The Smartphone is the development of telephone technology which from time to time experienced development, in which the mobile device can be used as a mobile device or moved as a means of communication, the delivery of information from one party to another becomes more effective and efficient.

Another term for a cell phone is a cellular phone so it is often referred to as 'mobile'. The history of the Smartphone began in 1908 when the issuance of US Patent 887,357 for cordless phones was created by Nathan B. Stubblefield (Anonymous, n / d.). Smartphone devices like we have today have been around since 1973. About who invented Smartphones, there are two different views. The first viewpoint is Dr. Martin Cooper, a former Motorola employee, as the inventor of the Smartphone in 1973 and the first person to receive a call via Smartphone was Joel Angel, Head of Research at AT&T Bells Laboratory. This view is refuted by the second view which says that Dr. Martin Cooper is not an inventor of smartphones because he only built radio phones. The second view claims AT & T Bells Laboratory as the inventor of the Smartphone Febriyan (Sauhenda et al., 2019)

Wiguna (Sauhenda et al., 2019) suggests several benefits of using Smartphones as follows: (a) as a communication tool between people: Mobile is one of the latest forms of development of wireless telephone technology. Through Smartphones one can communicate with family, friends, and acquaintances in distant places in seconds; (b) as a means of seeking information/knowledge.

In addition, nowadays with Smartphones, the community can do almost all activities by simply pressing the applications that are on the cell phone. Of course, this will facilitate the activities carried out by humans, starting to send e-mails, online trade in all types of goods, payment online, and even seminars and conferences can be done online. Such a long distance in front of the eye, this happens when utilizing a video calling application (Video call).

Learning Achievement

Learning achievement is an award obtained from learning outcomes and is shown with a very satisfying score. According to Muhibbin (Werang, 2011) "learning achievement is the realization or expansion of potential skills or capacities that a person has". Travers in (Werang, 2011) interprets the word 'learning achievement' as what is learned by an individual from some of the educational experiences he experiences. Furthermore, Winkel in (Werang, 2011) also explains that learning achievement is a change in the cognitive field, the sensory-motorist field, and the dynamic-affective field, and causes humans to change their attitudes and behavior.

Many factors contribute to one's learning achievement. According to (Suryabrata, 1984) citing the two main factors that influence student learning outcomes are as follows. First, internal factors: factors that result from students themselves such as physical health (vision, and hearing) and psychic (such as level of intelligence, interest in talent, and motivation to learn). Second, external factors: factors originating from outside the students themselves such as social environment, school environment, and peer group environment) and non-social learning environment at school, and climate/weather).

Furthermore, Murphy in (Werang, 2011) states that the factors that influence learning achievement are: "the extent to which educators, students, and the total educational environment reflect culture competence influenced the nature and type of schooling, conditions of learning, as well as learning outcomes ". This opinion implies that the factors that influence learning achievement include educators, students, and the educational environment. Educator factors can be seen from the teacher's performance, student factors can be seen from achievement motivation and learning discipline, the educational environment can be seen from the facilities and infrastructure of the school, the implementation of internships as well as parents' support. Everyone has their way of learning to understand what they want to learn. In this case, Sudarmanto in (Werang, 2011) explains the effective way of learning, namely, (a) completing the task as soon as possible, (b) underlining important words in the text (c) making notes on the right or left edge of the page (d) make a summary (e) copy important questions in notes (f) study the pictures, symbols or symbols in the text (g) use the time to read the book (h) follow the tutoring, and (i) make a study schedule.

Reading Skills

One of the demands of the current global era is to increase references, and it is also related to increasing. The increasing number of plagiarized scientific works in Indonesia has made the situation worse. This can be caused by the lack of interest of the Indonesian people in reading. Everyone should have good reading skills. Therefore, the importance of the ability to read for everyone. (Bua, 2022). This requires humans to think ahead in everything so that they are not considered left behind. One area that is quite significant in the development of science and technology in education. Education is a process of communication and information between lecturers and students, the media as a means of presenting ideas, ideas, and educational materials, and the students themselves. (Ferazona, 2020)

Reading skills is one of the skills needed in the process of learning English, in addition to listening, speaking, and writing. According to (Nurhadi, 2016) said in a narrow sense, reading is an activity to understand the meaning contained in the writing. While in the broadest sense, reading is a critical creative reading processing that is carried out by the reader to gain a thorough understanding of the reading, which is followed by an assessment of the state, score, function, and impact of the reading. The

purpose of learning to read is so that students can be skilled in reading and this reading ability becomes the basis for students in developing other skills, both in academic life and in everyday life. (Humaira, 2021).

