

# E-Learning Design on Computer Science Academy (AIKOM) Ternate

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**Abstract**— T One example of technological development is utilization in the world of education where it can provide reinforcement on the learning process to improve the quality and memandirikan students in teaching and learning process. Lack of learning time in the course. Causes the decline in student value. The method used is the development of the E-learning portal with Word Wide Web Consortium (W3C) standard that is easily accessible to all browser applications. Portal E-learning to be built to support the distribution (upload and download) data in the form of E-learning document content and able to display the problem online and the results of value for students to assist in the learning process.

The materials applied by lecturers can be utilized as additional learning materials for students. Methods in learning materials given by lecturers make it easier and understandable by the students. Therefore, more lecturers are required to be creative in the method or the provision of independent learning materials.

**Keywords:** E-Learning, Independent Learning, Supplementary Learning

## PRELIMINARY

Currently E-learning has been widely accepted in the community. The proof is on the implementation of E-learning in educational institutions. Both in formal and non-formal education institutions. E-learning is an electronics learning that utilizes information and communication technology that will be an alternative solution of some educational problems in Indonesia in general and North Maluku in particular. Which function will be tailored to the needs, both in addition to overcoming the constraints of space and time on the learning process that substance of learning activities in the classroom. (Setiawan, 2013)

In the application of E-learning, there are at least three components, namely;

1. Personal Computer (PC), Internet network, and multimedia equipment. As an infrastructure.
2. System and E-learning applications, as software systems that virtualize the conventional learning process.
3. E-learning content, as a teaching material that exist in E-learning system or also called Learning Management System (LMS). Content or teaching materials in the form of interactive multimedia.

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According to some experts "E-learning learners can improve the efficiency of research that provides enough motivation to stimulate learners. (Baroli, Akio Km Km Arjan D and Giuseppe M: 2006). They claim the application in the form of multimedia as well as the interaction of students and lecturers in cyberspace can stimulate more motivation ". This means that E-learning provides more motivation compared with the conventional learning presentation. (E-learning, Case, E-learning, & Sentolo, 2009)

The purpose of this research is to produce additional learning information system independently, as well as students and lecturers can utilize the internet as a model of modern learning, so that the students are not only limited to the existing lessons in school. Likewise with lecturers, more maximize the learning method in use. So that will be able to benefit from this research is will be designed E-learning which will become alternative media of learning and will be able to information for other researchers

## RESEARCH METHODS

In solving the problems encountered, the research design used is the Research Tideland or called Action Research which is a study focused directly on daily actions.

## DATA ANALYSIS METHOD

Data analysis will be done after data collection from observation result cycle.

Planning stage: preparing required tools and materials, preparing observation / observation formats and providing and preparing analysis of test questions.

Implementation: providing motivation and apperception, developing the nature of student curiosity, conceptualizing the concepts, and doing reflection activities at the end of the activity.

Reflection

## LITERATURE REVIEW

The literature review on this research is:

1. Desita Dwi Nuriyanti, Nur Rahayu, Supriyanto 2013 on E-Learning Development Based on E-Learning as Learning Media Motion in SMA, where this research is the development of moodle 2.4.
2. Gunawan Jati 2013, about Learning Management System (E-learning) AND Elearning Content Development. This research E-Learning website development at <http://elearning.bandungtalentsource.com>.
3. Winarno, Johan Setiawan, 2013 Implementation of E-Learning System at Home Schooling Community, about the implementation of E-learning in home school education community in Tangerang area.

4. Hasbullah, 2009, Design and Implementation of E-learning Learning Model to Improve the Quality of Learning in JPTE FPTK UPI. About the development of an E-learning system called Internet Enabled Learning at the Department of Electrical Engineering FPTK UPI.
5. Herman Dwi Surjono, 2014; The Evaluation of a E-learning Based Adaptive E-learning System.
6. Nopita Setiawati, 2012 Development of Mobile Learning (M-Learning) Based on E-Learning as a Supporting Power of Physics Learning in SMA.
7. Edhy Sutanta, 2009 Concept and Implementation of E-learning (Case Study of E-learning Development at SMA N 1 Sentolo Yogyakarta)
8. Delagi Wisnu Adi, Supurwoko, Dyah Fitriana M. 2013 Interactive Media Development Based E-learning with E-learning Program in Inter Material Wave Ferency Courses.
9. Sugeng Rianto, 2012 Developing Lectures with E-learning based E-learning. Development using the Learning Management System (LMS).

10. Elda Belina P, Fakruddin Rizal Batubara, 2013; Designing and Implementing E-Learning Applications Mobile Version Based Android

The conclusion that both on the design, implementation, and concept of development on each object of different research. With its purpose as a support to improve the quality of education.

Understanding e-learning concluded is the use of information technology on teaching and learning process to improve the quality of education is not limited by space, time and cost.

## RESEARCH RESULT AND DISCUSSION

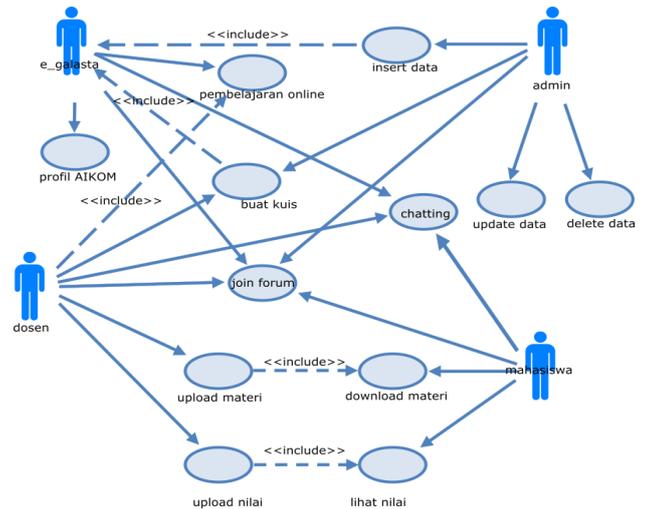
### Needs Analysis Initiation

Based on the data of research results obtained as follows:

1. The system now used by AIKOM is still in conventional cultivation.
2. Need for E-learning as an additional learning.
3. There are still many courses that practicum.

E-learning is a useful application to help students learn to acquire materials, schedule tasks, see the value implemented on the web. There are four main features of e-learning: viewing and downloading subject matter, viewing task details, viewing values and viewing enrol subjects. This e-learning product utilizes LMS moodle, so it requires browser on device that is used and internet connection in running it. With some references above, research that researchers do is make e-learning as a supporter of learning and by utilizing LMS Moodle. So that e-learning can be accessed wherever and when researchers pinned Responsive Web Design technology.

In the system design will look at the following Use case:



## CONCLUSION

1. This research can be summarized as follows:

1. Learning model with virtual class (e-learning) in AIKOM
2. The e-Learning system has been absolute to anticipate the development of the era with the support of Information Technology.
3. For the course that there is practicum can not be held online unless the practice guide can be uploaded as course material.
4. More flexible in the application of learning and teaching

### 4.1. SUGGESTION

1. The utilization of e-learning requires independent learning and learning habits. Lack of interaction between lecturers and students or even among students can slow down the formation of culture or values in the learning and teaching process.

2. E-learning tool is very positive to develop with other services such as communication media in video or voice format to support the course lab.

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