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Special Issue E-Learning Systems and Applications
Guest Editors | J. El Bouhdidi, D. Groux-Leclet, M. Ghailani

PAPERS

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Preface

Today, learning utilizing electronic technologies to access educational curriculum offered a multiple solutions to learners namely: Adaptive Learning System, MOOC, game-based learning, learning recommender System, etc. These solutions are there to address the problems of face-to-face teaching and to respond effectively to learners' needs in terms of learning pace and preferences. This special issue is focused on different solutions of e-Learning Systems including the new technologies and pedagogical approaches to thoroughly meet the needs of learners. This special issue has received the selected papers accepted in CIST'18 conference and covering all topics of e-learning systems and Applications. After a careful and highly competitive review process, four papers have been finally selected.

In the first paper entitled '*The Impact of Using Educational Software on Student Fraction Achievements Case Study: Economic Course'*, Zahda et al. have conducted an educational experiments using ICT in the learning process. They have used the Wageez Math software to facilitate the teaching of fractions in Economics course at Palestine Polytechnic University. An experiment was carried out to investigate how the software affects fraction learning. The results obtained were encouraging

In the second paper entitled '*Building an e-learning recommender system using Association Rules techniques and R environment'*, Dahdouh et al. have developed a courses recommender system dedicated to online learning environment. It aims to discover relationships between student's courses activities using association rules method in order to help the student to choose the more appropriate learning materials. The system was also based on the FP-growth algorithm which is considered as one of the most commonly used algorithms for extracting the frequent itemsets, without candidate generation, from historical learners' enrollments during the learning process.

In the third paper entitled '*Towards the development of a pedagogical approach using MOOCs in traditional classrooms to support teaching in higher education in MOROCCO'*, Lakrami et al. present the results of a long study on the integration of MOOCs in university classrooms and their influence on academic performance. An educational system CloudSpoc was implemented to study the effectiveness of two methods of integrating MOOC in higher education system through two practical experiments. The results of the two experiments were very satisfying; a clear improvement in learners' levels was noted. The solution can be also useful for supervisors to facility the classes' management.

Finally the fourth paper entitled '*Modeling and design of an architecture for Adaptive Intelligent Educational Distributed CBR system'*, Abroun et al. have proposed an adaptive intelligent skills-oriented and distributed e-learning system, adopting a dynamic cycle of Case-Based Reasoning to generate a suitable pedagogical training and to manage the dynamic behavior of the learners, this cycle is integrated in a Multi-Agent System, to reduce its complexity and to ensure its extensibility. The system proposes to the learner customized learning paths.

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