



Analysis of E-Learning System for Online Learning In Environmental Media Campus of UNP

Nofri Hendri¹, Novrianti², Rusdinal³, Nurhizrah Gistituati⁴

Universitas Negeri Padang

*nofrihendritp@gmail.com, *novriantidefrizal@gmail.com

Abstract

Application of the learning process in a campus using the conventional method of the longer lead the learning process is not effective. This raises problems in the campus environment how to create an interactive learning atmosphere so that it does not cause boredom towards students. The concept of *E-Learning* is a technology that can provide solutions to learning problems. The use of *E-Learning* can be accessed by utilizing internet technology through computers. The method discussed in this concept *E-Learning* consists of *distance learning* and *blended learning*. *Distance learning* is a model of distance learning where distance and time are not a problem in its operation, while *blended learning* is a learning model that combines conventional learning techniques with the use of technology for the distribution of learning such as the web.

Keywords : *analysis, e-learning, conventional, distance learning, blended learning*



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I. Introduction

E-Learning is a technique of conventional learning methods that is transformed into digital form using internet network technology. Another definition of *E-Learning* is the application of internet technology that is used as a means for learning. *E-Learning* can also be interpreted as a learning process that uses electronic equipment aimed at informing / conveying information to *users* (students / students) to facilitate the teaching and learning process by applying interactive concepts without the influence of time.

The concentration of the development of the *E-system Learning* is not only presenting material in digital form that is *uploaded* on the *web server* but also prioritizing the principles of learning and thinking about the effects or responses coming from the *users* (students) whether the design that has been designed can make they are not *boring* or bored in accessing the *E-Learning* system.

Along with the rapid development of technology and the increasing amount of data that must be managed in a campus to be able to produce useful information, the application of *E-Learning* is the main solution to solve data management problems into useful

information and can be accessed without the influence of time (*anytime and anywhere*). There are many benefits that we get in implementing this method *E-Learning* on campus. One of the benefits that can be felt by students is that they can get teaching materials that have been *posted* by teaching staff to the campus website without having to *copy* after each lecture meeting. Students can also interact directly with lecturers through applications *chat* that have been designed and are mandatory facilities in *E-Learning*. In addition to the application *chat* there is also a forum. Forums in *E-Learning* can be used as an exchange of ideas or information between fellow lecturers and students so that they can provide a variety of solutions that might not be solved during the lecture meeting or solutions arising from students but do not dare to express them directly in class. The application of *E-Learning* in a campus is sometimes hampered by infrastructure and needs that must be adjusted to the problems that arise on campus. We certainly understand that to build *E-Learning* on campus, we must first build a computer network that can synchronize all parts of the campus such as: academic bureaus, faculties, study programs, libraries, finance and other fields not yet mentioned. After network technology is installed and can work properly, then the *E-Learning* can be developed. To develop the system *E-Learning*, it is expected that the campus already has a server that can manage data that will be *input* in the *E-Learning*.

II. E-Learning System Methodology

The methodology in this case the techniques or models applied in a learning system in order to find effective solutions. The method of implementing *e-learning* must be adjusted to the needs of interaction between students and staff in the field. There are various types of electronic learning methods, namely:

A. Distance Learning

Distance Learning or distance education, which in Article 1 paragraph 15 of the National Education System Law is defined as education where students are separated from educators and learning uses various learning resources through communication technology, information and media others (Supradono, B., 2009).

In Indonesia learning *distance learning* is still classified as an education system with new technology (Adhiatma, N., 2011), not all educational institutions are successful in implementing it. According to Singh, H., (2003) The latest information says with the advancement in distance learning technology it has become more recognized for the potential to give individual attention and communication with students can be done

flexibly (Salim, K., and Tiawa DH., 2014). Brown, Mary Daniels., (2000) explains that distance learning based on e-education has different advantages from conventional computer-based learning systems that are commonly used; (1) can save the cost of education further than conventional classroom learning, (2) can save costs such as; official travel costs, facility costs and education implementation, student books (textbooks) can be replaced with e-books (virtual libraries), an easier and cheaper learning administration system not done in the conventional way (Salim, K., and Tiawa DH.,2014). Furthermore, to answer the problem regarding the centralization of education in big cities like today, distance learning should receive special attention. A student can be registered in an educational institution based anywhere that is deemed to have good quality, of course, after going through a selection test determined by the agency itself or the government. After that, the learning process can be done wherever and whenever as desired. Students can carry out their learning activities in their home areas without having to go to the base of the educational institution as happened in conventional education. Thus, learning is no longer concentrated in big cities. All Indonesian citizens from any region can receive education in their respective regions (Supradono, B., 2009).

