

# **Developing a Multimedia/Web-Based Student Learning Module**

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## **Abstract**

Technology is a pedagogical complement to the development of student-centered learning. Based on assessment and analysis of course content, a paradigm for design and implementation of learning modules was developed. A demonstration of how a needs assessment and analysis can be completed. Several multimedia tools used in the development of learning modules will be demonstrated.

## **Purpose**

The purpose of the learning module project is to allow students to enhance their learning through multimedia. The learning modules will be posted on the web or distributed by CD-ROM. This will allow the students to access the concepts outside class. The learning modules will be used as a supplementary tool in addition to the course content.

## **Needs Assessment**

In preparing a multimedia needs assessment, there are several areas that must be defined.

- The present condition
- Define the job of the multimedia designer
- Rank the goals for the multimedia project according to importance.
  - Discrepancies identified
  - Determine if project goals and outcomes are in conflict
- Determine positive outcomes
- Identify the priorities (Lee & Owens, 2000, pg. 268)

## **Front End Analysis**

The front end analysis consists of obtaining more detailed information about what multimedia tool is to be developed (Lee & Owens, 2000, pg. 14). The front end analysis uses nine different analyses to obtain the information required to complete the multimedia project. The nine analyses are:

- Audience analysis requires examining the demographics, special requirements, and attitude towards content and language skills of the intended audience.
- Technology access and knowledge of the audience.
- Task required of the learning modules and the variety of concepts that will be presented.
- Critical-incident determines the skills or knowledge that will be targeted in the learning module.
- Situational analysis assesses the environmental or organizational constraints that may impact student learning.
- Objective of the learning module.
- Media types that could be used to develop and distribute learning modules
- Extant-data materials used in addition to the learning module.

- Cost-benefit or cost association with the development and implementation of the learning module.

### **Multimedia Evaluation**

A critical area to the development of multimedia learning projects is to examine the effectiveness of the learning environment. Being able to create a web-based module is not enough. Once the tool has been developed there are four keys to examining the effectiveness of the web learning environment. Those four areas are:

- Instructional design of the site
- Equipment and software availability
- Length of pages
- Access to chats/discussions (Beer, 2000, pg. 149-150).

### **Demonstration**

A demonstration will be shown detailing the steps of the development of a learning module tool. The demonstration will show the learning module distributed by CD-ROM and the Web-Based module created in Dreamweaver.

### **References**

- Beer, V. (2000). *The Web Learning Fieldbook, Using the World Wide Web to Build Workplace Learning Environments*. San Francisco: Jossey-Bass/Pfeiffer
- Lee, W & Owens, D. (2000). *Multimedia-Based Instructional Design*. San Francisco: Jossey-Bass/Pfeiffer
- Locker, K. (2002). *Business and Administrative Communications*. Glencoe-McGraw Hill.