

Chapter XXVI

Production, Publication, and Use of Educational Multimedia Content in Brazil: Challenges and Opportunities in Real World Technology Projects

Joni A. Amorim

Universidade Estadual de Campinas (UNICAMP), Brazil

Carlos Machado

PST Electronics, Brazil

Rosana G. S. Miskulin

Universidade Estadual Paulista “Júlio de Mesquita Filho” (UNESP), Brazil

Mauro S. Miskulin

Universidade Estadual de Campinas (UNICAMP), Brazil

ABSTRACT

The production of quality educational multimedia content involves both its publication and its use, considering aspects ranging from metadata standards to teachers' guides. In Brazil, there are many challenges and opportunities in real world technology projects; particularly, in the field of education. Challenges may involve not only strategy and project engineering issues, but also the management of change in the creation of virtual groups focused on multimedia production. This scenario has created a platform from which it was possible to suggest a framework for an educational multimedia factory virtual group interaction. Thus, both software implementation for the proposed framework and the management of change are discussed from the perspective of a large-scale multimedia production, at UNICAMP, Brazil. This chapter intends to bring about some of the complexities involved in a pioneer project that can provide High School students with free content by simply connecting to the Internet.

INTRODUCTION

Digital convergence is finally happening (Amorim, 2003): all separate media now become digital and come to be delivered via global network, improving education quality. In this new context, change management comes into play (Bates, 1999; Conner, 1993; Frame, 1994): teachers demand both digital content and training in order to incorporate multimedia in their daily practice. After considering topics such as accessibility, change management and multimedia, this chapter presents two initiatives from the Universidade Estadual de Campinas (UNICAMP), Brazil. One is related to teacher training in educational technology (CENP, 2007), while the other involves large-scale multimedia production for teaching (MEC, 2007). This chapter discusses the production, publication and use of educational multimedia content, presenting, at the same time, a Brazilian perspective on the many challenges and opportunities experienced in real world technology projects.

In education, digital technologies are becoming increasingly important. The use of multimedia can combine text, images, full-motion video, and sound into an integrated package. The authoring process grows in complexity with time due to the increasing multitude of possibilities available: from traditional hypertext to Web-based audio broadcast via RSS (Really Simple Syndication) feed. This growing complexity of modern educational projects and the need for a more efficient production of quality courses stimulates the development of new instructional design approaches.

Improving quality in distance, flexible and ICT-based education turned out to be a priority for most institutions in developing countries, where the digital divide is just one of the many challenges. UNICAMP was established in 1966, as a public university funded by the State of São Paulo, Brazil. In 2007, the University had 6.200 fiber optics-connected computers, 1.800 professors, 15.696 undergraduate students and 17.275

graduate students enrolled in different courses. UNICAMP is one of the most distinguished Brazilian academic institutions and seeks to contribute to solving social problems, through education and research, as well as through services to the community at large. The University accounts for 15% of the total scientific production in Brazil and manages projects both in technology development and in technology education. In 2007, the Graduate Programs obtained the best evaluation among Brazilian universities by the National Coordination for the Improvement of Graduate Professionals (CAPES), accounting for 11% of the Ph.D. degrees granted in Brazil.

The incorporation of the best methods and practices is now mandatory in order to achieve a balance among time, cost, scope, quality, risk and customer satisfaction (Mulcahy, 2006). Improving quality and productivity standards in an organization is a difficult challenge; especially because it is also difficult for people to accept changes.

Change is a transformation, a modification, an alteration, a variation or a deviation. It is a transition from one state, condition, or phase to another. Never before has that changed so fast with such a continuous intensification. In the field of education, massive change comes from ever-advancing technology such as personal digital assistants (PDAs) and interactive digital television (iDTV), suggesting that learning how to better manage change is an important goal to be achieved. A better Management of Change (MoC) would enhance the chances of increasing organizational efficiency and effectiveness even when changes are attempted. The literature on MoC (Bates, 1999; Conner, 1993; Frame, 1994) indicates that there is a basic axiom according to which individuals operate: life is most effective and efficient when people move at a speed that allows them to appropriately incorporate changes, absorbing them with minimum dysfunctional behavior. In education, what happens when teachers are overwhelmed by more change than they can absorb?

11 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/production-publication-use-educational-multimedia/21647

Related Content

Identification of Co-Changed Classes in Software Applications Using Software Quality Attributes

Anushree Agrawaland R. K. Singh (2020). *Journal of Information Technology Research* (pp. 110-128).

www.irma-international.org/article/identification-of-co-changed-classes-in-software-applications-using-software-quality-attributes/249220

Emergency: A New Ambulance Despatch System

Darren Dalcher (2004). *Annals of Cases on Information Technology: Volume 6* (pp. 440-456).

www.irma-international.org/chapter/emergency-new-ambulance-despatch-system/44591

Data Mining for Supply Chain Management in Complex Networks

Mahesh S. Raisinghaniand Manoj K. Singh (2005). *Encyclopedia of Information Science and Technology, First Edition* (pp. 708-713).

www.irma-international.org/chapter/data-mining-supply-chain-management/14323

Utilizing BP Neural Networks for Financial Risk Prediction and Corporate Stability Assessment

Yongli Huand Xiaohua Li (2026). *Journal of Cases on Information Technology* (pp. 1-15).

www.irma-international.org/article/utilizing-bp-neural-networks-for-financial-risk-prediction-and-corporate-stability-assessment/411181

The Incremental Artificial Immune System for Arabic Handwritten Recognition

Khelil Hiba, Benyettou Abdelkaderand Afef Kacem (2019). *Journal of Information Technology Research* (pp. 88-106).

www.irma-international.org/article/the-incremental-artificial-immune-system-for-arabic-handwritten-recognition/238027