e-LEARNING SYSTEM
(LECTURER)

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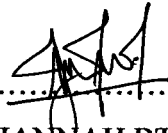Alamat Tetap: 191 TAMAN DESA PERWIRA

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ABSTRACT

'e-learning' is a system developed based on the web based application that provides support and resources online learning for lecturers to their students in other words, this system is another alternative to upgrade the existing learning system. The purpose of this system developed is to help lecturer in solving their daily tasks. The main objectives of develop e-learning are to overcame the difficulties of lecturers to arrange the lecture tasks and manage of many records by manually. Then, design the interactivity among the teaching and learning user and also to develop a system database to store and retrieve the information. This system consists of four modules there are announcement, upload, forum and course profile. Basically this project used the iterative prototyping methodology, Macromedia Dreamweaver MX as software, and it needs a web programming skills PHP as the programming language whereas MySQL is for the database management system.

ABSTRAK

'e-learning' merupakan sistem berasaskan aplikasi web yang dibangunkan untuk memberi bantuan dan meningkatkan lagi sumber pembelajaran secara 'online' untuk digunakan oleh pensyarah bagi berhubung dengan pelajar dengan kata lain ia merupakan penambahbaikan bagi sistem manual yang sedia ada. Tujuan sistem ini dibangunkan adalah untuk mengatasi masalah yang dihadapi oleh pensyarah dalam menyelesaikan tugas pengajaran harian mereka. Objektif utama dalam membangunkan e-learning ini adalah untuk mengatasi kesukaran pensyarah mengurus tugas pengajaran dan menyimpan maklumat yang banyak secara maual dalam sistem yang sedia ada. Melalui sistem ini juga, pensyarah dengan mudah boleh berhubung dengan pelajar melalui kemudahan yang disediakan. Sistem ini mengandungi empat modul utama iaitu Modul Pengumuman, Modul Upload, Modul Perbincangan dan Modul Maklumat Kursus. Secara asasnya, sistem ini dibangunkan berdasarkan metodologi prototaip iterative, menggunakan perisian Macromedia Dreamweaver MX serta PHP sebagai bahasa pengaturcaraan manakal MySQL pula digunaan sebagai pangkalan data untuk system ini.

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INTRODUCTION

1.0   Project Introduction

This project will design and develop e-learning system that provides support and resources online learning for lecturers to their students in other words, this system is another alternative to upgrade the existing learning system learning system. This system will act as a media to communicate with each other and create more opportunities using internet as enhanced value and make use of ICT to improve lecturer's daily tasks.

The system consists four main modules includes, Announcement module, Upload module, Forum module and Course Profile module. Through this system lecturers can easily handle their task and communicate with their student through the discussion board, upload notes and others. The system will combine all the functions in a single system, so that it is suitable for the lecturers use especially in handling multiple tasks.

The main purpose of this system developed is to help lecturer in solving their daily tasks. Besides that, this e-learning are developed to overcome the difficulties of lecturers to arrange the lecture tasks and manage of many records by manually.

1.1 Project Objective

In order for the project to success and to be implemented, the following objectives have to be achieved. There are:

> To design and develop the platform of web-based teaching and learning system (lecturer modules only).
> To design an interactivity among the teaching and learning user.
> To develop a system database to store and retrieve the information.
> To expose and familiarize the students with the programming skill to develop a web based system.

1.2 Problem Statement

The motivation to develop lecturer's e-Learning is triggered by many reasons. Before this, lecturers need to handle their task and communicate with their student manually. It is difficult for lecturers to make decision to meet all the students at the same time. The problems that usually happen are as below:

- Usually students need to make an appointment to see their lecturer but if the appointment was canceled the information cannot be inform to all student as soon as possible.
- The lecture notes only will be given at the end of the class sessions, thus it is difficult for the students to study the next chapters before the next class session
- Lectures do not have enough time to discuss individually with their student in lecture session.
- The usage of papers and other stationeries are no more effectives. Students need papers and other stationeries during quizzes, assignments and laboratory reports where all of them need to be submitted as a hard copy not soft copy.

1.3   Scope of Project

This e-learning has been classified into several scopes. The scope of this project is mainly about the user, modules or function and the environment of the system;

- This e-Learning system is design for lectures where system will able to help them to manage the existing learning system.
- This system consists of 4 main menus there is announcement module, upload module, discussion board and course profile module.
- The system module will design by using the php scripts and use the centralized database (Mysql) to make sure the data can be shared among the system users.
- The system user able to access this system anywhere and use for multiple usage hence this system use the online concept.
- The system functionality is to allow lecturer to access their lecture subject and other e-learning materials, and also to allow lecturer to view and participate with their student on comment and forum through the discussion board.

