# THE USE OF E-LEARNING AS LEARNING MEDIUM AT SECONDARY VOCATIONAL SCHOOL.

**Candra Dewi**
**Faculty of Computer Science,**
**University of Brawijaya, Malang, Indonesia**

*Corresponding author:
E-mail: dewi_candra@ub.ac.id

## ABSTRACT

In addition to conventional learning in the form of face to face in the classroom, the use of information technology can also support the learning system where it is possible to do without face to face learning. One of learning that is currently widely used is electronic learning or E-Learning. In this activity carried out the installation of E-Learning, training of the use for administrators and teachers, and monitoring the use of these media in learning activities. Based on the results of training can be seen that the E-Learning media is quite attractive and easy to operate. But some teachers are still experiencing difficulties. Complexity feature is often felt by those who first used this medium. But in general, participants also stated that this application is very useful for learning. From the results of monitoring can also be known that the facilities are quite helpful is the online exam application. This application can be used primarily to prepare students to face the online final exam. It can thus be concluded that the activities undertaken to provide benefits or impact on improving the performance learning activities at Secondary High School. However, still need to hold advanced training to enhance the understanding of E-Learning application.

## KEYWORDS

## INTRODUCTION

Active learning model requires media that support students in learning [13]. One of the learning technology is currently developing an electronic learning or known as E-Learning [3]. In this system, the delivery of teaching materials and learning evaluation can be done using electronic media such as an intranet or the Internet [12].

The virtue of the use of E-Learning is provides the flexibility, interactivity, speed, and visualization [10][11], the advantages of E-Learning is more easily absorbed because it can use the multimedia facilities in the form of images, text, animation, sound, and video. E-learning also provides efficiency of administrative costs for the organizers as well as the provision of facilities for learning. In addition to the E-Learning, self-learning ability of students has increased.

Until now, the achievement indicators of SMKN 1 and SMKN 2 Boyolangu, Tulungagung is in good categories. They have sufficient E-Learning facilities mentioned above for ICT activities, especially as learning medium. With this facility is expected to make the learning process more effective so that it can improve student achievement. However, they still have not developed the E-learning as integrated part of school programs. The main obstacle is the

availability of the system administrator and not all teachers use the facilities of ICT as a learning medium. Besides, the readiness of students in the use of E-Learning because they have not supported by stable system and learning content that should be included in the system.

The development of computers technology is getting help in the process of delivering educational materials. The use of multimedia technology is also increasingly makes the student more interest to learn in the classroom. Nevertheless, it still needs to be developed more effective modules to follow the development of computer-based technologies.

Based on the description above, this activity will introduce the electronic learning (e-Learning) technologies, to be used together with face-to-face learning model. In addition it is also necessary to train the system administrator and teachers about how to use the system. After that, it is necessary to monitor the usage of the system, especially for school teachers.

## E-LEARNING

E-Learning is a learning system that utilizes information technology. E-Learning is a teaching and learning that use electronics such as LAN, WAN, or the Internet for learning, interaction, and guidance [5][4] describes E-Learning as a process of learning and teaching through the medium of the Internet, an intranet, or another computer network media to deliver teaching material to students [2] defines E-Learning as the distance learning process by incorporating the principles of the learning process by using technology.

E-Learning applications generally consist of the features such as Lesson (Lessons and Questions), Assignment (Tasks), Quiz (Exercise/Exam), The reading material, Chat (Online Discussion), Choice (Polling), Forums (The Discussion), Journal (Personal communication of teacher-student), Glossary and Online Survey.

E-Learning application commonly used is a Learning Management System (LMS). This system in the form of software applications that can be used for online electronic learning

programs. Great LMS normally be used to perform the following functions:

- use service "self-service" and " self-guided "
- collect and deliver learning content quickly
- consolidate on a platform-based training initiatives "scalable web "
- support the portability and standards personalized content and allows reuse of knowledge.

## TECHNOLOGI ACCEPTANCE MODEL (TAM)

One method that can be used to determine the user acceptance to the application of information technology is the Technology Acceptance Model (TAM) [1]. TAM explains the causal relationship between faith (the benefits of a system of information and ease of use) and behavior, purpose and actual use of an information system [9].

Actual system usage is affected by the interest in using of the system (behavioral intentions toward usage). While interest in using influenced by two beliefs, the user's perception of the benefits (perceived usefulness) and the user's perception of the ease of use (perceived ease of use). User perception of the benefits (perceived usefulness) is defined as the degree to which a person believes the benefit of using system. Perceive ease of use is defined as the degree to which a person believes that using the system is not required any effort (free of effort). Perception users to the conveniences also affects the user's perception of the benefits, which means that if a person feels the system is easy to use, the system is useful for them [8].

In this activity, the parameters used in testing with TAM will be adopted in making the questionnaire. This questionnaire will be used to analyze the acceptance of E-Learning as a learning medium.

Some studies that utilize TAM include the analysis to determine the added value of TAM in explaining the use of the system. The study concluded that the TAM model is very useful, but should be integrated in a larger, involving variables related to human and social change

processes and the adoption of innovative models [7].

Research conducted by Koufaris [6] considers consumer both as a people who shops and as computer users. This paper takes measurements of how emotional and cognitive response to the first visit of the online store will affect visitors to visit again the Web and make unplanned purchases. The analysis shows that there are two needs of online consumers, namely as a buyer and user of the computer.

