

## ONLINE LEARNING WORKSHOP USING MOODLE LMS FOR OPTIMAL LEARNING QUALITY IMPROVEMENT AT SMK BINA MANDIRI SAWANGAN, DEPOK CITY

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### ABSTRACT

The purpose of this community service is to introduce a learning management system (LMS) based e-learning application to the teacher of SMK Bina Mandiri Sawangan, Depok City. The skills in using social media that are owned by the teacher are expected to facilitate the learning process using the moodle learning management system. The method used in this community service is in the form of lectures, discussions, and practices. This workshop was held for 2 days where the first day of activities focused more on providing information about the use of e-learning, introduction to moodle, the process of registering for moodle, and introducing the features and advantages of moodle. On the second day, the training focused on packaging learning content, practicing and simulating the learning process by utilizing the features in moodle.

**Keywords:** E-Learning, Teachers, Moodle, Learning Management System

### 1. INTRODUCTION

Internet utilization as a means of education that is often done is through E-learning media (Anita Ratnasari, 2012). Indonesia is a country with the largest population of internet users in Southeast Asia. However, based on a survey conducted by the Indonesian Internet Service Providers Association (APJII) in collaboration with the University of Indonesia's Center for Communication Studies (PusKaKom) regarding the profile of internet users in Indonesia in 2018, data obtained that internet users in Indonesia as a means of education are only 29.3% media (Anita Ratnasari, 2012). This happens because of the weak knowledge and skills of internet users, especially the use of e-learning as a medium of supporting education (Basori, 2013). The application of information technology in the world of education has a great meaning as one of the efforts in improving the quality standards of education [5]. The birth and development of e-learning is expected to increase effectiveness and efficiency. E-learning is a learning process that utilizes Information and Communication Technology [6]. As a tool that can be available whenever and wherever needed, so that it can overcome the constraints of space and time.

According to Dobransky & VanRy (2017), some of the advantages of e-learning are to save expenses in terms of development, time and place; suitable for specific topics; students can study anytime and anywhere; save 40-60% compared to conventional learning methods; suitable for distance learning and mobile; and students can manage the appearance of learning material (can be accelerated or slowed). Based on other research, users also feel comfortable in using e-learning systems as learning media (Solichin, 2009). Figure 1 presents a comparison of E-Learning and traditional learning methods. E-learning has also been applied to improve the quality of learning and teacher competencies in various educational institutions. For example, Handoyo & Sholeh (2011), organized e-learning training for social studies teachers in Genuk Sub-district, Semarang. In other studies, e-learning was successfully applied to Telkom Vocational School Sandhy Putra Purwokerto with a sufficient level of 77.27% (Hanum, 2013). Activities and student learning outcomes in SMA 10 of Jambi City also increased after the implementation of e-learning based learning systems (Aminoto & Pathoni, 2014). Based on another study, the implementation of the "experiential" e-learning in Sanata Dharma University has a high level of user acceptance (Sedana & Wijaya, 2012).

Bina Mandiri Sawangan is a vocational school in the city of Depok, West Java. Currently Bina Mandiri Sawangan Vocational School has an official site as a means of disseminating information for students, parents and the community. However, Bina Mandiri Sawangan Vocational School does not have an e-learning system. Based on the initial discussion with the headmaster, he wanted to improve the quality of learning through the application of e-learning systems. With the conditions described earlier, it can be taken that the problem points that exist in partners are insufficient training facilities and knowledge on the technical implementation of e-learning and distance learning activities, knowledge of the learning technology using e-learning and the form of utilization that is still lacking, and there is a lack of learning management knowledge using e-learning technology to support the distance learning process.

