Building a successful e-learning project in higher education

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Abstract— Internet has made our world, the way we live and educate, more dynamic and virtual than ever, creating greater challenges and new possibilities. In this way, it is important that higher education institutions have, as a priority, the goal of finding effective ways of providing new learning opportunities according to their environment: student characteristics; teacher training; economic crisis and advancing technology in an effort to make learning more efficient, equitable and innovative. At Guarda Polytechnic Institute, Portugal (IPG), we recognize the needs and the opportunities to create and develop new e-education courses in order to engage and motivate students and teachers according to their needs. Thus, we have, in this last decade, developed and implemented a set of institutional objectives with regard to teaching electronic courses which aim to provide intuitive content online courses, easy to access anywhere, any time. The main purpose of this paper is to present our strategies as an institution, vision and goals when we talk about electronic learning. We bring forward what we believe to be extremely important and that must be considered when an organization wants to implement and develop e-Learning. The paper also presents the outcomes and synthesizes the insights collected since when we implemented a mobile learning solution. Findings indicate that building a successful e-learning project depends basically on two components, teachers' training and students' characteristics. The focus attention on these two components can create new, successful and powerful opportunities of e-learning.

Index Terms—education; e-learning project; higher education, learning 2.0

I. INTRODUCTION

As daily consumers, as teachers, and as students we all recognize that technologies are increasingly being more and more used in society and in the economy, and this is transforming the ways of working, studying (lifelong learning), communicating, accessing information and spending leisure time, among others. Several studies, conducted in this last decade, have shown that the evolution of the World Wide Web

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and ICT could enable creative and innovative practices in schools. The value of information, offered at Web sites, can enhance students' research, developing new skills and new methodologies to become critical users of the Web and the Internet, thus playing an important role in education. Learning should be reflective of underlying social environments [1], [22].

The evolution of the World Wide Web, driven by user-generated content, represents a new form of collaboration and communication creating new tools such as platforms, blogs, podcasts and wikis. Web 2.0 means a qualitative leap in Web technologies that has made internet more creative, participative and social [12].

Web 2.0 has changed, particularly in these last five years, in the way we produce, distribute, and evaluate the use of knowledge and information in the field of education. In this way, ubiquitous technology and Web 2.0 tools play today a fundamental key role in promoting technology-enhanced learning and creating new learning concepts and new opportunities in the field of learning. Social computing or web 2.0 applications have been developed all over the world by key research centres in a number of projects that aim to assess the impact of web 2.0 trends on the field of learning and education.

Research evidence suggests that these online tools, web technologies, have not only affected people's private and professional lives, but are also starting to transform learning patterns and pathways [20], [1] and also demonstrated the benefits of applying these technologies to learning [17].

It is clear that the concept of learning has penetrated schools' walls, generating a number of concepts as e-learning, blended learning and mobile learning. Teachers and students are no longer located physically on a school campus, but living and studying in a virtual world, more real than ever. This new world allows for creative and collaborative participation in the process of learning. In this context, several authors have defined and introduced new terms such as Learning 2.0 , Web-based learning or Internet-based instruction to relate to a learning-teaching process that takes places with the use of ICT and Web 2.0 tools [14], [11].

The rapid growth of online education has promoted the need to rethink delivery structures and pedagogical practices that were once appropriate [4]. These technologies allow educators to collaborate and interact with students in a new learning environment. In Portugal, almost all higher education