1.4   Methodology

Briefly, the e-learning system has several stages of system development methodology there are analysis, design, development, testing, maintenance and upgrading.
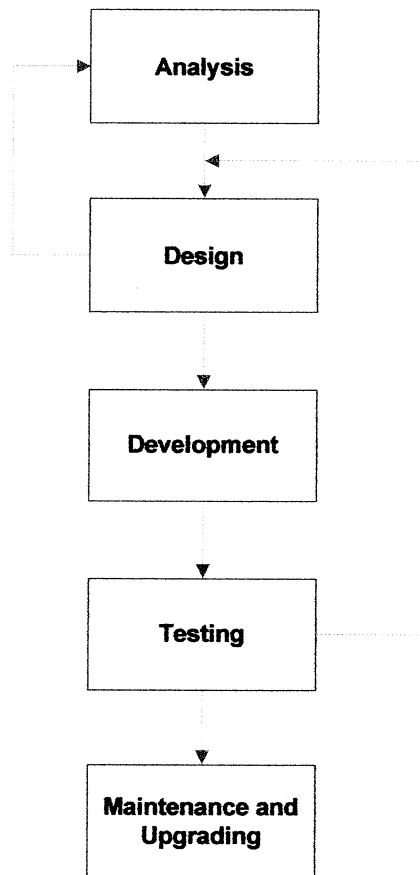
Figure 1.1 Life Cycle Step

Diagram explanation:

a) Analysis

- Analysis is often used to describe the process analyze and identify the information of system. In this phase, analysis will be done on the specification which related with the system requirement, users and the background research of the e-learning.

b) Design

- After the requirements of a system have been described in systems analysis, systems design begins. The purpose of system design is to describe how the system will function to meet its requirements. In this phase the interfaces (GUI), database and coding for each module of the system will be designed. If the system designs need to be analyzing, it can solve by return to analysis phase.

c) Development

- In this system development process, the implementation of the system such as the program code and database development for this project will built up and this development specification will ensures it satisfy the functional requirement.

d) Testing

- Testing software is an integral and important part of the system development process. This part of the process ensures that the system integrates with the database and the bugs and errors are recognized as early as possible to make sure that system is operating as intended. This testing phase can be return to previous phase to meet the requirements.

e) **Maintenance and Upgrading**

- Systems maintenance and upgrading phase involves monitoring, checking, changing, fixing and enhancing an operational information system. In this phase, the bug fixes can be done during the time of maintenance.

1.5   Report Structure

This report is divided into five chapters to provide the understanding of the whole project.

Chapter 1 is introduction to overview this project and its objectives. It also explains the scopes of project, problems statement and also the briefly about methodology.

Chapter 2 describe about the literature review that has been used to gather information to complete the whole project. This study is focused especially on the reference that findings from the past research, analysis from the existing system and method that use for develop this system.

Chapters 3 explain on how this research is satisfied. This chapter will cover up all the project methodology and explains the project implementation to achieve goal. This method is use to get more information from collection the data, analysis the data and process the data.

Chapter 4 explains the result of this project and showed the project progress. In this chapter the analysis of the project also has been discussed.

Chapters 5 explain the future recommendation for the project and also describe the future improvement for this system.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

This chapter describes about the literature review involved in gathering information of the project. Literature review is the fact and information that can be used as the reference. This study is focused especially on the design and functionality of this project. Many researches are carried out for this project. In that case, for develop e-learning system; the data for the reference are findings from the past research or sentence, collect the information from journal, internet and also the application of current system and existing system that are used today.

2.1 Fact and Finding

e-Learning is an umbrella term that describes learning done at a computer, usually connected to a network, giving us the opportunity to learn almost anytime, anywhere. e-Learning is not unlike any other form of education - and it is widely accepted that e-Learning can be as rich and as valuable as the classroom experience or even more so. With its unique features e-Learning is an experience that leads to comprehension and

mastery of new skills and knowledge, just like its traditional counterpart (Dr. Seuss, 1999-2008)

Instructional Design for e-Learning has been perfected and refined over many years using established teaching and learning principles, with many benefits to students and lectures. As a result colleges, universities, businesses, and organizations worldwide now offer their students fully accredited online degree, vocational, and continuing education programs in abundance. e-Learning is comes in many variations and often a combination of the following:

- Purely online - no face-to-face meetings
- Blended Learning - combination of online and face-to-face
- Synchronous - means that real-time communication is implemented
- Asynchronous - indicates that other means of communication are utilized that do not require real time responses.
- Instructor-led group
- Self-study
- Self-study with subject matter expert
- Web-based
- Computer-based (CD-ROM)
- Video/audio tape

