Utilization of Gadget Technology as a Learning Media

Dwi Julianingsih[1], Anggy Giri Prawiyogi[2] , Ellen Dolan[3] , Desy Apriani[4]
Department of Management[1], Faculty of Teacher Training and Education[2], Faculty of
Business[3], Department of Information System[4]
University of Raharja[1,4]
University of Buana Perjuangan Karawang[2]
Queensland University[3]
Jl. Jenderal Sudirman No.40, RT.002/RW.006, Cikokol, Kec. Tangerang, Kota Tangerang,
Banten 15117[1,4]
Jl. Ronggo Waluyo Sirnabaya, Puseurjaya, Kec. Telukjambe Tim., Kabupaten Karawang,
Jawa Barat 41361[2]
St Lucia QLD 4072[3]
Indonesia[1,2,4] , Australia[3]
E-mail: dwi.julianingsih@raharja.info[1] , anggy.prawiyogi@ubpkarawang.ac.id[2] ,
ellen.dolan@connect.qut.edu.au[3] , desy@raharja.info[4]

Abstract

The increasing demands and needs of the community, such as clothing, food, and housing, continue to soar, just like the current soaring advances in technology and information. Which is where the relationship and interaction between humans and technology have become things like basic needs and needs at any time, one example of human attachment to technology which is currently growing and becoming a competitive world for companies and technology developers, one of which is gadget technology. Gadgets are small electronic devices that have special functions in each type to make work and human needs more practical and efficient. Unlike humans who have advanced technology that is only owned by the upper strata, it is different with mini-electronic technology which is now almost owned by the middle and lower majority, namely gadget technology.

1. Introduction

To support a good education, some adequate educational facilities are needed. Currently, several educational gadgets have been created that aim to simplify and speed up the learning process [1]. Gadget is seen from the term, derived from English, which means a small electronic device that has a special function. A gadget is a small technological object that has a specific function, but is often adapted as an innovation or novelty [2].

A gadget is a device or instrument that has a specific practical purpose and function that is useful and is generally given to something new [3]. Gadgets as a technological tool that are in great demand are also experiencing development [4]. The development of technology contained in gadgets from time to time is so amazing from simple forms to extraordinary forms [5]. Gadgets themselves can describe the sophistication of electronic devices that continue to grow, it can even be said that gadgets are actually multi-functional communication tools [6].

From time to time, technological developments undergo significant changes. Before gadgets or advanced technology, many communication media already existed and were used by the community [7]. Electronic technology used to be a very new thing in society. More importantly, like how these new media function, the exchange of information takes place in the community [8].

Interactive things such as computer elements connected to a network and supported by equipment such as satellites are the development of electronic technology [9]. The needs that humans must possess to help solve a problem faced are the benefit of technological development. The technological developments that are currently developing are technology in the form of gadgets. Gadgets have become practical things that take place in society [10].

The term gadget is increasingly recognized along with the development of a trendy, practical and sophisticated lifestyle as well as technological developments. Gadget is a term that comes from English to refer to a device or instrument that has a specific practical purpose and function that is generally useful for something new [11]. Gadgets are technological devices with smart designs [12]. The term gadget which means a practical device is indeed suitable for today since the introduction of products that have a high level of mobility.

Even today's gadgets continue to be developed into one of the communication facilities that are packaged in increasingly smaller sizes. Because the gadget contains media in the form of audio and visual. All of this was realized thanks to the rapid development of technology.

2. Research Method

The existence of gadgets is a challenge for teachers and students [13]. Using gadgets in the classroom will prepare students for life outside the classroom and can explore many things. Many schools have high technology standards and must be achieved by all students at some point during their education [14]. Guidelines that define the knowledge and skills that students must possess at any given point throughout the academic year are held by most schools as educational standards [15]. These various standards are expected to make students more familiar with technology because the school system invests a lot of money in electronic devices to encourage and motivate educators to make lessons interactive and interesting, such as the application of gamification [16]. This drive incorporated technology standards into the curriculum for most school systems as preparation for real life. As society becomes more technologically advanced, school standards and systems must better prepare students for life outside of school [17].

2.1 Instructional Media

Untung Raharja [18] researched that if the media is studied in general, humans will build conditions that allow students to acquire knowledge, skills, or attitudes. The researcher states that the media is a component in the student's environment that can stimulate learning. The media is a physical tool that can present a role and encourage students to learn. Other studies say that media are all forms and channels used to convey messages or information. So the use of media is no less important as an information service for students to learn and explore new things.

2.2 Gadget Usage

Gadgets are related to ICT-based learning media, therefore they are usually connected to the internet [19]. The use of the internet is very supportive in this gadget. The use of gadgets can consist of several ways. Is the gadget used as an addition to conventional learning, or a support or even a substitute in the learning model.

