From E-Learning to T-Learning

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INTRODUCTION

The introduction of interactive television offers new potentialities to the television medium with the possibility of including e-commerce, programs on demand, games, and, last but not least, educational programs. Digital television will allow forms of lifelong learning to disadvantaged sectors of the population, namely those potential learners that have no possibility to improve their own knowledge caused by problems such as lack of free time due to working hours, family care, and so forth. Much of the interactive potentiality of this new medium will depend on the possibility of having a back-channel, connecting television to the Internet. A back-channel would allow the user to store choices, preferences, progress in learning units, and so forth, in the memory. In other words, there is the possibility of customizing the programs offered and the interface according to user preferences. The potentialities of this new medium are numerous, and it is necessary to explore, experiment with, and facilitate the new methods of available interaction. Every great technological change has also meant a change in perspective and mindset. What generally happens in the early stages of the utilization of new technological solutions is that the new tools available continue to be used while adopting an outdated mentality. It is necessary to propose a pedagogical model for the learning programs offered by new technology.

BACKGROUND

Learning Online

The Internet is shattering traditional teaching and learning styles. Most education today is information transfer from the teacher's mind to those of learners. This traditional delivery system is only one way to learn. What the Internet is doing is splitting the traditional teaching method into two parts: cognitive learning, which can be accomplished with online learning, and affective learning, which can be carried out in a small-group discussion setting (Draves, 2000). E-learning has evolved from the first static Web sites to systems where the focus is now on content personalization. Researchers attempt to adapt didactic material to students' unique learning styles, trying to meet individual student needs. E-learning can be considered more a social than a technological phenomenon, since the main issue in e-learning is learning, and not the technological media employed (Santos, Vale, & Meloni, 2006).

There are several aspects that can make online learning better than classroom learning:

- A learner can learn during his optimal learning time during the day
- A learner can learn at his own speed
- A learner can focus on specific content areas
- A learner can test himself daily
- A learner can interact more with the teacher.
- Online learning is less expensive and thus more accessible
- One can learn from the foremost authorities and experts

Interaction between the participants and teacher, as well as interaction among the participants themselves, is at the heart of online learning.

NEW MEDIUM, NEW LEARNING

A few public service educational broadcasters and commercial broadcasters have started or are about to offer learning programs due to the increased capacity made available by digital TV. In some instances, it may not be appropriate for educational providers to offer interactive services via TV at this stage, as interactivity will best be achieved via the Internet. For example, a university-level course may involve broadcasting a TV program, but as most people taking a university course will have a computer for writing assignments, it is probably easier to offer interactivity via the Internet

(PJB Associates, 2004). However, where there is need to target people who would not normally participate in further education, interactivity becomes very important in transforming them from passive viewers to active participants. A new medium will require a new way of learning, as the learning setting, users, time, and goals will be vastly different from those of e-learning.

Interactive Television

Television is a medium central to people's everyday lives. It has developed its own grammar and structure, and the audience has established specific, well-defined interaction patterns unique to this medium. However, a literature review has revealed that the approach followed by most scientific publications is principally PC-centric and usually implicitly focused on the work environment (Chorianopoulos, 2003). New interactive television makes two cultures converge, two cultures that have thus far traveled on separate tracks: television and the Internet. On the one hand, we have television, with its entertainment characteristics, its ability to tell stories, to offer richly visual programs; on the other hand, we have the Internet with its democratic culture allowing diffuse participation by community members with the important role accorded the individual in choosing what to access.

Some learning forms of ICT (information communication technology), in particular those relative to edutainment, will greatly influence the programs that will be produced for interactive television. And if forms of e-learning are planned for the new medium, they should be redesigned for the new technology. A new technological medium requires new visions and utilizations, new ways of learning. The interface used by television is very different from that used by the Internet. Table 1 highlights some major differences.

Due to these differences, it is not desirable to transfer the same formats offered in e-learning to digital television. In general, however, the attitude towards interactive television as demonstrated in the USA are only moderately encouraging for educators, as it seems those exclusively using television do not necessarily find many services (other than games) attractive. Those who find the other services attractive are computer users, and it would then beg the question of why we should invest in another technology (for work or training) when users probably already have access to the Internet (Berry, Kelso, & Lamshed, 2000).

At the start, there was some skepticism about interactive educational television. There was a feeling that work completed to date had consisted of reusing old computer-based learning techniques unimaginatively in a new interactive medium (Luckin, Coultas, Underwood, du Boulay, Mateer, Mudge, et al., 2003). So far, different methods of program enhancement through interactive television have been experimented. Program enhancement can take a number of forms: picture only, picture with prompts for additional information, picture with overlaid information, information with inserted picture, and information only (Berry et al., 2000).

Table 1.

Features	***T-Learning***	***E-Learning***
Data processing ability	Lower data processing capability	Huge data processing and storage capability
Screen resolution	Lower resolution of presentation devices	High resolution of presentation devices
Interactivity	Reduced interaction opportunities, due to the sole use of a remote for interaction	Great interaction opportunities, using keyboard, mouse, and other devices
Distance from the screen	Elements displayed on the screen must be readable from a distance	The display is generally viewed at a short distance, allowing the use of even very small fonts and visual elements
Utilization	Traditional passive utilization of equipment	Traditional active utilization of equipment