

E-Learning for a Better Advancement of National Education

^{1st} Alin Hoerunnisa

Master of Educational
Technology, Sebelas Maret
University
alin.h.nisa@gmail.com

^{2nd} Nunuk Suryani

Professor of Educational
Technology, Sebelas Maret
University
nunuksuryani@staff.fkip.uns.ac.id

^{3rd} Agus Efendi

Doctor of Vocational
Education, Sebelas Maret
University
Agusefendi_ptk@yahoo.com

Abstract--The millennium era which is marked by the rapid progress and development of technology should be utilized as well as possible so that it will have a positive impact on various aspects of human life, especially in the field of education. E-Learning is a website-based learning media technology providing many benefits in the world of education. E-Learning is a learning media which holds the concept of virtual learning, which means learning can occur without face to face as long as there is an internet connection. Currently people's lives are provided wifi facilities to connect to the internet in various public places, such as malls, offices, schools, city walks, hospitals, and others. In addition, currently many have gadgets in the form of smartphones or laptops. Thus, the use of E-Learning media for learning is directed towards achieving learning goals. E-Learning provided with a lot of facilities assisting learning variations, technological means are hopefully to be able to reduce students' boredom when learning, such as discussion forums chatting, electronic books, quizzes, and so forth. This will certainly provide a new learning experience for students. As long as students have gadgets and are connected to the internet, they can study anywhere. In addition, based on L-Y research. Li & C-C. Tsai (2017) applying E-Learning allows teachers to analyze how much motivation and learning performance of students. This certainly provides the ease of teaching staff in monitoring their *students*.

Keywords: *E-Learning, Learning Media, Internet*

I. INTRODUCTION

Progress in all fields in the current millennium era is inevitable from the role of technology, especially in the field of education. Education is important element in building the succeeding generations. Education is the only asset to build a nation's quality successor resources. Through quality education, national and state identity will be respected by other nations.

Thus, it takes educators who always think to create innovation in carrying out education, not only able to educate students intelligently in theory, but also in practice. Innovation can be done through the use of computer media that is growing rapidly lately.

The use of computer media in education is inspired by the history of learning technology. The terms of reference related to learning design affect the development of learning

technology which is then used as a reference in planning work frames in developing computer-based learning.

Computer learning means applying the use of media in learning. The use of media effectively helps students understanding the material. Although it really depends on the characteristics of both media and teachers-students' ability to understand how the media works. Thus, the media in learning should be planned and systematic in accordance with the learning objectives (Rusman, 2012, p. 161).

One of the applicable learning media to educators including the web-based learning media, which is commonly known as E-Learning. This e-Learning can be used with accessible media on the internet. Learning by utilizing E-Learning is not the same as conventional learning. E-Learning enables students to explore science further, since in web-based learning media equipped with hyperlinks that allow access to information at random (non-linear) allows us to be able to more quickly get information on the web. For example, in learning requires demonstration so that students can understand well because they can see firsthand and not just imagine it, in E-Learning this can be overcome by attaching a youtube link related to the relevant demonstration.

It takes a very serious effort in establishing an e-Learning portal, of course if we want this media to truly facilitate the learning process. The progress and rapid development of technology has opened up great opportunities for modern society to be able to use this learning media. Therefore, in this writing will be discussed about e-Learning that can be used for the advancement of national education.

II. DISCUSSION

a. *E-Learning*

Along with the development of time, especially the era of globalization with the rapid development of technology, the implementation of learning began to follow the times by realizing modern learning. There are several terms that refer to the word e-learning, such as virtual learning, online learning, virtual classes, e-training, and others.

According to Sanaky (2013, p. 239) E-Learning is a learning process that is facilitated and supported by the use of information technology and the internet. Meanwhile, according to Darmawan (2014,

p.10) e-Learning is an internet application that can connect between students and teachers in an online learning room to overcome the limitations of time, space, conditions, and circumstances. In addition, Smaldino (2008, p. 181) stated "Online learning (also called electronic learning, or e-learning) is the result of instruction that is delivered electronically using computer-based media" means e-Learning is an electronic learning using computer media. Based on these three theories, it was concluded that e-Learning is electronic learning using computer media and internet networks to cope with the limitations of space and time in learning.

