

PROCEEDING

THE 8th INTERNATIONAL CONVENTION OF INDOONESIAN ASSOCIATION
OF TECHNOLOGICAL AND VOCATIONAL EDUCATION (APTEKINDO)
AND 19TH INDOONESIAN CONGRESS OF FT/FPTK-JPTK

ISBN : 978 - 602 - 74864 - 1 - 6

August, 3-6 2016
Medan, Indonesia



Published :
Faculty of Engineering State University of Medan
Association of Technological and Vocational Education
(APTEKINDO) - 2016



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA



RAVTE
Regional Association for
Vocational Teacher Education
in East and Southeast Asia

EDUCATIONAL TECHNOLOGY AND VOCATIONAL IN ASEAN ECONOMIC COMMUNITY, INTERNATIONAL CONFERENCE PROCEEDINGS

3-6 August 2016

Auditorium State University of Medan, Medan, North Sumatera, Indonesia

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**FACULTY OF ENGINEERING
STATE UNIVERSITY OF MEDAN
NORTH SUMATERA, INDONESIA**

**EDUCATIONAL TECHNOLOGY AND VOCATIONAL IN ASEAN ECONOMIC COMMUNITY,
INTERNATIONAL CONFERENCE PROCEEDINGS**

ISBN:

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Published by:

Faculty of Engineering

State University of Medan

Jln. Willem Iskandar, Psr V Medan 20222;

Telp (061) 6636757; Fax. (061) 6613319-6614002

Website: <http://www.aptekindo.unimed.ac.id>

In Collaboration With:

Association of Technological and Vocational Education (APTEKINDO)

Preface

We feel thankful to Allah for the blessing so that the book of proceeding of National Seminar completely compiled in relating to the 8th National Convention of Indonesian Association of Technological and Vocational Education (APTEKINDO) and 19th Indonesian Congress of FT/FPTK-JPTK 3 - 6 August 2016 in State University of Medan.

The main objectives of the seminar is to improve the capability in vocational technology in theme: **The role of educational technology and vocational in Asean Economic Community (AEC)** which is adopted from the researches in order to upgrade the graduates to be International standard so that the output of LPTK-PTK be able to compete in AEC. Therefore, the National seminar, convention and workshop of Indonesian LPTK-PTK may emerge the thoughts how to strength the role of LPTK to improve the quality of the vocational teachers in Indonesia.

Hopefully this proceeding book will be useful to develop technology, art, and culture. This book also can be as a reference to intensify the National development.

The committee would express our gratitude to all participants and stakeholders in supporting the National seminar, convention and workshop of Indonesian LPTK-PTK

Medan, 6 August 2016
Chairman,

Prof. Dr. Abdul Hamid K, M.Pd.
NIP. 195802221981031001

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By: Fuad Paul Forghani(The University of QueenslandSt. Lucia QLD 4072 Australia)

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EI-02-041

THE DEVELOPMENT OF MIKROPROCESSOR LEARNING MODLE USING LMS APPLICATION BASE ON MOBILE AT UNIVERSITY

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ABSTRACT : *Utilization of information and communication technology-based mobile learning is developing very widely and quickly in various aspects of one of them in the field of higher education. STMIK Nurdin Hamzah Jambi are college computer science education Strata 1 (S1) Information Systems Studies Program and Strata 1 (S1) Informatics Engineering Program. The education system in STMIK Nurdin Hamzah Jambi running at the moment that is face to face between students and lecturers is already well underway. But sometimes there are some problems that often arise, such as the students and professors feel the meeting time courses are not enough to accommodate all of the discussion subjects, for example, need to copy the material subjects of laptop faculty, or replicate, it must be made more efficient and organized , This research has focused on mobile learning by using LMS applications one of which is Edmodo on learning microprocessors, applications have been selected for Edmodo makes it easy to track student progress. All values and plan study commissioned or provided through Edmodo stored and easily accessible. Lecturers can get input from the classroom through student reaction to quizzes, assignments, and discussion postings that captures the understanding, confusion, or the frustration of students*

Keyword : LMS,Mobile,Edmodo

I. INTRODUCTION

Learning is described in the Law on National Education System number 20 of 2003 Article 1 stated that the process of learning in the educational unit organized in an interactive, inspiring, fun, motivating the students to actively participate and provide enough space for the initiative, creativity and independence in accordance with the talent, interest in physical development of learners. Learning is also described in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 109 of 2013 Article 1 of penyelenggaraan distance education explained that the electronic learning (e-learning) is learning that utilizes the information packet-based information and communication technology for the sake of learning that can be accessed by the participants students anytime and anywhere. Information and Communication Technology seemed to have become a necessity in every human being in this era of information and communication technologies that have global as well able to cover all aspects of the life. Along with technological advances globalized been affected in every aspect of life in the fields of economics, politics, culture, art and even in the world of education. In the field of education, ICT has many roles. Information technology has become pengalihfungsian as books, professors and teaching systems that previously were conventional.

