

## Chapter 20

# E-Learning and E-Management in Tunisian Universities

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### ABSTRACT

*In the year 2000, policy makers in Tunisian higher education decided to explore ways in which e-learning and e-management could be introduced to enhance university administration and teaching. This effort was by no means an isolated one at the international level. Indeed, it comes as a major spin-off of Information and Communication Technologies (ICTs) that led to the emergence of e-learning and web-based education and training, enabling remote access to information and knowledge. Developing countries, such as Tunisia which was the host in 2005 of Phase II of the World Summit on Information Society (WSIS) (Baldoni, M., 2005), have great expectations from the social and economic consequences of the Internet. These countries see the Internet as an opportunity that should not be missed. For this reason, the government has put in place several programs, all of which provide for its citizens e-services, that were, prior to the advent of the Internet, either impossible or real headaches. An important category of these services apply to the sector of higher education. They range from e-learning to student information systems accessible from the web. In this context, the e-learning team in the Higher Institute of Informatics and Communications in Hammam Sousse (ISITC), University of Sousse, has developed and deployed a number of online courses in a blended learning format. Various e-learning projects covering both pedagogical and technical aspects as well as doctoral research works have been under way to support this activity. The deployment of e-learning courses is supervised by the Virtual University of Tunis with technical help from our university. In this chapter, we describe our experiments, the results achieved thus far and some lessons that we have learned. We discuss e-management practices in universities around the world and address issues of concern and human factors at stake especially from the students' point of view.*

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## **INTRODUCTION**

All universities around the world provide today some form of e-learning and e-services to its students and staff. Universities in developed countries rely so much on Internet and no single university that is among the top ranked can afford to disregard Internet. For universities in less developed countries, for example in some African countries, more efforts are needed especially from the infrastructure point of view. Well-aware of this situation, policy and decision makers in Tunisia invested in Internet relatively early with respect to other countries in the region. By the mid 1990's, Internet connections were common, in particular at university colleges. In 1996, the National Internet Agency was created to promote and regulate Internet services. In the few years that followed, the country has witnessed a surge in Internet based services, especially in the media and the public sector.

In this chapter, we focus on one category of these services, namely those applicable in the sector of higher education, ranging from e-learning to student information systems accessible from the web. In addition to this introduction, the chapter includes five sections. In Sections II and III, we describe e-learning programs in Tunisian universities. Sections IV and V are research oriented. They give an account respectively on e-learning assessment via the web and automatic generation of pedagogical scenarios. Finally, Section VI describes e-services in the context of higher education. At the end, we provide a comprehensive discussion.

## **E-LEARNING PROGRAMS**

As mentioned in the introduction, the second half of the 1990's was a busy period for Internet fans in Tunisia. But the year 2000 represents a turning point in the history of our universities, as decision makers in the higher education system took con-

crete steps to engage in some kind of e-learning activities. But hard questions had to be answered first since this subject was new to everyone, administrators and teachers alike. A major question was then whether to choose a centralized e-learning management system or a decentralized one. The decision was in favor of the former option and at the beginning of 2002, the Virtual University of Tunis ("UVT," 2008) was created by the ministry in charge of higher education.

The other major question was then to determine its main objective. Since that period, a major concern was the sharply rising number of students. This number is expected to grow from 220,000 in 2002 to almost 500,000 ten years later. It was hoped that UVT would help in this regard. Its precise objective was set for it to provide 20% of all university-level courses at distance, i.e. web-based (before 2009). Ministry officials were hoping that e-learning would provide a viable solution to crowded lecture rooms.

This interest in e-learning was not unique of course to Tunisian universities. Just in the Mediterranean region, a number of projects were underway. A network of Mediterranean universities called "Tethys" was created in that period and several Tunisian universities were members. Its purpose was to promote e-learning within the Mediterranean region.

It is precisely in this context that we launched an e-learning program at the Higher Institute of Informatics and Communication Technologies of Hammam Sousse (ISITC), which is a part of the University of Sousse ("UC," 2008). This program included blended learning courses, research projects and symposia organization. All this activity was coordinated with UVT and the services of our university. Although this article will focus on work at ISITC, similar programs may be found in other colleges and universities nation wide.

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