Abstract

The World Wide Web has been widely recognized as a powerful medium for distributing course based information and has seen a tremendous expansion over the last three years. This paper outlines the importance of the Web in enhancing student learning and describes the applications of Web Course Development Tools for large campus wide deployment. The paper presents a general look at WebCT as a powerful tool that facilitates the creation of sophisticated Web-based educational environments. Finally, the paper presents a model for improving study effectiveness based on our student’s way of thinking.

Introduction

The World Wide Web (www) has become the tool of the century. It has been revolutionizing the way we do things in general from studying and learning to any sort of operation. Using the www technology, in enhancing our education and training policies with the current information explosion, will shape our very near future.

In this paper an attempt is given for educational institutions to improve their methodology of teaching and learning. We will describe in this paper the role of the Internet to enhance student learning, what is online learning and finally the importance of the www technology to produce tools for course management.

We will conclude our discussion with a brief summary concerning distance education and learning experienced by department of Computer Technology in our institution.

What do we expect from our graduates?

The graduates are expected to be able to (Figure 1) [1]:

- Communicate effectively
- Stay up-to-date of what is changing in their field
- Have formed ethical principles which will guide them in their carrier
- Work effectively in a team environment

The rich resources available on the web lead to more active, independent student learning if student is held responsible for the information posted [1].

Online Education

Analysis showed that the three main obstacles for providing effective online materials and learning environment are [2,3]:

1. Lack of support for the collaborative and dynamic nature of learning.
2. Lack of standards for locating and operating interactive platform-independent materials.
3. Lack of incentives and structure for developing and sharing content.

Based on these shortcomings, a better approach has to be found. The solution [2,3] is to develop web course tools and provide a collaborative environment and standard interface for creating and distributing course contents.

Course Tools Based on the Web Technology

The integrated web-based tool provide a three way interaction:
1. Student with contents
2. Student with Instructor
3. Student with other students.

A comparative study [2] of the following products of web course management tools that conform IMS (Instructional Management Systems) specification:

- BlackBoard CourseInfo

Figure 1: The Role of the Web in Enhancing Student Learning

Figure 2: Showing features of Web course development tools.

A comparative study [2] of the following products of web course management tools that conform IMS (Instructional Management Systems) specification:

- BlackBoard CourseInfo
showed that WebCT is the recommended development tool. This study was based on committee discussions, online evaluation, vendor demonstration, review literature, individual contacts, testimonials from existing users and institution, scalability, integration with current infrastructure, and rating comparison. Other studies also showed the same result [4,5].

Figure 3 shows the designer view of a sample course using WebCT.

Figure 3: Designer view of a sample course

Buraydah College Infrastructure

With the current infrastructure the college [6] has all the requirements needed to implement an environment for educational purposes that facilitates the creation of on-line courses for students. From the above discussion, the college has chosen the course tool WebCT for the following reasons: 1) free to download, install, and create courses, 2) low cost comparing to other product, 3) ease of use.

The college has now around 1700 students registered in 9 different specialties. The college will focus in the first stage on developing on-line courses for the Computer Technology students (20 students). During this study we will provide all the necessary teaching support for students and follow the progress of student learning through assessments and student progress tracking provided by WebCT. The results are expected to improve study effectiveness.

The new Course model format

To improve study effectiveness, the following course model format has been adopted beside the text book:

* The introduction of interactive visualisation tools for each course. CBT courses from Smart Force is one of example.
* The creation of Web-based study support system where the student can find all information needed such as delivering study material and communication tools necessary for exchanging electronic messages such as E-mail, chatting and discussion groups.
* Offering interactive progress to master the course contents. This include self-test, exercises and quizzes.
* Offering simulation packages to help student solving problems and finding solutions to their specific case.

Conclusion and Discussion

A Web-based study support environment was designed and developed based on the proposed model. The benefits expected are important as far as student motivation during the entire course and final marks improvement. The development cost for the new course model requires a lot of initial investment in both labor and money.

The use of WebCT Tools has given teachers a powerful mean to control the course as well as tracking students over the entire course.

One of the main concern in the next study will focus on the problem associated with the Arabic support with the WebCT environment.

The knowledge and technical experience gained from this project are expected to help educational institutions plan and restructure their programs of training in the region.

References