In some school settings, the students gain some English textbooks which are written in English. These textbooks contain a lot of information related to the subjects the students learned. To access this information, therefore the students need sufficient knowledge of English. Especially, they should have the skills of reading because it is written in the textbooks so that they could comprehend it well. That is why reading skills are important to be mastered.

In understanding the text the reader needs to understand several aspects of reading to facilitate the reader in understanding the text being read. According to Tarigan (Dalman, 2014), some aspects of reading comprehension are the following: a) Understanding simple terms (lexical, grammatical). This aspect means that the reader is expected to know the lexical meaning or the meaning of the actual and grammatical meaning that is the meaning of the word that changes according to the context of the user; b) Understand the significance/meaning (intent and purpose of the author). This aspect means explaining whether the reader understands in detail and comprehensively the contents of the reading. The way to read it is to read carefully at normal speed. Understand each idea expressed carefully; c) Evaluation / assessment (content, form). This aspect evaluates the truth of ideas from content and form by the author or writer. You do this activity by reading the entire reading carefully; d) Flexible reading speed which is easily adapted to circumstances. Reading must be flexible. We must be able to adjust the reading material that we read with the speed of reading. This depends on the level of difficulty of the reading text.

There are several goals for reading skills from experts. One of them is from (Mikulecky, 1990) some goals of reading skills can be seen in the following table:

Table 1. Reading Skills and Reading Purpose

No	Skill	Purpose
1.	Automatic decoding	Students can recognize a word at a glance
2.	Previewing and predicting	Students can guess what the text is about by looking at the text a quick once over
3.	Identifying purposes	Students can predict what the form and context of the text will be.
4.	Specifying Purposes	Students can know why the text is being read.
5.	Scanning	Students can find out the specific information in a text by looking at the text very rapidly.
6.	Recognizing topics	Students can find out what the text tells about after reading and comprehending the text.

7.	Locating the topic sentences	Students can find out a topic sentence in a text.
8.	Making inference by using evidence	Students can infer the main ideas of the text and can show the evidence that supports their inference.
9.	Guessing the meaning of unknown words from the context	Students can guess the meaning of the unknown word from the context
10.	Skimming	Students can process a text rapidly at many levels to get an overall picture of it.
11.	Paraphrasing	Students can paraphrase the text to help them understand the text by using their own words.
12.	Summarizing	Students can shorten the text by retaining and re-stating the main idea by leaving out details.
13.	Drawing conclusion	Students can put together the information from several parts of the text and induce new or additional ideas.
14.	Reading critically	Students can judge the accuracy of the text concerning what the reader already knows and distinguish facts or opinions
15.	Reading faster	Students can read fast enough to allow the brain to process the input.

RESEARCH METHODOLOGY

A. *Definition Descriptive Statistics*

Descriptive statistics are statistics that function to describe or give a description of the object under study through sample data or population as they are, without conducting analysis and making conclusions that apply to the public. (Sugiyono, 2017). However, Arikunto (2010:3) through (Wahyudiati, 2016) states that descriptive research does not change, add or manipulate the object of research. In descriptive research, no treatment is given or controlled as can be found in experimental research and aims to explain what variables or conditions exist in a situation.

The purpose of this study was to describe the effect of the use of Smartphones on the achievement of Intensive Reading learning of English Language Education Program students in the First Semester of St Augustine Hippo Catholic University. The research approach used in this study is a quantitative research survey design. Quantitative research is carried out on representative populations and/or certain samples and bases the research hypotheses on pre-existing concepts or theories. The hypothesis in this study is as follows :

H₀: There is no relationship between Smartphone use and students' achievement

H₁: There is no relationship between Smartphone use and students' achievement. The number of samples of this study is the same as the population,

Which is 46 students in the first Semester English Education Program St Augustine Hippo Catholic University Landak regency West Kalimantan. Research data on 'Smartphone use' was obtained through the distribution of a questionnaire containing 20 items of statements to 46 students of English Language Education Program first Semester St Augustine Hippo Catholic University. While the data on 'Intensive Reading learning achievement' is taken from the scores of the Intensive Reading courses of all students who are sampled.

