



Chapter III

Online Computer Lab Planning

Introduction

In Chapters I and II, we have done overviews about the issues related to online computer labs such as Web-based teaching (WBT) and various Web-based teaching systems. We have also briefly discussed technology-based courses and the technologies that can be used in the development of WBT and online computer labs. Starting from this chapter, we will discuss issues in designing and developing online computer labs for technology-based courses. The first task in designing online computer labs is to determine what type of online computer lab should be developed. It all depends on the teaching requirements. The developed computer lab should meet the needs of hands-on practice and balance the support, cost, and the complexity of technologies. This chapter provides you with a systematic way of identifying the needs of an online computer lab. In this chapter, we will discuss various approaches to decide what the teaching requirements are. We will start off with the topics related to online computer lab development process which will show you the big picture about developing online computer labs. Then, we will walk through the topics such

as identifying hands-on requirements, identifying resources, and assessing costs. Investigating these topics will help you decide how big your project is, what the growth rate is, what the costs are, if there is funding for the project, and what kind of support you need to get from the computer service team. The next topic is about project planning which deals with issues such as budgeting, scheduling, forming a project development team, and implementing the project. This topic helps designers to deliver an efficient plan in developing a successful online computer lab.

Background

As mentioned in the previous chapters, the process of developing online computer labs is a complex process and requires careful planning. Even though it is hard to find publications that directly deal with the planning of an online computer lab, there are some publications that discuss each specific area of a planning process such as the planning of instructional design, Web page development, and the use of multimedia technologies.

In a planning process, the first task is to plan how to get the information from the key players who may impact the online lab development project. These key players may include university administrators, computer service department personnel, faculty members, and students. There should be a plan on how to meet these people and what information to collect. The information to be collected should include the assessment of the organization, budget, resources, and technical issues. Then, the collected information can be used to identify the challenges in developing online computer labs (Huntley, Mathieu, & Schell, 2005).

In the planning process, one needs to allocate the resources, form a development team, pick a WBT system, and build a framework for the project as pointed out by Horton (2000). The planning process should also include the preparation of teaching Web-based classes which will be supported by the online computer lab (Potter, 2003). To prepare the implementation and evaluation of WBT, checklists can be prepared for designing, developing, and implementing WBT as mentioned by Khan (2005).

Effectiveness is one of the concerns in the planning process. It is always a good strategy to create an effective Web-based teaching system with minimum resources. The issues of designing and developing effective Web-based training should be covered in the planning phase (Taran, 2003). The planning of effectively implementing Web-based teaching is another component of the planning process (Clark & Mayer, 2003).

One of the objectives of a planning process is how to effectively use technologies to improve instructional quality. Multimedia-based teaching materials are often

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