Integration of TV and the Internet: Design Implications and Issues

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Abstract

The integration of the Internet and TV (InternetTV) is a powerful medium for delivery of instruction to learners. However, the instruction has to be designed to cater to the needs and characteristics of the learners. Proper design and analysis strategies must be followed when designing instruction for InternetTV. More research is needed on the integration of the different messages on InternetTV and the most appropriate design and support strategies for delivery.

1. Introduction

In recent years there has been considerable development in telecommunication technology to link businesses and individuals together. These include satellite, ADSL (Asymmetric Digital Subscriber Line), and Cable. These communication technologies allow businesses to send data, audio, video, and graphics through the same line. The speed of the communication also allows the communication to be synchronous using videoconferencing, audio conferencing, and interactive chat. Also, the speed of the communication allows the information, video, audio to be transmitted digitally. However, most of the telecommunication is being used by business and industry. Education and training need to conduct research and develop methods for using the merging of the Internet and TV (InternetTV) to delivery instruction to students. This paper will identify how education and training can design and deliver training using InternetTV to teach students and suggest research should be conducted to make the merging of the two technologies more effective.

2. Expertise Required to Develop InternetTV Instructional Materials

A team of experts is required to develop instructional materials for InternetTV delivery. These experts include television production experts, Internet experts, content experts, instructional designers and a project coordinator to coordinate the activities to develop the instructional materials. Figure 1 shows the expertise required to develop InternetTV instructional materials.

![Expertise required to develop InternetTV](image)

Figure 1: Expertise required to develop InternetTV

3. Design for the Learner

When designing instruction for InternetTV, the learner must be analyzed to determine the characteristics of the learner. Different learners may have different learning styles and preferred modes of learning [1]. Some learners like to perceive and absorb the information in the environment. This can range from concrete experience to abstract conceptualization. Concrete experience relates to one’s preference to learn things that have personal meaning in life. The second dimension of perceiving is reflective observation. Students who prefer this style like to take the time to think and reflect on the learning materials. The second component, processing, is related to how one understands and processes the information that is absorbed after perceiving the information. Processing ranges from abstract conceptualization to active experimentation. Learners who have a preference for abstract conceptualization like to learn facts and figures and like to research new information on different topics. Learners who have a preference for active experimentation...
prefer to apply what they learn to real life situations. They like to try things and learn from their experience.

Learning materials should include activities for the different styles to allow learners to experience all of the activities. Refer to Figure 2 for the dimensions of learning.

Concrete experience learners prefer specific examples in which they can be involved, and they relate to peers and not to people in authority. They like group work and peer feedback and they see the instructor as coach or helper. These learners prefer support methods that allow them to interact with peers and obtain coaching from the instructor. For learners who prefer concrete experience, support mechanisms should be in place to allow these learners to interact with other learners. Interactive video or chat will be an appropriate approach for concrete experience learners.

Active experimentation learners prefer to learn by doing practical projects and group discussions. They like active learning methods and prefer to interact with peers for feedback and information. They tend to establish their own criteria to evaluate situation and things. The active experimentation learners need the opportunity to apply what they learn to real life situations.

The challenge for educators is how to develop instruction to meet the needs of different types of learners. If designed properly, InternetTV, perhaps uniquely among delivery methods, can customize the instruction to meet learner needs.

Research is needed to determine the most effective layout of the information when delivering instruction on InternetTV. More research is needed to determine the learning style of students and how to develop learning materials for InternetTV based on the learning style of students. There has to be research on how to sequence the instruction for InternetTV and the instructional strategies to use to promote learning and transfer.

In summary, because of the increasing bandwidth for transmission of information, the use of InternetTV to deliver instruction is inevitable. If done properly, this could be an effective medium for teaching students. The interactive nature of InternetTV will allow learners to interact with each other and will present the materials in a high quality format.

4. Research and issues to be addressed

- Can everyone learn from InternetTV and how can educators design instruction to meet the needs of all learners?
- What is the role of the instructor when teaching with InternetTV?
- How can we make InternetTV portable so that learners can learn anywhere?
- How can educators convert existing educational materials for InternetTV?
- What strategies that can be used to make InternetTV instruction interactive?
- What are the social implications of using InternetTV for instructional purposes?

5. References