# Chapter 14
# EDUPMO:
## A Framework for Multimedia Production Management

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## ABSTRACT

*Engineering is seen today as a synonym of innovation, especially for providing technological solutions that affect not only daily work and entertainment, but education as well. Project portfolio management of multimedia production and use emerges today as a challenge both for the enrichment of traditional classroom based teaching and for distance education offering. In this way, this chapter intends to answer the following question: Which are the fundamental aspects to be considered in the management of projects on educational multimedia production and use? This research presents a proposal of a project management model for digital content production and use. The model, the methodology and the implementation will be named EduPMO, an abbreviation of Educational Project Management Office. Therefore, the model, the methodology, and the implementation should be understood as related but independent entities. This interdisciplinary investigation involves different topics, going from metadata and interoperability to intellectual property and process improvement.*

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## INTRODUCTION

Digital convergence is finally happening (Amorim & Silva, 2009): all separate media now become digital and come to be delivered via global network, improving education quality. In this new context, Management of Change (MoC) 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, MoC and multimedia, this chapter presents a initiative from the Universidade Estadual de Campinas (UNICAMP), Brazil, that involves large-scale multimedia production for teaching (MEC, 2007). This chapter discusses the use of multimedia but focuses on its production while presenting 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 really simple syndication (RSS) 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, and today 87% of its 1,736 professors are full time and 96% have at least a doctoral degree. The University has the largest percentage of graduate students in Brazil and is responsible for 12% of the master's and doctoral theses in the country. 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 the last years, the Graduate Programs obtained the best evaluation among Brazilian universities by the National Coordination for the Improvement of Graduate Professionals (CAPES).

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 the world has 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 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? The answer could be fatigue, frustration, or apathy resulting from prolonged stress, overwork, or intense activity. This phenomenon is referred to as Burnout Syndrome (Carlotto, 2002). The seriousness of