The following are a few of the definitions of e-Learning:

- "e-Learning is the convergence of learning and the Internet". – *Banc of America Securities*
- "e-Learning is the use of network technology to design, deliver, select, administer, and extend LEARNING". – *Elliott Masie, The Masie Center*
- e-Learning is Internet-enabled learning. Components can include content delivery in multiple formats, management of the learning experience, and a networked community of learners, content developers and experts. e-Learning provides faster learning at reduced costs, increased access to learning, Enhances computer and Internet skills and clear accountability for

all participants in the learning process. In today's fast-paced culture, organizations that implement e-Learning provide their work force with the ability to turn change into an advantage. – *Cisco Systems*

2.1.1 e-Learning vs. Online Learning

The *Corporate e-Learning: Exploring a New Frontier* report by WR Hambrecht +Co clearly identifies the differences between e-Learning and online learning. e-Learning represents the whole category of technology-based learning, while online learning is synonymous with web-based learning. In this case, online learning is actually a subset of e-Learning [6].

e-Learning = Electronic + Learning

The term e-learning covers a wide set of applications and processes, including computer-based learning, Web-based learning, virtual classrooms, and digital collaboration.

e-learning is define as the delivery of content via all electronic media, including the Internet, intranets, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-ROM. Yet, *e-learning* is defined more narrowly than distance learning, which would include text-based learning and courses conducted via written correspondence. For the purpose of this report, the term e-learning is used synonymously with technology-based learning. Terms like e-learning, technology-based learning, and Web-based learning are defined and used differently by different organizations and user groups. Moreover, use of these terms is constantly changing, as the world of e-learning evolves.

Online Learning = Web-based Learning

Online learning constitutes just one part of technology-based learning and describes learning via Internet, intranet, and extranet.

Levels of sophistication of online learning vary. A basic online learning program includes the text and graphics of the course, exercises, testing, and record keeping, such as test scores and bookmarks. A sophisticated online learning program includes animations, simulations, audio and video sequences, peer and expert discussion groups, online mentoring, links to material on a corporate intranet or the Web, and communications with corporate education records. In this report, the term online learning is used synonymously with Web-based learning or Internet-based learning.

2.1.2 Advantage and Disadvantage of e-learning

e-learning is beneficial to education, corporations and to all types of learners (Kristy DelVecchio and Megan Loughney, 2006). It is affordable, saves time, and produces measurable results. e-learning is more cost effective than traditional learning because less time and money is spent traveling. Since e-learning can be done in any geographic location and there are no travel expenses, this type of learning is much less costly than doing learning at a traditional institute.

Flexibility is a major benefit of e-learning. e-learning has the advantage of taking class anytime anywhere. Education is available when and where it is needed. e-learning can be done at the office, at home, on the road, 24 hours a day, and seven days a week. . e-learning also has measurable assessments which can be created so the both the instructors and students will know what the students have learned, when they've completed courses, and how they have performed.

Next we look at the disadvantages of e-learning. One disadvantage of e-learning is that learners need to have access to a computer as well as the Internet. They also need to have computer skills with programs such as word processing, Internet browsers, and e-mail. Without these skills and software it is not possible for the student to succeed in

e-learning. E-learners need to be very comfortable using a computer. Slow Internet connections or older computers may make accessing course materials difficult. This may cause the learners to get frustrated and give up. Another disadvantage of e-learning is managing computer files and online learning software. For learners with beginner-level computer skills it can sometimes seem complex to keep their computer files organized. Without good computer organizational skills learners may lose or misplace reports causing them to be late in submitting assignments. Some of the students also may have trouble installing software that is required for the class.

E-learning also requires just as much time for attending class and completing assignments as any traditional classroom course. This means that students have to be highly motivated and responsible because all the work they do is on their own. Learners with low motivation or bad study habits may fall behind. Another disadvantage of e-learning is that without the routine structures of a traditional class, students may get lost or confused about course activities and deadlines causing the student to fail or do poorly.

Another disadvantage of e-learning is that students may feel isolated from the instructor. Instructions are not always available to help the learner so learners need to have discipline to work independently without the instructor's assistance. E-learners also need to have good writing and communication skills. When instructors and other learners aren't meeting face-to-face it is possible to misinterpret what was meant.

2.2   Existing Systems

2.2.1   Case Study 1: e-lecture - online Lecturing system

Before this e-learning is developed, one current e-learning web base application had been found. The website is called e-lecture or online Lecturing system [9] which is a free (GPL: Gnu General Public License) e-education package to facilitate the design and presentation of electronic lectures. It has evolved from the presentation of courses in a university environment. Different from other (predominantly commercial) e-learning