

# Software Ad Hoc for E-Learning

**Maria-Isabel Sánchez-Segura**

*Carlos III Technical University of Madrid, Spain*

**Antonio de Amescua**

*Carlos III Technical University of Madrid, Spain*

**Luis García**

*Carlos III Technical University of Madrid, Spain*

**Luis A. Esteban**

*Carlos III Technical University of Madrid, Spain*

## THE SOURCE OF THE PROBLEM

Although they are non-educational institutions, financial institutions have specific training needs. The greatest priority in employee training arises when the bank launches a new financial product or service. The difficulty, in such cases, lies in training the employees in all the regional branches so that they can offer good service to meet the clients' demand for the product.

In developing the training program two factors had to be considered:

- The department responsible for developing the new financial product keeps it secret during the development phase. Therefore, the technical details, tax treatment, and other issues relating to the product are known only after it has been designed and is ready to be launched. Consequently, it is impossible to train employees until the new product has been completely developed.
- Traditionally, employee training is pyramidal. First of all, the trainers in each training center are trained. These, in turn, train the managers, in groups, from the most important branches. Finally, these managers are responsible for training the employees in their offices.

Considering the specific needs of the employees, and to obtain the maximum profitability from new financial products, we defined the pilot project called factory to minimize time and cost spent in the development of e-learning courses for financial institutions.

This project was conceived to cover the above-mentioned weaknesses detected in the training process of an important financial institution. The pilot project goals were:

- To improve the spread of knowledge
- To minimize the course development cost and time

This pilot project consisted of two main parts: developing the factory tool and developing the courses with and without this tool, in order to compare the cost/benefit for the institution.

## E-LEARNING

E-learning, also known as "Web-based learning" and "Internet-based learning", means different things to different people. The following are a few definitions of e-learning:

- E-learning is the convergence of learning and the Internet. (Bank of America Securities)
- E-learning is the use of network technology to design, deliver, select, administer, and extend learning. (Elliott Masie, The Masie Center)
- E-learning is Internet-enabled learning. Components can include content delivery in multiple formats, management of the learning experience, and a networked community of learners, content developers and experts. E-learning provides faster learning at reduced costs, increased

access to learning, and clear accountability for all participants in the learning process. In today's fast-paced culture, organizations that implement e-learning provide their work force with the ability to turn change into an advantage. (Cisco Systems)

- E-learning is the experience of gaining knowledge and skills through the electronic delivery of education, training, or professional development. It encompasses distance learning and asynchronous learning, and may be delivered in an on-demand environment, or in a format customized for the individual learner (Stark, Schmidt, Shafer, & Crawford, 2002).
- E-learning is education via the Internet, network, or standalone computer. Network-enabled transfer of skills and knowledge. E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM (E-learnframe, 2004).
- Any technologically mediated learning using computers whether from a distance or in face to face classroom setting (computer assisted learning) (USD, 2004).
- Any learning that utilizes a network (LAN, WAN or Internet) for delivery, interaction, or facilitation. This would include distributed learning, distance learning, computer-based training (CBT) delivered over a network, and WBT. It can be synchronous, asynchronous, instructor-led or computer-based, or a combination (LCT, 2004).

In a general way, the most accepted definition for e-learning is: "The use of technologies to create, distribute and deliver valuable data, information, learning, and knowledge to improve on-the-job and organisational performance and individual development." Although it seems to focus on Web-based delivery methods, it is actually used in a broader context.