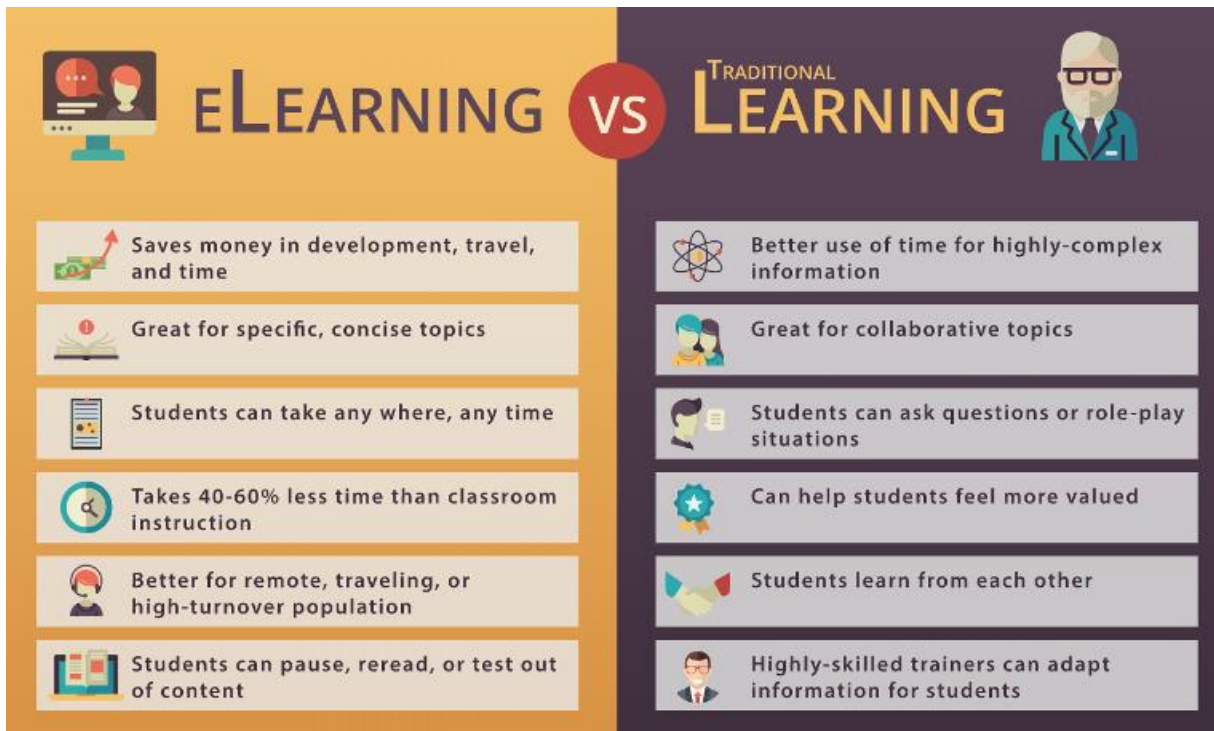


Figure 1. Comparison between e-learning and traditional learning methods (Dobransky & VanRy, 2017)

To support the partners in resolving their problems, here are the solutions that can be provided, among others: In dealing with the lack of information on online learning, it is hoped that this e-learning training can help improve knowledge in designing distance learning content, the development of learning is expected to help partners to further develop teaching and learning activities. Therefore, it is necessary to deepen the material about developing better and appropriate e-learning content for students and teachers, It is expected that both teachers and students who have received this workshop can carry out online education management for the better.

Training materials in the form of the application of e-learning systems in the teaching-learning process in schools. In activities that are one of the tangible manifestations of the Tridharma Perguruan Tinggi (Three Pillars of Higher Education comprising Education, Research and Community Service), we want to help the community in the Mitra Bintaro Junior High School to improve the performance of teachers in e-learning methods. This activity has provided positive benefits for improving the quality of human resources and the quality of the learning process in schools.

## 2. METHOD

The training methods for delivering the theory included lecturing, questions and answers, and discussion. Workshop activities included questions and answers and tasks. The method of this workshop was based on the theoretical and practical learning process approaches. The comparison between theory learning and practical learning is 1:2. Below is a description of community service programs carried out at the computer laboratory, SMK Bina Mandiri Sawangan, Depok City.

