

University of Medicine and Pharmacy Tîrgu Mureş

PhD Thesis – Abstract

“Innovative approaches in the development of e-Learning platforms for medical field”

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In the last decade of the twentieth century and the first decade of the 21th century, e-Learning systems became a phenomenon. These systems consist of several sub-elements interconnected to form a large integrated system that allows effective learning.

Due to the rapid development of e-Learning systems in higher education institutions there was observed an improvement in the quality of teaching using these systems.

One of the disadvantages of e-Learning systems is that in terms of technology, they are becoming more sophisticated and complicated regarding the training and the management of teaching materials.

Currently on the market there are no e-Learning systems that integrate asynchronous and synchronous e-Learning and assessment of knowledge.

In this context, this paper aims to create an e-Learning platform which is meant to help both teachers and students, with easy access, attractive interface, easy to use and multiple features designed to facilitate teaching.

This paper has two parts, a theoretical and a personal contributions part. The theoretical part of this thesis is divided into 3 chapters, and the personal contributions part in 5 chapters.

The first chapter of the theoretical part entitled “E-Learning - general” presented the advantages of using IT in teaching / learning, characterization of effective e-Learning resources, and a general presentation of computerized-supported collaborative learning systems. In the second chapter entitled “Computerized assessment systems” is presented the

current state of knowledge regarding the computerized assessment evaluation and ways to improve those systems by using adaptive ones. Chapter three entitled “Computerized tests item analysis” presents methods to increase the quality of tests used items.

In the personal contributions part there is described the proposed e-Learning platform. In the fifth chapter entitled “RoELME – e-Learning asynchronous” there is described the asynchronous module of the e-Learning platform which is used for courses and teaching materials management. Using this module, teachers can upload any file types (doc, ppt, pdf) and also files containing pictures and videos. The asynchronous module of the e-Learning platform provides easy access to both students and teachers to a learning environment well organized and with multi-functionality.

Chapter six is entitled “RoELME –advanced assessment module”. In this chapter there are described the two sub-modules of the advanced assessment module: the administration sub-module and the evaluation sub-module.

Chapter seven is entitled “RoELME – e-Learning synchronous” and presents the synchronous module of the e-Learning platform which is used for virtual classroom management. This module provides all the classic features of some virtual classroom/remote teaching and monitoring environment solutions and with a number of new / innovative features such as: it can be used as a local solution (virtual classroom) and also as a web-conference system “remote” solution, the screen recording module allows real time recording of any content displayed on teacher’s computer screen and the possibility to use an annotation advanced module in real time of the computer screen.

The last chapter, “Final conclusions” presents the main conclusions of the paper, underlining the importance of the RoELME, the e-Learning platform developed.

Keywords: e-Learning, asynchronous, advanced assessment, synchronous