The learning method is performed in most colleges educational system of "traditional", ie between educators and learners meet at a place and at a certain time (face to face in the classroom directly). Actually there is nothing wrong with the education system, but along with the development of increasingly sophisticated technology, the system is less and unable to move dynamically.



Dynamism is needed is the creation of communication that goes well, namely the easy communication between educators and learners. Such dynamics can not be limited by space and time (scheduled classes), so the opportunity to meet face to face will be greatly reduced. This can be exemplified by the various activities of the educators who have activities outside of learning nor is there the same subjects and conflicting with another course with the other half of the courses so that educators can not do a good job. This is actually not the fault of educators, because of the absence of someone in traditional learning is also due to preoccupation of learners.

There are students who can not attend classroom because they have to attend seminars, workshops, and employment needs of the organization. The problem of the solution is to elektronik learning. As elektronik learning system at least consist of: content, software, hardware and human. According to Darin E. Hartley e-learning is a type of learning activities that allow tersampaiannya teaching materials to students by using the internet, intranet or other computer network media. There are two main parts to the e-learning is the e-learning (or teaching materials) and learning management system (LMS). Learning management system is a model and a system that is running the administration that serves as a platform for e-learning. According pandey (2009) written in Szabo, LMS is an infrastructure that delivers and manages content, identify, assess, track progress, gather and present the data to monitor the overall learning process. The idea of LMS is the achievement of e-learning system that can be set and managed in an integrated system. All learning activities and materials in a learning (course) organized and managed by and within the system. The Internet is the use of technology that is widely used in the learning process, development of the Internet are quite widely supported by computer prices are quite cheap, therefore the more open the opportunity to change the structure of technical education by expanding the learning experience and lecture halls to a combination of lecture halls and computer students ,

Educators can take advantage of computer ownership existing in students optimally for teaching, to student's desktop, the process of becoming a student as learning centers will be able to run well, lecturers no longer be the only speaker in learning (Teacher Center Learning), but will become an active part in the study (student Center learning), computer ownership on the students enough, not fully utilized by the teachers in the learning process, each stand alone, without being connected to one another to increase student learning.

Exploiting this potential, we need a plan and develop a strategy that is useful to clarify the purpose of education is to be achieved, determine the resources needed, to make all parties involved to adhere to the same goal, knowing the measurement of success. The magnitude of the potential use of information technology and the computer is in learning as well as the magnitude of competences of the students, some universities have designed based learning computer and information technology in the form of e-learning by utilizing social media applications that exist such as blogs, portals integrated



into the campus website, facebook, twitter, or build applications with a commercially available application program. But not maximized in terms of its use.

Seeing an application on the market, to build a web-based learning and the benefits are considerable arising from its use in learning, which encourages researchers to develop learning with application of a learning management system (LMS) with the concept of e-learning model utilizing the internet facility, this concept is known also with Mobile Learning.

STMIK Nurdin Hamzah Jambi are college computer science education Strata 1 (S1) Information Systems Studies Program and Strata 1 (S1) Informatics Engineering Program. The education system in STMIK Nurdin Hamzah Jambi running at the moment that is face to face between students and lecturers is already well underway. But sometimes there are some problems that often arise, such as the students and professors feel the meeting time courses are not enough to accommodate all of the discussion subjects, for example, need to copy the material subjects of laptop faculty, or replicate, it must be made more efficient and organized ,

Consultation between students and lecturers to discuss a subject material is also sometimes not met as a result of the difficulty of finding the right time to to do so. In another case, a problem that often arises is the desire of some students to develop their knowledge, but the difficulty in getting the source.