### Observation

This program is carried out by visiting service partners at SMK Bina Mandiri Sawangan, Depok City to determine the needs of the partners in the Community Service program. After finding out the needs of the partners, the lecturers formed a team to implement the program.

### Interviews

Direct interviews were conducted with the Principal of SMK Bina Mandiri Sawagan, the Board of Teachers, and the Employees related to the needs that could be used as objects of social community service.

### Study Literature

The literature studies were used to learn the various theory associated with the activity theme, the documentation and search for the information from different scientific resources related to the development of e-learning activities.

The team analyzed user needs at SMK Bina Mandiri Sawangan, Depok City and had discussions with related stakeholders such as Principal and the teachers, as follows:

- a. The lecturers created the results of the needs assessment by planning the requirements of the training.
- b. The lecturers made training modules that will be used as a guide for the trainees.
- c. The lecturer prepared the implementation of the workshop.
- d. The lecturer implements the workshop and evaluates the participants by delivering the workshop.

Here are some of the contents relating to the e-learning-based learning systems that will be given during the workshop:

- a. Login and Enter the Course Page
- b. Adding Lecture Materials (Resources)
  - 1) Upload a Document File(s), PDF, Powerpoint, and other formats.
  - 2) Adding Material / Own Articles
- c. Add a Quiz
- d. Adding Exam Questions
  - 1) Adding Multiple Choice Questions
  - 2) Adding Essay Questions
- e. Adding Questions from External Files (Import)
- f. Adding Questions to a Quiz
- g. Adding Assignments
- h. Student Evaluation
  - 1) See Online Quiz Results
  - 2) Assess the Assignment
  - 3) View the Overall Grade of Students
- i. Add Other Class Activities, including:
  - 1) Discussion Forum.
  - 2) Activity Chat

### 3. RESULT AND DISCUSSION

The training in order to improve the quality of the learning process at SMK Bina Mandiri Sawangan through the implementation of the e-learning system has generally run well and smoothly. The participants who attended the training were representatives of teachers and students. Participants also attended the training with enthusiasm and passion. However, some obstacles need to be solved in the future. The participants in this workshop were a total of 28 people, the workshop was conducted for 1 day (face-to-face), conducted in 2 sessions and 7 days of self-directed tasks. The instructor's assignment is that participants are asked to create learning media and manage virtual classes using the Budi Luhur University e-learning website on the page: <http://elearning.budiluhur.ac.id>.

Each participant obtains a personal account to enter the e-learning system. Figure 2 shows the appearance of the e-learning system of SMK Bina Mandiri Sawangan, Depok City which has been filled with various subjects.



Figure 2. The e-learning systems

Here is a detailed workshop schedule for Online Learning Using LMS Moodle for teachers of SMK Bina Mandiri Sawangan, Depok City:

Table 1. Online learning workshop activities table using lms moodle

Session	Time	Title of the activity	Presenters
1	08.00-09.30	Distance learning and the use and introduction of the Moodle LMS	Zaqi Kurniawan, S.Kom., M..Kom
2	09.30-11.30	Practicing Moodle LMS for creative and interactive teaching and learning	Ikhsan Rahdiana, S.Kom., M.Kom

The workshop details are explained below:

- In the first session, the participants were introduced to the trend of distance learning and the usage of e-learning as a learning platform. The introduction of Moodle LMS, the process of registering in Moodle LMS to the introduction of the features and benefits of Moodle LMS.
- The main activity of this first session is to give basic information about the concept of e-learning to the participants, because some participants do not have sufficient knowledge about e-learning by themselves. With a detailed explanation, teachers are expected to understand the meaning and the benefits as well as the process of creating the e-learning content for Distance Learning.
- The second session is a workshop focused on the packaging of learning content, practice and simulate the learning processes by using the features of the Moodle LMS, participants are also expected to have an understanding of how to use the e-learning platform as a learning tool.