1. Gadgets as an addition to learning For example a biology teacher gives material about digestion

    The material has been explained by the teacher in class. However, if it is not clear then students may access the internet on websites that have been recommended by the teacher [20]. The nature of this learning is not mandatory for students. If it is necessary as additional knowledge, students are encouraged to seek. This gadget learning model is often applied in our education. With the limitations of information technology in the regions so that each student has different abilities in terms of technology. For example, there are students who do not have gadgets, so they cannot access them. Even though they cannot access the internet, students still get knowledge from the teacher in class.

2. Gadgets as a support in learning activities Gadgets can support learning

    For example, in a history lesson, the teacher gives the task of finding material on the internet about the history of the Islamic empire in Indonesia. So this can be said as one of the supporting learning. Students become active in looking for assignments on the internet, not only on social media [8]. Another example is when the teacher gives assignments, the tasks to be done are on the teacher's blog or web, so students have to browse and download the assignments. It is beneficial for teachers as well as students. Teachers can save teaching time, while students get assignments that can be accessed at any time. This gadget learning is also widely applied in our education. The teacher gives the task to search on the internet, or the assignment is on the teacher's web [21]. Usually schools that use such a model, internet access is easy to achieve. At least if students don't have gadgets in their area, they can still access the internet such as wifi, internet cafes, etc.

3. Gadgets as an alternative to support learning

    Currently, especially in cities that have fulfilled access to information technology, the internet is not an obstacle for users. The gadget-based learning process can be applied if the conditions are like this. In addition, it must meet other requirements, namely the characteristics of students and schools, as well as lessons made by gadgets. For example, there are cases of teachers being assigned out of town. While at school it is possible to learn gadgets at a distance. Then the teacher can give student assignments via the web. The teacher provides a module that students can download. After that students can work on assignments, and these assignments can be submitted via email. Students can also consult with the teacher [21].

3. Steps in the use of gadgets
Gadget Utilization Steps:

    Cellular phones (HP) or gadgets can be used to improve the quality of learning to make calls and write short messages. Like the existing KD, students must be able to make phone calls and write short messages in polite and effective sentences. Therefore, teachers need to prepare a polite and effective measuring instrument or sentence indicator as a basis for conducting an assessment. After that, the teacher prepared the steps for doing CAR. In the first cycle, the students were asked to learn to make telephone calls and write short messages without using a gadget. The teacher conducts an assessment based on indicators of competency achievement in making telephone calls and writing short messages that have been prepared. Because without using teaching aids, I found that the competence of the students for making telephone calls and writing short messages was very low. The students only practiced the activities of making the call and writing short

messages. The students do not do telephone learning and writing short messages seriously.

In the second cycle, the students were asked to bring gadgets to school. The teacher asks students to practice the telephone activity in pairs. For competence in writing short messages, students must send an SMS to the teacher's number so that it is easy to make an assessment. From these activities, teachers can conduct telephone assessments and write short messages based on the indicators that have been prepared. In addition to an increase in the achievement of scores on the competence of making telephone calls and writing short messages [22], it appears that the students are very enthusiastic and enthusiastic about participating in classroom learning. students have. Before the students use the gadget, the teacher must check the gadget by borrowing it. Teachers can open multimedia folders to find out the contents of photos and videos. If pornographic images and/or films are found, the teacher can take notes and call the owner. This is the added value of using gadgets for learning.

4. Conclusion

One example of the use of smartphone gadgets that I know until now is only used as a chat messenger facility and a means of accessing social media networks that only blows up personal problems, activities that are being carried out at the same time, turmoil in life that may be very bad, and things that don't fit. Intellect is asking for prayers against social networks.

Meanwhile, if we explore a little of the problem, there are many things that we can use more usefully, we take the example of the Twitter social network where there are many accounts of sources of information and basic learning where the admin is always on standby almost 1 x 24 hours, Facebook provides We can use group facilities as a mini discussion forum between educators and students, Google docs which can be used as a place to share data with one another. From the above problem, is this due to a technology error?

E-learning itself must have effective and efficient linkages between educators and students for the smooth running of the process as well as infrastructure or facilities that support very well and innovate from conventional learning. Many people think that gadgets can be likened to a knife.

References
[1]   P. Faisal and Z. Kisman, "Information and communication technology utilization effectiveness in distance education systems," Int. J. Eng. Bus. Manag., vol. 12, p. 1847979020911872, 2020.
[2]   S. C. Jeong, S.-H. Kim, J. Y. Park, and B. Choi, "Domain-specific innovativeness and new product adoption: A case of wearable devices," Telemat. Informatics, vol. 34, no. 5, pp. 399–412, 2017.
[3]   Y. Mansouri and M. A. Babar, "A review of edge computing: Features and resource virtualization," J. Parallel Distrib. Comput., 2021.
[4]   U. Rahardja, T. Hariguna, and Q. Aini, "Understanding the Impact of Determinants in Game Learning Acceptance: An Empirical Study.," Int. J. Educ. Pract., vol. 7, no. 3, pp. 136–145, 2019.
[5]   U. Rahardja, N. Lutfiani, Q. Aini, and I. Y. Annisa, "The Potential Utilization of Blockchain Technology," Blockhain Front. Technol., vol. 1, no. 01, pp. 57–67, 2021.
[6]   H. Lee, "A study on the development of a user-focused multi-functional convergence-smart-fashion product," Heliyon, vol. 6, no. 1, p. e03130, 2020.
[7]   T. Ramadhan, Q. Aini, S. Santoso, A. Badrianto, and R. Supriati, "Analysis of the