To solve the problems mentioned above, we need a support system to support existing educational system. The support system is e-learning. The E-learning is an educational system using an internet as a medium. Lecturers can upload course materials and material about courses on e-learning. Students can learn the lecture material from the lecturer concerned with opening the e-learning site. However, based on reports from the Academic of not maximal use of e-learning in the two existing courses in STMIK Nurdin Hamzah Jambi that only 21% of lecturers STMIK Nurdin Hamzah Jambi are using e-learning or use of information technology and communication, this is because the absence an integrated system in the management of learning that can be used by all lecturers STMIK Nurdin Hamzah Jambi called learning management system.

As in Microprocessors Course in Informatics Engineering study program can be found some of the fact that during this learning process, 1). Learning tends to look dull, interactive and communicative because the learning process is performed using a diktat or modules, whereas subjects in existing courses in STMIK Nurdin Hamzah Jambi especially Microprocessor developed along with the development of technology. 2) Power of Student interest in the subject is less, 3) student learning outcomes are less satisfactory when viewed from the ability to understand the subjects and academic values To overcome the disadvantages of the use of mobile-based lms as a learning tool in universities, especially in the course of microprocessors regarded as an appropriate solution. The success in developing and implementing learning microprocessor with mobile learning course should be formulated both by researchers and universities supported by management to be drawn up long-



term plans gradual and well integrated system and its content. There are several factors that must be considered as a success in building the mobile learning, namely, 1) The institutional factors, 2) Factor lecturers, 3) Factors student, 4) consideration of Pedagogic (Stacey & Gerbic 2008). Another factor to be considered in building a successful Mobile Learning depends on the syllabus which is structured and planned. Teachers should also consider the following aspects: equal distribution of online activities, educational objectives and solutions related to the ability of the individual student, the choice of appropriate teaching methods, control and assessment tools. When designing mobile learning required to broaden the horizon of the student learning experience for what he did (Throne, 2003). Mobile learning as ICT media quite an impact on the learning process, has prompted researchers to build on microprocessor course ,, maybe later can be a forerunner to build the institutional governance in the form of campus learning management systems, learning management systems in general in Jambi still STMIK Nurdin Hamzah conducted individual teaching with a variety of applications used. With this study, researchers expect this to be a breakthrough in the future in building a learning system based integrated mobile LMS.

Issues to be studied can be encapsulated in the formulation of the problem as follows:

1. How to develop a learning model with a microprocessor-based mobile LMS application in college
2. How to design instructional materials in the form of mobile learning used by educators?

Research conducted on microprocessor course aims to:

1. Develop learning model microprocessors with applications Learning Management System (LMS) at the College-based mobile learning.
2. Make it easy for students to understand the material being taught, especially on a microprocessor
3. Provide feedback to teachers in colleges as pengampu course that the importance of the development of mobile based learning
4. To determine whether the LMS-based mobile learning can enhance the effectiveness of the learning process of microprocessor

II. MATERIALS AND METHODE

A. Materials

1. Learning Management System (LMS)

According to Ryan K.Ellis in the book *A Field Guide to Learning Management System* (2009: 1), "Learning Management System, the basic description is a software application that automates the administration, tracking, and reporting of training events". K.Ellis Ryan explains that the LMS is a software or software for administrative purposes, documentation, search material, reports an activity, provision of training materials online teaching and learning activities that are connected to the internet. According to Ann Gordon LMS is the environment used by teachers / lecturers / instructors to create, store, reuse, manage and deliver learning materials to students. Meanwhile, according to wikipedia: LMS is defined as a software for delivering, tracking and managing learning. LMS is a software



application for documentation, administration, tracking, reporting, training programs, classes and activities " online ", " e-learning ", and the content of the training. One platform lms used is Edmodo. According to (www.Edmodo.com) Edmodo is a private microblogging platform developed for lecturers and students, with emphasis on student privacy. Lecturers and students can share notes, links and documents.

2. The Definition of Edmodo

Edmodo is a social learning platform for teachers / lecturers, students / students or for parents / guardians that developed in late 2008 by Nic Borg and Jeff O'Hara who feel the need to grow in the school / college to reflect that the world is increasingly global and connected, then they create a tool / application that can close the gap between how students / Students live their lives and how they learn at school / college, for that reason, there Edmodo. Edmodo created as a learning platform social network for teachers / lecturers, Student / Students and parents / guardians. Edmodo is designed to make students / Students eager to learn in an environment that is more intimate. Within Edmodo, teachers / lecturers can continue the discussion online classes, giving polling to check for understanding Student / Students and merit badges to the Student / Student individually based on performance or behavior. On Edmodo, teachers / lecturers are in the midst of a powerful network that connects the teacher / lecturer to student / students, administrators, parents / guardians, and publishers / book. This network is a surface the best resources in the world and tools, which provide the building blocks of a high quality education. Edmodo makes it easy to track the progress of student / student. All values and plan study commissioned or provided through Edmodo stored and easily accessible. Teachers / lecturers can get input from the classroom by reaction Student / mahasiswa for quizzes, assignments, and discussion postings that captures the understanding, confusion, or frustration Student / Student