Figure 3. Assistance of participants of online learning workshop with lms of moodle by instructors

In Figure 4, the participants of the online learning workshop using Moodle LMS presented the results. The participants are taught to make attractive and interactive contents to encourage an enjoyable learning experience online.



Figure 4. The results of online class work in the moodle application by participant

On the subject page, teachers can upload lesson materials for each chapter. Students can only access the lesson material and cannot upload lesson material. In addition to course materials, some activities that can be added to the subject page include exams/quizzes, discussion forums, chat, assignments and so on. Through the e-learning system, students can access subject matter without being limited by time and study hours. The

students can access the subject matter from anywhere and anytime.

Example of quiz display in E-Learning, the student can finish the quiz in the time limit set by the teachers. Quiz navigation is on the left side of the screen, and some questions to be done are shown. Student work time is also shown in the quiz navigation section. Meanwhile, the questions will be displayed on the main screen. To answer the questions, students can click or check the answer options for each question.

The stages of observation were carried out by the implementation team on the training participants from the beginning to the end of the activity. The observers in this activity were the implementing team and students of the Faculty of Information Technology, Budi Luhur University Jakarta, using an observer sheet. The categories of observations recorded are listed in the table 3 below.

Table 3. Table details of observation aspects

No	Aspect of Assessment	The Assessment Team
1	Listening and paying attention to the explanations from the implementation teams	Assement Team
2	Read the instruction module for making interactive teaching media	Assement Team
3	Asked the organizing team about training materials	Assement Team
4	Work on tasks assigned by the implementation team	Assement Team

Based on the results of the evaluation of the training that has been carried out, it can be concluded that the participants can benefit from the implementation of this e-learning system training. Figure 5 shows the results of the evaluation of training implementation obtained using the questionnaire method.

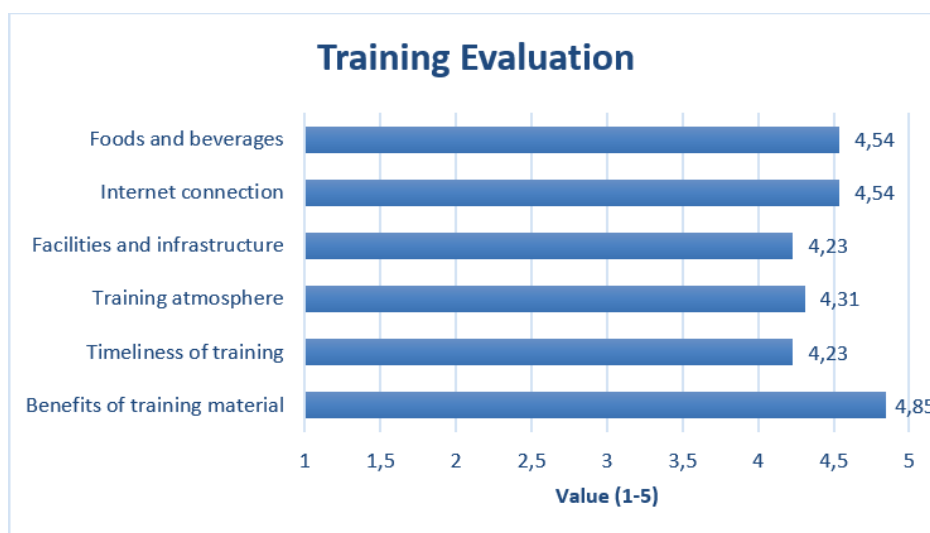


Figure 5. Results of evaluation of training activities

The things that still need to be improved from the training activities are the timeliness of the training, the availability of training facilities and infrastructure such as computers, stationery and so on, and also the comfort in the training atmosphere. In general, the evaluation results of the trainees were at a good level with a score of 4.45 in the range of 1-5.

