

DISTANCE AND OPEN LEARNING – WEB-BASED TRAINING (WBT) DEVELOPMENT PROCESS CONSIDERATION

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Abstract: Learning is undergoing a revolution as technology provides effective and engaging channels to deliver training to multiple locations when audience can learn, communicate, email, chat, video-conferencing with instructors and others.

This paper highlighted some major fundamental development process someone needs to consider to develop an effective and interactive web-based learning system.

INTRODUCTION

In traditional teaching, the instructor normally stands in front of a classroom filled with 30 or more students. Lectures are being conducted verbally with course materials occasionally transcribed on chalkboards or projected onto a screen. Students usually are frantically copying down words from the screen. A well-planned class may include some question and answer types of discussion. Tests and exams are normally given during class. A portion of class time is normally devoted to review test and exam results. These are things teachers and students in traditional classes do.

Today, the traditional model where teachers stand in front of a class and students sit in a physical classroom at a predefined time is no longer the only teaching and learning environment. The coming of the Web environment brings with it the need for individuals involved in teaching and learning to take their education materials to the next level. The beauty of the Web is that it provides an entirely new context for teaching and learning. It removes the physical and the constraints for instructors as well as learners.

Learning is undergoing a revolution as technology provides effective and engaging channels to deliver training to multiple locations when audience can learn, communicate, email, chat, video-conferencing with instructors and other learners. The increasing use of Web-based training for the delivery of education has brought convenience and flexibility to learners, trainers and the offering institutions. To day, WBT has become important to corporations, small businesses and individuals to develop, deliver and receive training at anytime and from anywhere. The benefit of WBT provides a broad reach of multiple audiences and has high potential customization to address various learning style and needs.

With the rapid growth of Internet technology, multimedia and network bandwidth in recent years, we have experienced a shift of paradigm in doing business, acquire knowledge, pursue education and conduct training. It is undoubly that the community is moving towards a more efficient and effective way to deliver and receive education and training.

Web based training is not just another format for instructor-led or self-paced education. It is a learner centric, interactive, nonlinear, graphical, structural and effective use of the power of multimedia to present knowledge to the community.

However, WBT is not a total replacement of classroom teaching. It is definitely not the solution for every type of training topics. It is appropriate for teaching imparting kinds of knowledge, such as software application, management skills, listening and writing skills, company rules. WBT is also good in providing continuous learning, keeping knowledge current and supplementing instructor-led-courses. Training involves complex physical movement such as operating a truck or driving a car is very difficult to convert to WBT due to this kind of training requires environment and instant feedbacks and mentoring from the instructor.

An effective Web-based training project will not be successful without a team of committed professionals. Therefore the very first thing is to establish a qualified project team to facilitate the design and development of WBT.

WBT Team:

The followings are suggested roles and responsibilities of a basic WBT project team:

- a.) A Project Manager - for overseeing the overall team activities and coordination.
- b.) A Course Instructor - for developing the course contents and instructional strategies of the course.
- c.) An Instructional Designer - for conducting the needs and analysis, choosing the most appropriate forms of web-based training designed lessons and media tools, and developing blueprint.
- d.) A Subject Master Expert/Editor - for establishing the needs analysis with the instructional designer and reviewing the goals and accuracy of the subject.
- e.) A Legal counsel - for reviewing the design documents to ensure there are no improper use of proprietary information and violations of copyrights, and use of trademarks.
- f.) Programmers – for developing web pages and creating scripts.
- g.) Multimedia Expert/Graphics Artist - for visual design of the course materials and the Web sites.
- h.) Technical Support Staff - for preparing the WBT infrastructure for the delivery of the Web courses and helping the team and learners in their use of the infrastructure for WBT courses.
- i.) Learners – can be involved in the beginning and ending of the project. They are expected to provide information and feedbacks of WBT courses.

Development Process Consideration

WBT can be developed with four major phases. They are namely Instructional Design, Course Development, WBT Pilot and Deployment. The purpose of this paper is to explore the needs of these important phases and to discuss how these phases are brought together to make WBT works.