## METHOD
### The Stage of Activity

Stages of implementation activities are divided in the preparation stage, the E-Learning design, system testing, development of training modules, training about the use the system either for system administrators or teachers, evaluation and monitoring results of implementation of activities. Stages of these activities can be broken down as follows:

### Preparation
1. This steps consist of the following activities:
2. Discussions with partners on the needs of the system in accordance with the available resources.
3. Analysis of hardware requirements
4. Discussion about User Interface design in accordance with user needs.
5. Discussion about E-Learning content in accordance with the curriculum used.
6. Engineering of E-Learning Application
7. This steps consist of the following activities:
8. Build a conceptual model in the form of a diagram that depicts the overall application as a functional unit of the system unit.
9. Design the user interface of application.
10. Identify the facility for each user and design the menu.
11. Identify the required data input.
12. Describe the operations performed.
13. Installation of the server
14. Installing of clients

Trial E-Learning Application in computer laboratory of SMKN 1 and SMKN 2 Boyolangu.

Preparation of training modules to facilitate the participants in following the steps that must be done during training.

### Training

This steps consist of the following activities:

Discussions with partners on the technical execution of the training

Implementation training for administrators and teachers about the procedures for the use of the application

Discussion regarding the application and content of learning.

### Evaluation and Monotoring

This steps consist of the following activities:
1. Monitoring the follow up of training for the using of E-Learning in class.
2. Evaluation of the use of application to motivate students to learn.
3. Mentoring and discussions are carried out during the period of realization of the IbM program if the partner have difficulties associated with the offered methods.

### Data

Data feedback from teachers and administrators are very necessary to do an analysis of the results of monitoring and training. Techniques used in the collection of data on the implementation of these activities were interviews and questionnaires (Questionnaire).

A questionnaire was given to 15 teachers and two administrators were trained. The interviews were conducted for some of the teachers that implement the E-Learning in the classroom being taught.

## RESULT AND DISCUSSION

After the training and observation of the use of the application, we do analize the feedback given by teachers, administrators and students on the use of E-Learning. Acceptance of instructional media is assessed by considering the two dominant factors affecting the integration of a technology that is the perception of acceptance of instructional media (suitability and convenience features) and the benefit of learning media to PBM (learning process). Indicators used to measure each factor are as follows:

### 1. Acceptance Factor.

The average score obtained was 4.1. When referring to the scoring, with a value of 4 is agree and 5 strongly agree, then the value of 4.1 indicates that the learning media is exciting and easy to operate. Moreover, only 4 values including the middle zone, none of which included unfavorable zone. Where a favorable zone is the value of 4-5, the middle is the value 3, unfavorable is the value of 1-2. In this application, the parameter has less score (including middle zone) is display and complexity of the features of E-Learning. The interface is still posible to be fixed by an administrator who has been trained. As for the feature complexity is often felt by those who first used this medium.

But this can be overcome by regularly implementing of the medium.

### 2. Benefit Factor

In these parameters there are four grades including middle zone, while the rest including the favorable zone. The average value obtained was 4.2. This means they still in the range of agreed that the media is beneficial for learning. It can thus be concluded that the service activities undertaken to provide benefits or impact on improving performance of learning process at secondary vocational school.

Overall the average value obtained was 4.15. This illustrates that these activities provide more benefits to the partners based on the feedback of respondents. Results of questionnaires to both factors are shown in Table 1.

*Table 1 Individual assessment of the use of E-Learning*

| No | Statement | Score** | | | | | Average |
|----|-----------|---|---|---|---|---|---------|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | E-learning applications are used quite interesting | | | 2 | 10 | 3 | 4,1 |
| 2 | E-learning application is easy to operate (*user friendly*) | | | 1 | 10 | 4 | 4,2 |
| 3 | The menu on the E-Learning application that is used is easy to understand | | | 1 | 11 | 3 | 4,1 |
| | **Average Convenience and Compliance Features** | | | | | | **4,1** |
| 4 | E-Learning application allows teachers to deliver/distribute course materials to students | | | | 12 | 3 | 4,2 |
| 5 | E-Learning application allows teachers to prepare and distribute students' test scores | | | 1 | 8 | 6 | 4,3 |
| 6 | Discussion forum in E-learning makes it easier to discuss and communicate with students | | | 2 | 11 | 2 | 4,0 |
| 7 | E-learning application support teachers to evaluate learning outcomes to related subjects | | | | 11 | 4 | 4,3 |
| 8 | E-learning application support teachers to teach related subjects | | | 1 | 12 | 3 | 4,4 |
| 9 | E-learning application is suitable for use in supporting the learning process | | | | 13 | 2 | 4,1 |
| 10 | E-learning applications can improve the quality of school | | | | 11 | 4 | 4,3 |
| | **Average Usefulness Against PBM Improvement** | | | | | | **4,2** |

** *score 1-5 of the answers shows ratings of less agree/less important - strongly agree/very important*

## CONCLUSIONS and SUGGESTION

From the discussion with a partner during the implementation of activities, it is known that the learning process by implemented E-Learning quite enthused by the participants and the school. This is evident from the enthusiasm of the participants during the training and advice in the form of feedback to provide input so that similar training was held in a longer period of time and involve more schools. From the results of a questionnaire given also to note that this application is very useful especially Exam facilities were very supportive in the training of

students' ability to prepare for the online exam (CBT).

However, there is still need to be accompaniment activity of implementation of E-Learning, especially in trouble shooting and technical handling.

## ACKNOWLEDGEMENTS

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