Currently e-Learning is not only a static, stand-alone, and one-way learning process, but as a dynamic, collaborative, and multimedia learning process. Therefore, e-Learning is a multimedia learning process, so there is a facility that allows users to add various kinds of media. All multimedia elements such as text, audio, video, images, and animation can be incorporated into the system as interesting teaching materials. In addition to supporting interesting teaching materials, using e-Learning can increase student activity. This is in accordance with Smaldino's statement (2008, 183) "Students can actively participate because online learning provides interactive learning environment." Another advantage of using e-Learning is that it can increase student learning motivation. This is evidenced by research conducted by L-Y. Li & C-C. Tsai (2017) entitled "Assessing online learning material: Quantitative behavior patterns and their effects on motivation and learning performance".

The study results of L-Y. Li & C-C. Tsai (2017) shows that through online learning (e-Learning) it allows increasing students' motivation especially with regard to the learning material. This study analyzed the log system of 59 students who accessed learning materials in the e-Learning system. The results of the analysis show a number of significant findings. First, students more often access learning in the classes they follow such as slides and videos instead of assignments or messages posted. Secondly, there are 3 types of student behavior patterns, some of which are intensively accessing all learning materials, some are intensively accessing presentation slides, and those who rarely access any learning material. Third, the use of e-Learning greatly influences students' learning performance. Students who are active in utilizing e-Learning reflect high learning efforts compared to students who are not actively using this media. Based on this study, it can be concluded that the third pattern of student behavior patterns is closely related to learning motivation, students who consistently use e-Learning generally show high motivation in learning.

b. E-Learning Characteristics

According to Sanaky (2013, p.241) in general, based on the interactive characteristics of e-Learning,

there are two characteristics, namely a static and dynamic system. Characteristics of system applications that are static, including (1) users can only download instructional materials as needed, (2) an administrator, can only upload material files, (3) on this system, the learning atmosphere is actually not easily presented, i.e. with regard to communication links, (4) this system is quite useful for students / students who are able to learn self-taught from the reading sources provided in this system, both in HTML, powerpoint, PDF, and in the form of video, (5) this system serves to support learning activities that are carried out face to face in class. As for the characteristics of dynamic system applications, including (1) the facilities available in this system are more varied, such as discussion forums, chat, e-mail, learning evaluation tools, user management, and electronic material management, (2) students are able learning in a learning environment that is not much different from the classroom atmosphere, (3) e-Learning system is used to assist the process of knowledge transformation under the student-centered paradigm, (4) lecturers actively provide material, asking students to ask questions that have not been understood and students are trained to learn critically and actively, and (5) e-Learning systems can be developed using collaborative learning methods or learning from the problem solving learning process.

Sanaky (2013, p. 242) identifies that e-Learning systems characterize students who are able to use these facilities, including (1) students can easily access subject matter without being limited by time and place, (2) communication synchronous for example directly connected with audio, video & data and asynchronous communication such as audio, video & recordable data, (3) availability of a number of teaching material types such as modules, handouts, text, images, audio, video, animation in multimedia form, (4) education paradigm is learning-oriented, this is based on an assumption that every student wishes to get the best learning techniques. Students will be actively involved in building their knowledge and linking it to what they already know or experience.

c. E-Learning Implementation

With regard to the development of the online learning system (e-Learning) according to Gde Putu Arya Oka and I Dewa Kade Tastra (2015, p. 10), there are several significant things that deserve attention regarding the target of online learning before applying learning using the e-Learning media, including (1) checking students' background, (2) understanding the students' expectations and needs that can be fulfilled related to the created online learning system, (3) the typical nuances of learning offered to students, (4) knowing the initial ability of students in the form of prerequisites the beginning needed to take part in online learning, (5) what groups are the main targets of online

learning participants, (6) the tools that students have, (7) the way students learn material, and (8) the best strategy for representing content.

The implementation of e-Learning relies on availability of information technological infrastructure, this is due to the media will generally be used online 24 hours a day through both capacity and capabilities which meet institutional needs in accordance with the development of educational institutions and the business environment, from which an organization is inseparable from influence, including the education. This Information Technology infrastructure includes network devices, hardware, software and internet access.