1. Instructional Design Phase:

Instructional Design is the major process of designing the environment, methodology, and resources in addition to developing instructions and strategies for effective learning of course objectives.

The following are the suggested items to be considered for designing instructional materials for WBT:

- a.) The target audience of your instructional materials.
- b.) The level of knowledge the learners know and don't know.
- c.) The level of computer knowledge your learners required to participate in WBT
- d.) The goal and objectives of the course.
- e.) The expectation of learners wanted to accomplish from the course.
- f.) The delivery environment such as network infrastructure and learner workstation requirements.
- g.) The determination of training methods. In this design, a single training method or a combination of methods can be used. This includes partial traditional classroom instructions; self-paced workbook exercises and tests; design facility to allow student-to-instructor and student-to-student activities.
- h.) The interactions and tools that can provide assistance to learn and communicate with instructors and other learners.
- i.) The creation of a detail blueprint for courses and student administration and tracking process and system.
- j.) The creation of a detail blueprint on course interactions, feedbacks, and information structures.
- k.) The technical limitations such as small bandwidth and differences among browsers that might cause technical problems.
- l.) The business limitations such as corporate culture and contractual obligations.

2. Course Development Phase:

Moving classroom courses to WBT environment provides opportunity to re-evaluate the strength and weakness of a course. During the process of either redesigning or converting classroom courses to WBT courses, incremental assessment is crucial to ensure that the development of the course contents and design, the learners' feedbacks as well as the instructional design and supports are sufficient to deliver the Web-based training courses effectively to the audience.

The following are the suggested items to be considered:

- a.) Course goal, objectives and contents must be assessed for factual integrity and completeness.
- b.) Types of dialogue support.
- c.) Teaching and learning strategies such as the forms and frequency of lectures, discussions, mentoring, feedbacks, questions and answers.
- d.) Hardware, software, network infrastructure and support.
- e.) Forms and frequency of assessment such as tests, exams, group assignments, discussions, vocabulary, examples, practices etc.
- f.) The clarity of smoothness of directions, level of interest, and effectiveness of instructions.

3. WBT Pilot Phase:

The purpose of conducting a WBT pilot is to evaluate the technology infrastructure and the effectiveness of the entire instructional design. The results of the pilot can also be used to set the tone for the deployment and support requirements in the implementation phase.

The following are the suggested items to be considered in conducting an effective WBT pilot:

- a.) Carefully select a group of accountable learners and support personnel to participate in the pilot.
- b.) Clearly define the pilot objectives, tasks, roles and responsibilities to the pilot group.
- c.) Define measurable evaluation criteria and tasks.
- d.) Maintain open and regular communication with the pilot group and the project team.
- e.) Document all sorts of changes, issues and concerns during the pilot phase to ensure that problematic areas can be fine-tuned and improved.

An evaluation process must be in place prior to deployment of WBT. The purpose of the evaluation process is to assess the effectiveness of the WBT system. This process should be able to identify what worked well and where improvements can be made.

The following are suggested WBT course evaluation areas:

- a.) Organization of the course contents and the knowledge flow
- b.) Clarity of presentation materials
- c.) Quality of interactive activities
- d.) Adequacy use of multimedia tools
- e.) Availability of communication channels, assistance and support
- f.) Overall satisfaction with the course

4. Deployment Phase:

Prior to deploying the course on WBT environment, one needs to set the tone for the environment.

The following are suggested items to be considered in implementing WBT:

- a.) To set the expectations of the learners in the use of WBT.
- b.) To explain to the learners and support staff the roles and responsibilities prior to the deployment.
- c.) To state the expectation of response from instructors and technical assistance
- d.) To consider a contingency plan for time when the technology is not available and alternatives should be identified for substitution.
- e.) To determine the deployment strategies such as limit the number of learner groups, types of WBT courses and where WBT is available for access.

SUMMARY

WBT has gained momentum in the colleges, universities and technical institutes in the recent years globally. Effective WBT requires carefully planned activities, systematic developed processes, manpowers and financial support to implement. Nevertheless with circumspectly concerted efforts of planning, WBT can be applied in many types of training with reasonable amount of time and effort. Learners can gain the flexibility to receive training at anytime and from anywhere.

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