For this reason, we must be able to develop an education system that is more open, more flexible, and accessible to anyone who needs it regardless of age , gender, location, socioeconomic conditions, and previous educational experience. the system is also able to improve the quality of education equally. The education system is an open education system or distance learning system, which is part of the national education system. Therefore, in this paper we will discuss methods of teaching distance learning in the hope that education practitioners in Indonesia can understand it more deeply.

Some of the benefits of the learning system *Distance Learning* are:

1. Enabling equal distribution of quality of education especially for remote islands.
2. Unlimited capacity and time, which can accommodate any number of students and students can study at any time, according to the rules or laws that have been set, students can repeat lessons that are not yet understood.
3. Students can choose learning topics according to their needs and abilities to master the learning material.
4. Learning material is easily updated in the form of *softcopy* and can be more effective for repetitive work.
5. Distance learning with *e-education* can be carried out interactively or *chat* so that it

can attract the attention and motivation of students.

B. *Blended Learning*

The concept of *Blended Learning* is mixing conventional learning models with online learning. *Blended Learning* comes from the words *Blended* and *Learning*. *Blend* means mixture and *Learning* means learning. From the two elements of the word it can be seen that *Blended Learning* blends learning patterns. According to Mosa (in Rusman, 2011: 242) said that mixed learning patterns are the two main elements namely learning in class with online learning. In online learning there is learning to use the internet network in which there is web-based learning.

Blended Learning is a combination of multimedia technology, CD-ROM, video streaming, virtual classrooms, e-mail, voicemail and others with traditional forms of classroom training and training for whatever they need. *Blended Learning* is the most appropriate solution for the learning process that is suitable,

not only with the learning needs but also the learning style. Besides *Blended Learning*, there are other terms that are often used, among them, *Blended Learning* and *Hybrid Learning*. The term contains the same meaning which is integration, mixing or combination in learning. The point is the merging or mixing of two learning approaches that are used so that new learning patterns are created and will not cause boredom in students' participation.

Blended learning can provide ease of learning by combining a variety of ways of delivery, teaching models, and learning styles, introducing various choices of media dialogue between the facilitator and the people who are taught. *Blended Learning* is also a combination of *face-to-face* teaching and online teaching, but more than that as an element of social interaction.

Mixing conventional learning models with online learning is nothing new, and complementing conventional learning is *e-learning*. This learning system serves as a complement to conventional learning methods and provides more affective experience for students. In the end, this learning model aims to achieve the effectiveness of learning, learning *online* and *face to face*. Implementation of the learning model *blended* more broadly should be supported by various studies, so the percentage of each learning model can be known. *Blended Learning* provides the best opportunity for learning from class transition to *e-learning*. *Blended Learning* involves class (or face-to-face) and online learning (*e-learning*). This method is very effective for adding efficiency to

classroom instruction and allowing increased discussion or reviewing information outside the classroom.

III. Discussion Analysis

Based on the variables of the concept *e-learning* analyzed is the provision of new classes equivalent to conventional classes in educational institutions. Therefore, the construction of an educational institution *virtual* such as *e-learning* must provide results that are more or less the same as the aspiration to establish a conventional educational institution. In essence, this system *e-learning* is adapted from existing systems in conventional educational institutions into a digital system via the *Internet*. As a result of grafting from the seeds of the same parent education system, it also inherits the characteristics and systems carried out by its parent. One of the most obvious examples is the teaching-learning process. A teacher will provide material to students in various places connected by the *Internet*. This method is more or less the same as the learning process in conventional classrooms. From these characteristics, it is clear that the development of technology *e-learning* must be based on the nature and original character of the existing education system.

From the technology side, the most preferred system is a system that is simple, attractive, and easy to use. In this case, planning a good *e-learning* system must be able to attract users by displaying interface design an interactive, thus helping users to feel at home in the *virtual classroom*. The following are pictures of system components *e-learning*.