There are several things that are needed to sustain the implementation of e-Learning. This is as suggested by Sanaky (2013, p. 243), namely (1) expanding on-campus and off-campus network access, (2) preparing the internet access capacity, (3) availability of public access for all teachers and learners, (4) providing computer laboratories online 24 hours in school and campus environments, (5) oriented to open source applications, (6) easy to customize by users, and (6) have a high level of reliability and integrated with other information system services.

An in-depth review needs to be done related to the management of e-Learning material, especially in creating and maintaining the learning material, one should always be able to up-to-date and in accordance with the development of science. This requires a special performance unit in an effort to manage material in the form of softcopy and multimedia-based. Learning systems that are done through 80% classroom learning and 20% online learning (Sanaky, 2013, p. 244). In class meetings, students should always be present and play an active role in learning. Especially in the context of online learning, students should be active in accessing subject matter, able to dialogue with teachers and fellow students through the E-Learning website. There are many activities that students can do through online learning, namely (1) accessing learning material, (2) doing assignments and discussions, (3) reading assignments, (4) presentation of material, (5) dialogue between instructors and learners, (6) dialogue between learners with other learning resources, (7) dialogue between learners through the e-Learning website, learners are able to access learning material or other materials that are in accordance with learning materials to answer questions in discussions or do assignments online by accessing resources related sources, (8) evaluation is intended to conduct assessments for learners who follow the learning process through e-Learning.

A system of management process through e-Learning websites includes the development on both sides, the instructors and learning materials. The teaching development was carried out initially on things that concern cultural change, from the conventional learning process to the learning process to finally bear

with the E-Learning websites. This would additionally require changes on paradigm, knowledge, skill and attitude ability in learning using the e-Learning website. The development of e-Learning material needs to be rearranged the curriculum, learning event unit or *Satuan Acara Pembelajaran* (SAP) and or Learning Implementation Plan (RPP), creating the outlines of lecturing and teaching material in multimedia based-learning form. Then create plans for both teaching and learning activities oriented at learning resources for the e-Learning. Thus the instructor should provide outline modules in power point based-media, Ms.word and acrobat, in addition to course outlines covering the concept maps, subject matter, supporting material, online reading, and discussion topics and tasks in multimedia based-learning forms.

III. CONCLUSION

E-Learning is a web-based learning media, which technically leads students to assessing internet network. It is the learning method as much as possible applicable at any time, anywhere and without the limitations of space and time. The discovery of internet-based learning or e-Learning is expected to be utilized by students in Indonesia to advance education in this country. Although access to e-Learning can only be realized through having the better internet connection, however, it is now quite possible to implement this type of learning effort in Indonesia. As indicated by the availability of many public facilities such as malls, hospitals, city walks, schools, offices, and other public facilities that provide wifi, therefore enable the visitors to connect the internet media. In addition, there are currently many who have gadgets in the form of smartphones or laptops that can be used to access e-Learning. That way, the role of e-Learning as a medium allows users to learn at any time and place. In addition, this media can also be used as an effort to realize students' motivation in learning. By the increasing students' motivation in learning, it will have an influence on education in Indonesia. Of course Indonesian education will be more advanced under hands of the insightful and knowledgeable young generations.

REFERENCES

- Darmawan, D. (2014). *Pengembangan E-Learning*. Bandung: PT Remaja Rosdakarya.
- Graf, Sabine & List, Beate. "An Evaluation of Open Source E-Learning Platforms Stressing Adaptation Issues." *Proceedings of the Fifth IEEE International Conference on Advanced Learning Technologies (ICALT'05)*, no.05 (2005):0-7695-2338-2.
- Li, Liang-Yi & Tsai, Chin-Chung. "Accessing online learning material: Quantitative behavior patterns and their effects on motivation and learning performance." *Computers and Education*, no.114 (2017): 286-297.
- Oka & Tastra. (2015). *Massive Open Online Course: Web Pembelajaran Masa Depan*. Yogyakarta: Teknosain.

- Rusman. (2012). Belajar dan Pembelajaran Berbasis Komputer. Bandung: Alfabeta.
- Sanaky, H. (2013). Media Pembelajaran Interaktif-Inovatif. Yogyakarta: Kaukaba Dipantara.
- Smaldino, S E., Lowther, D L., Russel, J D. 2008. Instructional Technology and Media for Learning. Upper Saddle River: Pearson Education, Inc.