



COURSEWARE OF CAGAYAN STATE UNIVERSITY AT LAL-LO

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ABSTRACT:*This study was envisioned towards the improvement of the present manual system used by the teachers at Cagayan State University at Lal-lo with the hope to achieve a better and convenient way in keeping and managing their files like their syllabi in different subjects, making their lectures and evaluation items as well as in processing data. Specifically it focused on the development of a Courseware that would improve their way of making their lectures. It has the ability to store, retrieve, edit, and delete data like lectures and evaluations of teachers who would make use of the system. Teachers can make all their lectures as well as their evaluations in all their subjects in advance and can update it anytime for some necessary changes. This system can also generate information like syllabus of different subjects, list of all the CSU Lal-lo subjects together with the name of mentor, separate subjects of the different courses, subjects of each year level and course, and quizzes of each subject. However, the recording of the result of evaluation and computation of grades of students are not included in the system. The Courseware was developed in PHP using Macromedia Dreamweaver 8 and XAMPP 1.8.1-0. The development of the courseware employed the six phases of the systems development life cycle namely; Preliminary Investigation, Analysis of the Requirement, System Design, System Coding/ System Testing, System Implementation and System Maintenance.*

KEYWORDS:*courseware, system development, PHP, Macromedia Dreamweaver, XAMPP*

INTRODUCTION

Different people understand multimedia courseware differently, but mostly it is understood as the use of different communication mediums within a single computer program used to present information. Communications mediums refers to audio for music, sound effects, or voice-over narration, still photographs and / or graphics to help the user understand the message presented, video to further explain or illustrate ideas (Hick, 1997).

Computers are really beneficial to everyone today. That's why many people are already adopting the so called computerized system in all aspects of their lives. Computers are considered to be the answer to technological demand and in fact, they are also used in the country to uplift and develop people's way of living.



However, old procedures do not comply with the changing time, thus problems like redundancy of work, waste of time, effort and money occur. To unveil these problems, an analysis to the present system on making lectures in Cagayan State University – Lal-lo Campus was conducted to find solutions for this common problems by developing a new and computerized system which is called Courseware.

This study was envisioned towards the improvement of the present manual system used by the teachers at Cagayan State University at Lal-lo with the hope to achieve a better and convenient way in keeping and managing their files like their syllabi in different subjects in making their lectures and evaluation items as well as in processing data. However the system do not include the computation of grades.

Objectives of the Study

General Objectives:

To assess the manual system of making their lecture notes and improved the system through computerization.

Specific Objectives:

1. To speed-up the level of making lectures
2. To organize teachers' records like quizzes and lectures
3. To lessen time in updating lectures every year
4. To lessen the cost and effort in making lectures
5. To avoid loss of data
6. To make topics more systematic and efficient

Significance of the Study

Courseware is a computer-based system which is primarily used by teachers to automate their way of making and keeping lectures, evaluations and syllabi. Courseware is designed for the purpose of making efficient, effective and more accurate records of data.

This study aimed to improve the present manual system used by the teachers at Cagayan State University at Lal-lo with the hope to achieve a better and convenient way in



keeping and in managing their files like their syllabi in different subjects, in making their lectures and evaluations, as well as in processing data and information.

Scope and Limitations of the Study

The system for Cagayan State University at Lal-lo, which is the courseware, has the ability to store, retrieve, edit, and delete data like lectures and evaluations of teachers who would make use of this system. Teachers can make all their lectures, as well as their evaluations in all their subjects in advance and can update it anytime for some necessary changes. The system can also generate information like syllabus of different subjects, list of all the CSU Lal-lo subjects, together with the name of mentor, separate subjects of the different courses, subjects of each year level and course, and quizzes of each subject. However, the recording of the result of evaluation and computation of grades of students are not included in the system.

RESEARCH METHODOLOGY

The creation of this Courseware was based on the six phases of System Development Life cycle.

Preliminary Investigation: This is the first stage of the development of the system. In this stage the researchers made a survey by gathering all the available information needed for the system elements and allocation of the requirements to the software.

Data collection was done through an interview with the Deans of the different colleges and the teachers regarding their teaching strategies as well as the problems encountered while using the manual teaching strategies. Information included in the Courseware were also gathered. Moreover, the Courseware's requirements were determined. These included the hardware and software requirements, and the personnel or the users of the system. In this stage, feasibility study was likewise conducted to determine the benefits of making the Courseware and to determine whether the system was possible.

Analysis of the requirement: The researchers understood the nature of the information and the functions of the software which is required for the system. The researchers made a brief survey of the requirements and tries to analyze the performance of the system which is to be developed. Enough information and resources to build the appropriate system was ensured.



After data gathering, needed specifications in the development of the Courseware was determined. Here, different system analytical like Data Flow Diagram (DFD) or Flowchart tools were used.

System Design: The number of designs of the system on paper or on the computer were made and sees to it that the rough image made of the system comprises of all the requirements or not. Best suited design for the development of the system was selected.

From these system designs, the database of the Courseware which included the different tables with their corresponding fields and attributes, Entity Relationship Diagram (ERD), Input Process Output (IPO), Hierarchical-Input-Process-Output (HIPO) and the physical design of the Courseware (input and output page ready for implementation in the development phase) was designed.

System Coding/ System Testing: The code of the programs were translated in in machine readable form. After the coding stage, the system was tested to ensure functionality. Flaws in the system was checked immediately.