3. Definition of Mobile Learning

Mobile learning is defined by Clark Quinn [Quinn 2000] as: The intersection of mobile computing and e-learning: resources accessible wherever you are, strong search capabilities, rich interaction, powerful support for effective learning, and performance-based assessment. E-learning independent of location in time or space. Based on these definitions, the mobile learning is a learning model that utilizes information and communication technology.

B. RESEARCH METHODOLOGY

In each study, the technical term data collection methods and instruments. Between these two terms there is a very close relationship, especially the link between the instrument selection method. In fact, sometimes there is overlap between differentiate methods with the instrument. According Trianto (2010: 262) is essentially a method of data collection "The ways that can be used by researchers to collect data". Thus we can conclude, that the instrument is one determinant of the success of the study. Instrument serves as a tool in gather the necessary data. Form of instrument relating to data collection

methods, such as interview guides the instrument interview method. The questionnaire method, instrument in the form of a questionnaire or questionnaires. The test method, the instrument is a test question. Methods of observation instrument observation sheet. In this study the research methods used in data collection are interviews, observations, and questionnaires. Interview instrument used in this study is the interview guidelines, in the form of free guided interviewernya. Interview conducted by faculty and students in particular majors in information systems STMIK Nurdin Hamzah to know opinions about this product and to deepen the data obtained through the observation and study of the document. Then the interview was also done to the elements of leadership to college to find out how they feel Learning management system is built. Instruments of observation in this study is the observation sheet form of systematic observation, and questionnaires. Observation is used to examine the implementation of mobile learning system based on Management of the department of information systems. Researchers looked at more deeply whether the system can enhance the learning process in college.

A. Data Analysis Method

Data analysis techniques used in this research is the analysis of qualitative data that follows the concept given by Miles and Huberman and also quantitative analysis statistically processed. According to the analysis of Miles and Huberman, the selection of design analysis for the study was based on three main components. According to Miles and Huberman (1989), the third principal component includes "data reduction (data reduction), presentation of data (data display), and conclusion (verification)". Here is an explanation of these three components.

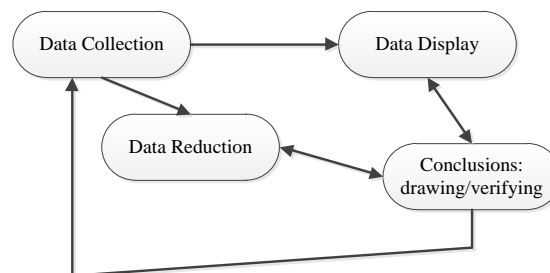


Figure 1. Model Interactive Analysis (Miles & Huberman, 1992: 20)

The research process begins with data collection. The collection of data is the data search process conducted by observation and interviews. Furthermore, after the data are collected, do advanced process of data reduction. Merupakan data reduction selection process, focusing, simplification and abstraction of data (roughly) that exist in the note fields. The process of data reduction persisted throughout the study. Once the data is sorted out, then the data is presented in narrative form sentences arranged in a logical and systematic reference to the formulation of the problem

B. Analysis And Result

Mobile learning as a supplement in the process of learning and online learning should still be there face to face it in the application development learning model mobile learning is done in-person learning and online learning, better known as blended learning, development of learning models of microprocessors using the application lms in mobile learning can be several lecturers expected behavior in mobile learning models are as follows:

Phase -1 (student orientation at issue)

At the first step educator or lecturer may explain learning objectives ,, motivate students to engage in problem solving activities chosen.

Phase- 2 (Organizing students to learn)

At this stage By helping students define and organize learning tasks related to the issue both in class and outside of class by making use of learning resources that already exist in the LMS applications that can be accessed via mobile devices by students.

Phase - 3 (Lecturer properly guide students individually or in groups)

At this stage Lecturer can mmbimbing students to collect or obtain information using modules, teaching materials, which already exists on the application lms.