B. Data Presentation

Every researcher must be able to present data that has been obtained, whether obtained through observation, interviews, questionnaires, and documentation. The basic principle of presenting data is communicative and complete, in the sense that the data presented can attract the attention of others to read it and is easy to understand the contents. Communicative data presentation can be done by: the presentation of data that is made in color, and if the data presented is quite a lot then it needs to vary the presentation (not just with one table) (Sugiyono, 2017). In this study, the presentation of data will be written in the form of descriptions and tables so that readers will be more easily understand the data from the results of the research done.

RESULT

After analyzing the research data, the researchers found several findings to answer the research problem, namely: Did the use of communication devices (Smartphones) affect the achievement of students' intensive reading?, and What are the strengths and weaknesses of the use of communication devices (Smartphones) in improving student learning achievement?.

The research findings indicate several important points, namely: Improvement of students' learning achievement in Intensive Reading, Students are more active in conducting learning activities in class, and The quality of the teaching and learning process increases significantly. Increased student achievement in Intensive Reading increases. This statement is supported by the following table which shows the student's learning achievement has improved by using a mobile communication device (Smartphone). Improved student achievement in Intensive Reading is shown in table 1.1 While the strengths and weaknesses of the use of communication devices (Smartphones) in improving student learning achievement.

The strengths of the use of Smartphones are The students could use smartphones to access most of the materials. Then, The students could use smartphones to make communication with others easily. After that, The students could use smartphones to do their activities easily. Moreover, The weaknesses of the use of Smartphones are: The students are lazy to make communication with others. Next, The students sometimes use Smartphones

over time. Then, The students use sometimes use smartphones while they are learning in the classroom for chatting with friends.

DISCUSSION

Based on the results of the study showed that of 46 respondents as many as 18 respondents used Smartphones more than 11 hours per day Smartphones are used for browsing and even the most widely used to play online games and to access various existing social media (Instagram, Path, Facebook, Twitter), they tend to have Smartphones to follow the current trends.

Based on the results of the study, the results obtained from the average score of Intensive Reading for first semester students of St Augustine Hippo Catholic University 44 (95.7%) respondents had high scores while 2 (4.3%) other respondents had the low score. The results of the study showed that 44 (95.7%) respondents frequently used Smartphones and 2 (4.3%) respondents rarely used Smartphones. Benefits of using Smartphones found that 18 (40%) of respondents use smartphones to access social media such as Path, Instagram, Facebook, Twitter, and various other social media, and 28 (60%) respondents use Smartphones to access knowledge.

Based on statistical tests using the Pearson Correlation test with a significance level of 5% ($\alpha = 0.05$) the results of the analysis are: 0.966 then a score of $p < r$, which means there is a relationship between the use of cell phone with the level of student achievement. The use of cell phones that are too long can affect the concentration of students, during lecture hours and can be seen the impact the level of student achievement on campus, in *the International Journal of Neuroscience* that cell phones can interfere with the functioning of the human brain work by weakening the work power brain or brain weak. Most of the 40% of respondents use their cell phones to access a variety of existing social media such as Path, Instagram, Facebook, Twitter, and various other existing social media this can adversely affect the level of student achievement.

The study also found that 2 (4.3%) of respondents who rarely use Smartphones, 44 (95.7%) respondents received high scores, while 2 (4.3%) respondents received low scores, in the study also found that 18 (40%) respondents use mobile to access social media while 28 (60%) other respondents use mobile to complete school work. The use of Smartphones is due to the current trend demands for those who are active in the world of the internet or social media, therefore, during lecture hours students also often use Smartphones to cover up their boredom because of long lecture hours. But this activity can be dealt with by the rules at the beginning of the lecture in the lecture contract, students are prohibited from using a Smartphone without the permission of the lecturer.

If students are left using Smartphones in the classroom, causing some of the material explained by the lecturer to be no longer absorbed properly because students are not able to concentrate anymore with ongoing lectures, which can result in decreased student academic grades,

also students become less able to communicate with their friends because it is more fun with his Smartphone.

The 2013 Science Journal discusses excessive use of Smartphones that can adversely affect health, such as dry eyes, sleep disorders, neck pain, and obesity due to irregular eating schedules due to the pleasure of playing games. Nurses can also provide useful information or provide counseling to students for good Smartphone use and provide information to parents to supervise excessive use of Smartphones.