There are many well-known organizations that are making a big effort to standardize the concepts, processes and tools that have been developed around e-learning:

- The Aviation Industry CBT (Computer-Based Training) Committee (AICC) (<http://www.aicc.org/>) (AICC, 1995, 1997), is an international association of technology-based training professionals. The AICC develops guidelines for the aviation industry to develop, deliver, and evaluate CBT and related training technologies. The AICC develops technical guidelines, (known as AGR's), for example, Platform guidelines for CBT delivery (AGR-002), a DOS-based digital audio guideline (AGR-003) before the advent of window multimedia standards, a guideline for Computer Managed Instruction (CMI) interoperability, this guideline (AGR-006) resulted in the CMI systems that are able to share data with LAN-based CBT courseware from multiple vendors. In January 1998, the CMI specifications were updated to include Web-based CBT (or WBT). This new Web-based guideline is called AGR-010.
- The IEEE Learning Technology Standards Committee (LTSC) (<http://ltsc.ieee.org/>) is chartered by the IEEE Computer Society Standards Activity Board to develop accredited technical standards, recommended practices, and guides for learning technology. The Standard for Information Technology - Learning Technology - Competency Definitions (IEEE, 2003), (Mairtin, 2003) defines a universally acceptable Competency Definition model to allow the creation, exchange and reuse of Competency Definition in applications such as learning management systems, competency or skill gap analysis, learner and other competency profiles, and so on.
- The IMS Global Learning Consortium (<http://www.imspj.org/>) develops and promotes the adoption of open technical specifications for interoperable learning technology. The scope for IMS specifications (IMS, 2003a, 2003b), broadly defined as "distributed learning", includes both online and off-line settings, taking place synchronously (real-time) or asynchronously. This means that the learning contexts benefiting from IMS specifications include Internet-specific environments (such as Web-based course management systems) as well as learning situations that involve off-line electronic resources (such as a learner accessing learning resources on a CD-ROM). The learn-

10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/software-hoc-learning/17349](http://www.igi-global.com/chapter/software-hoc-learning/17349)

## Related Content

---

### A Hyperbolic Arnold's Cat Map-Based System for Multimedia Data Encryption

Amine Rahmani (2021). *International Journal of Multimedia Data Engineering and Management* (pp. 57-71). [www.irma-international.org/article/a-hyperbolic-arnolds-cat-map-based-system-for-multimedia-data-encryption/276400](http://www.irma-international.org/article/a-hyperbolic-arnolds-cat-map-based-system-for-multimedia-data-encryption/276400)

### From Circuit Switched to IP-Based Networks

Thomas M. Chen (2009). *Encyclopedia of Multimedia Technology and Networking, Second Edition* (pp. 212-217). [www.irma-international.org/chapter/circuit-switched-based-networks/17403](http://www.irma-international.org/chapter/circuit-switched-based-networks/17403)

### A New Neural Networks-Based Integrated Model for Aspect Extraction and Sentiment Classification

Rim Chiha, Mounir Ben Ayed and Céla da Costa Pereira (2021). *International Journal of Multimedia Data Engineering and Management* (pp. 52-71). [www.irma-international.org/article/a-new-neural-networks-based-integrated-model-for-aspect-extraction-and-sentiment-classification/301457](http://www.irma-international.org/article/a-new-neural-networks-based-integrated-model-for-aspect-extraction-and-sentiment-classification/301457)

### SSIM-Based Distortion Estimation for Optimized Video Transmission over Inherently Noisy Channels

Arun Sankisa, Katerina Pandremmenou, Peshala V. Pahalawatta, Lisimachos P. Kondi and Aggelos K. Katsaggelos (2016). *International Journal of Multimedia Data Engineering and Management* (pp. 34-52). [www.irma-international.org/article/ssim-based-distortion-estimation-for-optimized-video-transmission-over-inherently-noisy-channels/158110](http://www.irma-international.org/article/ssim-based-distortion-estimation-for-optimized-video-transmission-over-inherently-noisy-channels/158110)

### Automatic Pitch Type Recognition System from Single-View Video Sequences of Baseball Broadcast Videos

Masaki Takahashi, Mahito Fujii, Masahiro Shibata, Nobuyuki Yagi and Shin'ichi Satoh (2010). *International Journal of Multimedia Data Engineering and Management* (pp. 12-36). [www.irma-international.org/article/automatic-pitch-type-recognition-system/40983](http://www.irma-international.org/article/automatic-pitch-type-recognition-system/40983)