potential context of Blockchain on the usability of Gamification with Game-Based Learning," Int. J. Cyber IT Serv. Manag., vol. 1, no. 1, pp. 84–100, 2021.

[8] T. Hariguna, U. Rahardja, and Q. Aini, "Effect of social media activities to determinants public participate intention of e-government," Procedia Comput. Sci., vol. 161, pp. 233–241, 2019.

[9] F. Al-Turjman, M. H. Nawaz, and U. D. Ulusar, "Intelligence in the Internet of Medical Things era: A systematic review of current and future trends," Comput. Commun., vol. 150, pp. 644–660, 2020.

[10] M. Mahbub, "Progressive researches on IoT security: An exhaustive analysis from the perspective of protocols, vulnerabilities, and preemptive architectonics," J. Netw. Comput. Appl., p. 102761, 2020.

[11] P. A. Sunarya, A. Williams, A. Khoirunisa, A. S. Bein, and D. M. Sari, "A Blockchain Based Online Business Intelligence Learning System," Blockchain Front. Technol., vol. 1, no. 01, pp. 87–103, 2021.

[12] M. S. Hadis, E. Palantei, A. A. Ilham, and A. Hendra, "Design of smart lock system for doors with special features using bluetooth technology," in 2018 international conference on information and communications technology (ICOIACT), 2018, pp. 396–400.

[13] Q. Aini, M. Budiarto, P. O. H. Putra, and N. P. L. Santoso, "Gamification-based The Kampus Merdeka Learning in 4.0 era," IJCCS (Indonesian J. Comput. Cybern. Syst., vol. 15, no. 1, pp. 31–42, 2021.

[14] E. Guustaaf, U. Rahardja, Q. Aini, H. W. Maharani, and N. A. Santoso, "Blockchain-based Education Project," Aptisi Trans. Manag., vol. 5, no. 1, pp. 46–61, 2021.

[15] C. Lukita, S. Suwandi, E. P. Harahap, U. Rahardja, and C. Nas, "Curriculum 4.0: Adoption of Industry Era 4.0 as Assessment of Higher Education Quality," IJCCS (Indonesian J. Comput. Cybern. Syst., vol. 14, no. 3, pp. 297–308, 2020.

[16] Q. Aini, U. Rahardja, and A. Khoirunisa, "Blockchain Technology into Gamification on Education," IJCCS (Indonesian J. Comput. Cybern. Syst., vol. 14, no. 2, pp. 147–158, 2020.

[17] K. B. Rii, L. K. Choi, Y. Shino, H. Kenta, and I. R. Adianita, "Application of iLearning Education in Learning Methods for Entrepreneurship and Elementary School Student Innovation," Aptisi Trans. Technopreneursh., vol. 2, no. 2, pp. 131–142, 2020.

[18] U. Rahardja, T. Hongsuchon, T. Hariguna, and A. Ruangkanjanases, "Understanding Impact Sustainable Intention of S-Commerce Activities: The Role of Customer Experiences, Perceived Value, and Mediation of Relationship Quality," Sustainability, vol. 13, no. 20, p. 11492, 2021.

[19] N. Nurdyansyah, P. Rais, and Q. Aini, "The Role of Education Technology in Mathematic of Third Grade Students in MI Ma'arif Pademonegoro Sukodono," Madrosatuna J. Islam. Elem. Sch., vol. 1, no. 1, pp. 37–46, 2017.

[20] D. Cahyadi, A. Faturahman, H. Haryani, and E. Dolan, "BCS: Blockchain Smart Curriculum System for Verification Student Accreditation," Int. J. Cyber IT Serv. Manag., vol. 1, no. 1, pp. 65–83, 2021.

[21] A. G. Prawiyogi, Q. Aini, N. P. L. Santoso, N. Lutfiani, and H. L. J. Juniar, "Blockchain Education Concept 4.0: Student-Centered iLearning Blockchain Framework," JTP-Jurnal Teknol. Pendidik., vol. 23, no. 2, pp. 129–145, 2021.

[22] U. Rahardja, Q. Aini, and A. Khoirunisa, "Effect of iDu (iLearning Education) on Lecturer Performance in the Lecture Process," Aptisi Trans. Manag., vol. 2, no. 2, pp. 140–148, 2018.