The planned design of the Courseware both on database and physical layer was implemented. After implementing the design and writing the codes needed for the Courseware, several testing were conducted to be ready for the implementation or uploading of the Courseware.

System Implementation:The system was awarded to the end users for implementation and use. Evaluation of the functionality of the system was done ready for full implementation.

System Maintenance: During implementation, system maintenance was ensured to obtain sustainability of the system use

TECHNICAL BACKGROUND

The Courseware system was developed through the following:



Software:

- A. PHP Programming Language(PHP: Hypertext Preprocessor)
 - it is a server side scripting language, a dynamic and general-purpose web development tool or scripting language capable of designing and maintaining interactive web page. Initially developed by RasmusLerdorf to maintain his online curriculum vitae.PHP evolved and became popular and user friendly scripting language with the developments of PHP modules and plugins developed by two Technion students AndiGutsmann and ZeeveSuraski in 1994. It was popularly used by popular websites, learning sites, social networking sites and others for wide array of applications.
- B. HTML- Hypertext Markup Language for designing web page.
- C. Database Platform(MySQL)
 - the system utilized a popular and widely used database platform for today, MySQL relational database management system. MySQL is widely known for its integrity and features that allow thousands of servers online to base their data over MySQL. This open source application supports Structured Query Language for web developments and other windows application.
- D. Adobe Photoshop- an image editor used to improve and transform image into a different way.

HARDWARE:

- A. Desktop or laptop- was a hardware used in developing the courseware.
- B. Flash Drive- was used to store backups to avoid loss of information about the courseware.

Application Needed:

- A. Macromedia Dreamweaver 8.0 -this is a primary application for the development and design of the system. It provided controls to easily create and define the system full setup capacities and capabilities.
- B. XAMPP 1.8.1-enables easy installation of Apache Distribution for Linux, Solaris, Windows and Mac OS X. The package includes the Apache web server, MySQL, PHP, Perl, a FTP server and phpMyAdmin which are all needed to manage the system.



- C. Web Browser(e.g. Mozilla Firefox) – user-end application for browsing the interface of the system.

RESULTS AND DISCUSSION

This study was conducted to develop a courseware used to improve and computerize the existing system of teaching and making lectures of the teachers at Cagayan State University at Lal-lo.

This courseware lessened the time, effort and cost in making/ updating lectures of the teachers in CSUL. This courseware also helped the teachers organize their records and make their topics more systematic and efficient.

Features of the System

The courseware had better features compared to the manual system used by the teachers at Cagayan State University at Lal-lo in managing their syllabi and in making their lectures. Since the courseware is packed with a computer unit, teachers can update, edit, or totally change their lectures without wasting many notebooks and ball pens. Thus, teachers only consumed a minute or an hour in updating student's lessons.

This courseware is also very beneficial on part of the students since they can view their lessons made by their teachers for advance reading and studying, but they are not allowed by the courseware to view the evaluations made by their teachers on a certain subject; Indeed, courseware provides a good and active interaction between the teacher and students during discussion because students can already concentrate on listening to their teachers since they don't have to take down notes during their discussion.

Courseware can also keep the syllabi of all the subjects offered at CSU Lal-lo. It can also hold important data like evaluations inaccessible for unauthorized person or student. Capabilities of courseware offer a low cost, less effort and time, efficient data processing, as well as safe and effective record keeping.



CONCLUSION

The courseware minimizes time in editing or updating lecture notes. Students can also become active in class during discussions since they can have an advance reading and study on their lessons. It also provides access to students about their lessons in class.

The system also keeps lectures more efficiently and accurately and it minimizes the problems of teachers in making and storing lectures

RECOMMENDATIONS

The adoption and implementation of the courseware at Cagayan State University at Lal-lo to speed up the storage, processing and retrieval of lectures for the teachers and for the students to have a complete copy of lessons is recommended.

Training among teachers on the use of the system should be conducted to ensure the usability of the system.

REFERENCES:

- Aris, B., M.H. Ahamd, K.B. Shiong, M.B. Ali and J. Harun et al., (2006). Goal programming" using an interactive multimedia courseware: design factors and students' preferences. *Malaysian Online J. Instruc. Technol.*
- Asmawi, A. and R.A. Razak, (2006). The instructional design evaluation of a courseware of a Malaysian Virtual University. *Malaysian Online J. Instruc. Technol.*, 3: 1-10.
- Delombaerde, F., C.A. Madramootoo and B. Mehdi, (2001). Development of a hydrology multimedia courseware. *Canadian Biosyst. Eng.*, 43: 23-30. Hammami, S., 2010. evaluating e-learning systems using e-traceability systems. *J. Comput. Sci.*, 6: 210-216. DOI: 10.3844/jcssp.2010.210.216.
- Mahmud, R., M.A. Ismail and L.A. Kiaw, (2009). Development and evaluation of a CAI courseware 'G-Reflect' on students' achievement and motivation in learning mathematics. *European J. Soc. Sci.*, 8: 557-568.
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Mohammed, A.J. and H.K.A. Omari, (2010). E-Learning management system using service oriented architecture. *J. Comput. Sci.*, 6: 285-295. DOI: 10.3844/jcssp.2010.285.295.

Opina, A. S.,(2014, February). The Development and Validation of Online Learning Modules for College English.*American International Journal of Contemporary Research*.

Verecio, R.L., (2014, June 06). Students' Evaluation of an Interactive Multimedia Courseware.*International Journal of Education and Research*.