Table 2. Frequency of Average Scores in the First Semester Students of St Augustine Hippo Catholic University

Students' Score	Amount(n)	Percentage (%)
High	44	95.7
Low	2	4.3
Total	46	100
Average Score		84.96

Table 3. Frequency of Smartphone Use of First Semester Students of St Augustine Hippo Catholic University

Frequency of Smartphone Use	Amount(n)	Percentage (%)
High	44	95,7
Low	2	4,3
Total	46	100

Table 4. Benefits of Using Smartphones the First Semester Students of St Augustine Hippo Catholic University

Benefits of Using Smartphones	Amount(N)	Percentage (%)
Social Media	18	40
Knowledge	28	60
Total	46	100

Table 5. The Relationship between the Uses of Smartphones with the Level of Student Achievement in the First Semester of St Augustine Hippo Catholic University Correlations

Bivariate Analysis		The Use of Smartphones	Students' Achievement
The Use of Smartphones	Pearson Correlation	1	.966**
	Sig. (2-tailed)		.000
	N	46	46
Students' Achievement	Pearson Correlation	.966**	1
	Sig. (2-tailed)	.000	
	N	46	46

** . Correlation is significant at the 0.01 level (2-tailed)

Compare Pearson Correlation with r table

- Sig > 0.05 = related
- Sig < 0.05 = not related

Degree guidelines

Pearson correlation score 0,00 to 0,20 = no correlation.

Pearson correlation score of 0.21 to 0.40 = weak correlation.

Pearson correlation score of 0.41 to 0.60 = moderate correlation. Pearson correlation score of 0.61 to 0.80 = strong correlation.

Pearson correlation score of 0.81 to 1.00 = perfect correlation.

(taken from www.spss Indonesia.com)

From the degree guidelines above it can be concluded that there is a strong correlation between the use of smartphones and students' achievement. Therefore a student who uses Smartphone more, will gain better achievement. On the contrary, the student who uses smartphones less will get a low achievement.

CONCLUSSION

First semester students of St Augustine Hippo Catholic University generally often use Smartphones, students have a high level of achievement, based on the analysis of Pearson Correlation the results there is a relationship between the use of smartphones and the level of students learning achievement at St Augustine Hippo Catholic University Landak. Because students use smartphones to do lecture assignments from questionnaire results 60% of students use smartphones to access science and 40% to access social media.

REFERENCES

- Amidtaher, M. (2016). The Relationship between Mobile Cellphone Dependency, *American Journal of Educational Research*, 1-4.
- Bua, M. T. (2022). Efektivitas Media Animasi pada Keterampilan Membaca Permulaan Siswa di Sekolah Dasar . *Jurnal Basicedu* , 3594 - 3601.
- Dalman. (2014). *Keterampilan Membaca*. PT Raja Grafindo Persada.
- Ferazona, S. (2020). Pengaruh Pembelajaran Daring Terhadap Hasil Belajar. *Journal of Research and Education Chemistry* , 102-110.
- Han, S. (2018). Sunyoung Han. *Journal of Computer Assisted Learning*, 13-24.
- Humaira, M. A. (2021). Strategi Guru Dalam Pembelajaran Daring: Peningkatan Keterampilan. *Journal of Educational and Language Research*, 120-128.
- Hwang, G. J. (2011). A formative assessment-based mobile learning approach to improving. *Computer and Education*, 1023-1031.

- Lepp, A. (2014). The relationship between cell phone use, and academic performance,. *Research Gate*, 343-350.
- Lin, T. T. (2017). Investigating predictors of smartphone dependency symptoms and effects. *International Journal of Mobile Communications*, 1-27.
- Martin, F. (2013). Here and now mobile learning: An experimental study on the use of. *Computer and Education*, 76-85.
- Mikulecky, B. S. (1990). *A short course in teaching reading skills*.
- Sauhenda, A. F., Kidahane, A. K., & Werang, B. R. (2019). Pengaruh Penggunaan Handphone Terhadap Prestasi Belajar Bahasa Indonesia Siswa. *Magistra: Jurnal Keguruan Dan Ilmu Pendidikan*, 6(1), 34-44.
- Sugiyono. (2017). *Statistika Untuk Penelitian*. Alfa Beta. Suryabrata, S. (1984). *Psikologi Pendidikan*. Jakarta. Rajawali Press.
- Wahyudiati, D. (2016). Analisis Efektivitas Kegiatan Praktikum. *Jurnal Tatsqif*, 143-168.
- Werang, B. R. (2011). *Belajar dan Pembelajaran*. Elang Mas.