Stage - 4 (Developing and presenting the results of the work)

At this stage Lecturers can assist students in planning appropriate work such as reports, videos and models as well as help them to share the duties with his friend.

Stage - 5 (Analyze and evaluate the process of solving the problem)

At this stage Lecturer helping students to conduct their investigation and evaluation of the processes they are involved

As a result of the microprocessor development process learning model using LMS applications (Edmodo) based mobile taken from android can dilihat in Figure 2 below:

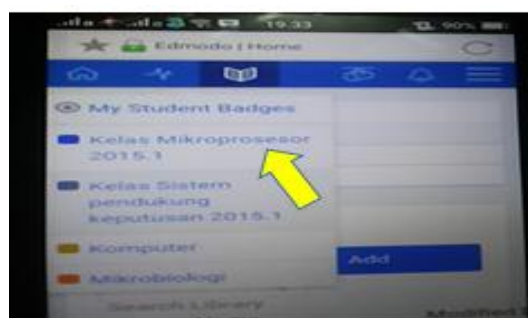


Figure 2. Class microprocessors on Edmodo

In figure 3 below can be seen how the teacher assign tasks to students

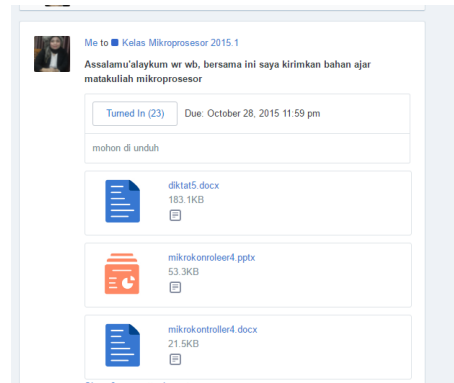


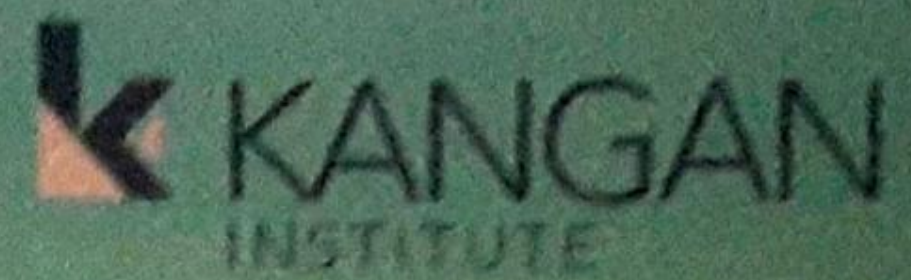
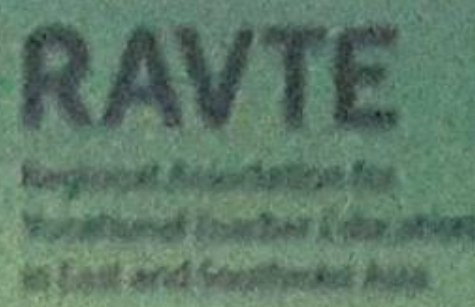
Figure 3. Set tasks Lecturer

III. CONCLUSION

1. Learning to use Edmodo LMS applications are alternative solutions for faculty and students in the learning of the microprocessor.
2. With the development of models that do can give to the students knowledge of college students looking for extra lessons microprocessor
3. Microprocessors are the subjects that develop in accordance with developments in technology so that more appropriate use of LMS-based mobile applications.

REFERENCES:

- Quinn, C. ,2008,. mLearning: Mobile, Wireless, in your Pocket Learning (<http://www.linezine.com/2.1/features/cqmmwiyp.htm> diakses 30 November 2015)
- K,Ryan Ellis,A Field Guide to Learning Management system.2009. (<https://hakimkalimantan.wordpress.com/2016/01/30/pemanfaatan-learning-management-system-sebagai-media-pembelajaran>. Diakses 30 Desember 2015)
- Richey Rita.C dan Klein James. 2010.*Research And Development Research, Lawrence Erlbaum Associated,inc.*
- [Sugiyono.2013.Metode Penelitian Administrasi dilengkapi dengan metode R & D, Alfabeta](#)
- Undang-Undang Republik Indonesia nomor 20 tahun 2003 tentang Sistem Pendidikan Nasional (online), (kemenag.go.id/file/dokumen/UU2003.pdf, diakses 13 maret 2015)
- www.edmodo.com



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