Based on the results of the participants' assessment of the resource persons, it can be seen that on average the participants were quite satisfied with the quality of the resource persons and the material presented by the resource persons. This can be seen from the results of the training participants' assessment of the resource persons presented in Figure 6. In general, all participants considered that the customers had mastered the material presented by the instructors. In general, all participants assessed that the speaker had mastered the material very well. This can be seen in the evaluation results regarding the level of mastery of the material, which is an average value of 4.68 in the range of 1-5. Based on the results of the training participants' evaluation of the presenters presented in Figure 6, it can be seen that in general all participants assessed that the participants had mastered the material very well. From the results of the participants' assessment, there are things that need to be improved by the instructor, especially how the instructor interacts with the training participants. Instructors should be more interactive in delivering the material by providing more opportunities for participants to ask questions and understand the material more deeply.

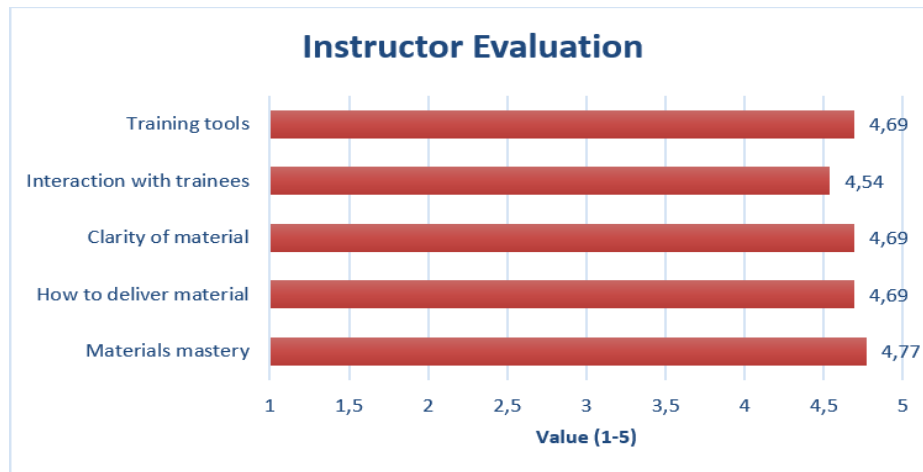


Figure 6. Evaluation results of training participants on instructors

Based on the results of the training implementation and training evaluation, several things still need to be improved and enhanced in the future. Some notes for improving the quality of training in the future based on feedback from training participants include:

- a. The availability of training facilities and infrastructure should be improved, especially the internet network.
- b. More practice should be done compared to theory.
- c. Future training should continue to be conducted with in-depth materials.
- d. Training is further developed and remains enthusiastic in providing the knowledge possessed to be more useful for many people.
- e. Future training is expected to make the discussion material denser.
- f. Improve again regarding the delivery of material.
- g. Future activities need to be improved.

The same applies to the timing of implementation, which needs to be considered when conducting training. The right timing of activities will make the results of the training useful. Some of the training materials cannot be delivered due to limited time to run it. Training facilities and infrastructure can also be an obstacle and should be anticipated. One of the most important things is the internet connection because the training material is related to the availability of internet services.

#### 4. CONCLUSION

From the results of the implementation and evaluation of the training, several conclusions can generally be drawn, namely:

- a. The training ran smoothly and was attended by trainees from among students, teachers, and principals of SMK Mandiri Sawangan, Depok City.
- b. The material presented in this training is how to use e-learning technology in learning at school, so that the material provided can be delivered better, effectively, and efficiently.
- c. The evaluation results showed that the training participants felt the benefits of the material provided. The average score of the training is 4.45, and the assessment of the instructor is 4.68 in the range of 1-5.

While the quality of training implementation needs improvement in the future. Here are some recommendations that can be submitted to the implementation of future community service activities:

- a. The material presented in the training should be more precise and more structured.
- b. Materials that are tailored to the needs and competencies desired by the institution.
- c. The selection of training time should be properly considered so that the delivery of the material is more effective and more effective and efficient.

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