

CALL FOR CHAPTERS

Submission Deadline: September 15, 2012

Technology Platform Innovations and Forthcoming Trends in Ubiquitous Learning

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Introduction

Distance Education (DE) is a growing mode of teaching and learning. The developments of computer networks, the improvement of the processing capability of personal computers and the advance of multimedia technologies, among other factors, contributed to the creation of this scenario. However, despite consisting of an effective teaching method, distance education still presents some challenges, among which we highlight the need for a pedagogical and computerized support appropriate to the characteristics of each person. Through this support is possible to automate increasingly the process of learning, making the teacher a facilitator and cease to be the main source of information that drives the learning process. One of the ways to provide DE is through the use of mobile devices. This modality is known as Mobile Learning. This way of providing education allows that students and teachers can take advantage of the resources offered by mobile technologies. One of these benefits is the possibility to access, view, and provide content irrespective of time and location. However, even with the benefits offered by mobile learning, we should consider the particular characteristics of each student, including the resources of which he holds. This is necessary not only to provide content that meets the needs of students, but also to provide content in an appropriate way to the constraints of mobile devices since they have distinct and limited resources. In this context, the concept of context-aware environments arises. This kind of environment fits to the user, considering information provided by the selfsame user, beyond those captured dynamically from his interaction with the learning environment. This learning modality based on context-aware and mobile environments is called Ubiquitous Learning.

The increasing use and diffusion of Web technologies and the ubiquity of educational tools have provided breakthroughs in learning environments. It is known that students should no longer be treated in a homogeneous way. An ubiquitous learning (or u-learning) environment provides students with a teaching method that would be not possible to be performed in a conventional web-based course. An u-learning environment may be understood as a context-aware mobile learning environment, providing most adaptive contents for learners. Context awareness describes a paradigm in which the context of a user is considered to define his profile. There is no consensus about the definition of "context". This one is specific to the application and the desired intention, requiring the identification of functions and properties of the individuals' domains. This book will cover subjects related to u-learning. The u-learning, generally, refers to learning supported by technology, performed anytime and anywhere. So, u-learning occurs when learning does not have a fixed location, or when the students take advantage of mobile technologies. It is considered by some authors as an evolution of the concept of mobile learning (m-learning). In this sense, the idea of ubiquity in the learning process provides valuable contributions to thinking about invisible learning, which by nature is dependent of the student context. A major contribution of adoption of ICT in everyday life is extending the pre-established limits of what is traditionally known as learning spaces. In other words, technology is opening new possibilities for converting other spaces in learning spaces. These new opportunities represent a new educational paradigm, because they enable anybody to produce and disseminate information so that learning can occur at any time and space. In other words, learning occurs not only in the classroom, but also at home, at work, in the courtyard, in the library, in the museum, at the park, and in daily interactions with others. For example, through mobile devices, the learner is able to interact with the environment by capturing images, sounds, videos, and location information from the environment. That ability to capture information in different contexts motivates the students to create new learning situations through interactions with the environment.

The Overall Objective of the Book

The proposed book has an overall objective to clarify the new technologies, applications, and researches in the u-learning area. It intends to help students, teachers, and researchers to obtain a larger understanding of both the potential of the related new technologies and the trends that are being followed to make u-learning more effective. The successful implementation of u-learning in face of the opportunities provided by new technologies is not a trivial task. The accumulated experience and know-how of the researchers in this area, which have invested time and effort in study in the attempt of solving problems in this area, are, therefore, important success factors. This book will share this know-how with other researchers, students, and interested professionals in this area. We will intend to show the current trends, practices, and challenges faced by designers of u-learning environments. These can include theoretical assumptions and empirical researches to practical implementations and case studies. In the end, the readers should have a clear notion about the current stage and the future tendencies in this area.

The Target Audience

Computer-supported learning is a genuinely interdisciplinary area that strives for creating a better comprehension of the requirements of the learning process that are mediated by a diverse set of computer technologies. Therefore, this book is addressed to a wide audience, including researchers and students, and educators and industrial trainers interested in various disciplines, such as education, cognition, social and educational psychology, didacticism and, mainly, computer science applied to education.

Recommended topics include but are not limited to the following:

Virtual and Augmented Reality Technologies Applied to U-Learning
Mobile and Context-Aware Learning
Use of Interactive Digital TV for U-Learning
Context-Aware Learning Objects for U-Learning
Use of Intelligent and Pedagogical Agents for Improving Collaboration in U-Learning
Game-Based Learning versus U-Learning
Modeling technologies for U-Learning systems
Advances in design of U-Learning systems
Main issues and trends in U-Learning
Problems and challenges in U-Learning environments
New technologies for surpassing the challenges of U-Learning
Developing Technologies for U-Learning
Validation and testing technologies for U-Learning systems
Mobile Learning versus U-Learning
New approaches for developing U-Learning systems

SUBMISSION PROCEDURE

Researchers and practitioners are invited to submit *on or before September 15, 2012*, a 2-5 page manuscript proposal clearly explaining the mission and concerns of the proposed chapter. Authors of accepted proposals will be notified by **September 30, 2012** about the status of their proposals and sent chapter organizational guidelines. Full chapters are expected to be submitted by **December 30, 2012**. The book is scheduled to be published by Idea Group, Inc., www.idea-group.com, publisher of the Idea Group Publishing, Information Science Publishing, IIR Press, CyberTech Publishing and Idea Group Reference imprints, in **2013**.

Inquiries and Submissions can be forwarded electronically (Word document) to:

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