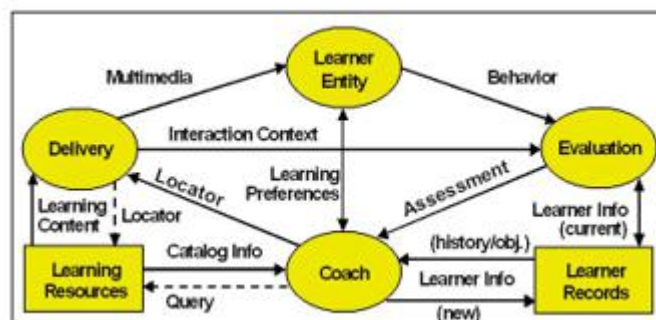


Figure 1. System Components *E-Learning*

In this process what happens includes: *login of* lecturers, students, admins and exchange of information regarding modules, materials, and evaluations of lectures given. Then the content analysis includes analysis to find out course descriptions *online* for anyone who has accessed the elearning system, facilities *module upload* and lecture evaluations for lecturers as well as facilities *download* for students who have enrolled in this system and

statistical reports to site managers regarding the use of website, forum information exchange facilities and articles about the lecture process, facilities to get or students understand in terms of understanding and the relationship *link* with the information system fully mastered the material provided by other academics integrated with the instructor. Most of them if after the web. The next stage is the analysis is done doing teaching and learning activities in interaction (*Interaction Analysis*), namely analysis in the classroom then what has been taught about users who will interact before they are not mastered or even with web applications by *logging in* and do not know or forget what has been is given by authentication, where *username* and *thepassword* lecturer. Students who are learning activities can directly use all the facilities provided by the system (*meeting in classroom*) in the campus environment after a process. *login* successful

The functions that exist in this method I use because the web application to be made include: combining distance teaching systems Remoteadministration *user* by admin, *uploading* and using conventional teaching systems to *download* lecture material and evaluate it, campus or college environment. discussion forums between lecturers and students off campus, a service is *mail system* implemented by designing something to site users, providing a web-based system report where students can access the system *e-learning*. In general, these services *realitionship* follow in gare those that must be provided in building a design of an ERD system *e-learning* that can be illustrated into a *use case diagram* as shown below:

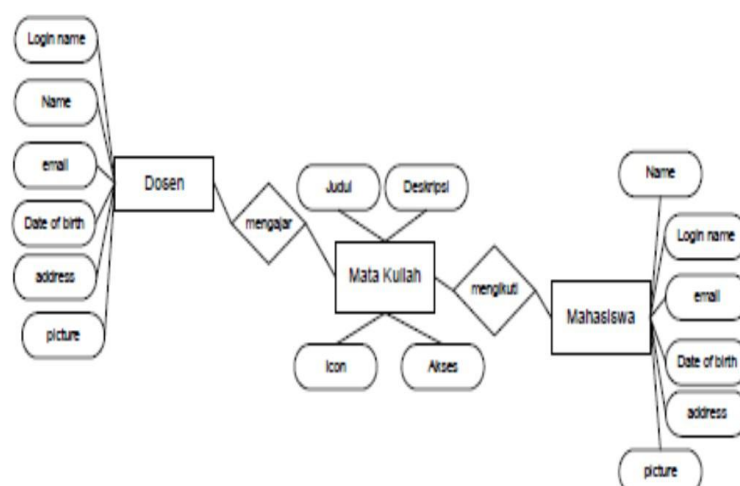


Figure 2. ERD E-Learning

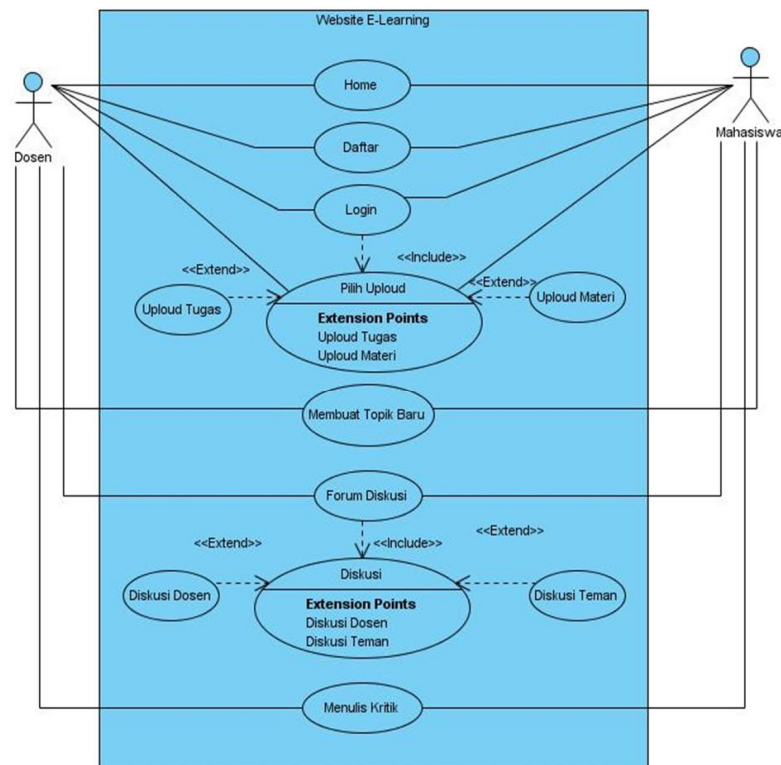


Figure 3. Illustration of the Process E-Learning

IV. Analysis Results

Based on the analysis that the author has described as above, it can be concluded the use of the concept of e-learning is indeed very meaningful in helping teaching and learning activities in the campus or college environment. When a campus intends to design a *tool* to support teaching and learning activities that is e-learning, indirectly both students and campus will get added value which means the quality of students or the campus will use better *use case diagrams*. This we can prove that the teaching method that is commonly done in most campuses or colleges Explanation of the illustration *use case diagram* above is high teaching in the classroom (*face-to-face* is an example of an *e-learning* system on the *face*) which as we know is rarely a student generally can be applied in a campus or college environment. Another thing that can be explained is the difference between conventional learning systems and digital learning systems (*elearning*). The difference can be seen as the following in figure 4;

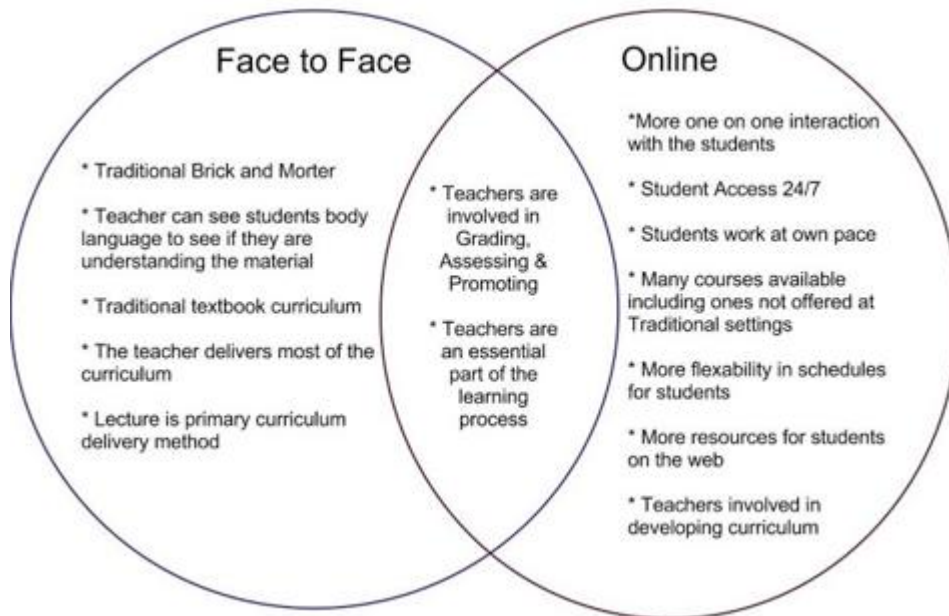


Figure 4. Differences in Conventional Learning Methods with E-Learning

It can be concluded from the table above, that learning with digital methods is far more effective and makes students more independent in mastering the material and finding solutions to problems given by the instructors.

V. Conclusion

The *e-learning system* is an application that is expected to be able to support the process of teaching and learning activities. So that through *e-learning*, the teaching and learning process can be done quickly and easily and can improve the efficiency and effectiveness of the time and cost of *e-learning* which is now able to overcome educational problems and open new horizons in the teaching and learning process so that it becomes an alternative that must be applied in the framework of understanding a subject matter. The problem that is still being felt is the issue of readiness of human resources (HR) both in terms of teachers and students. E-learning also has limitations including demanding a culture of *self-learning* in which a person motivates himself to want to learn and not depend on the instructor. Constraints that often occur and become important issues are related to the readiness of network infrastructure, limited supporting hardware, geographical conditions, and lack of (limited) capacity *file upload* insystems *e-learning*.

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