

Special Issue on Learning Systems
and Innovation in Education

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Preface

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 papers covering various topics of e-learning systems and Applications. After a careful and highly competitive review process, six papers have been finally retained.

In the first paper entitled '*Determinants of Intention to use Google Lens*', Vinh The Nguyen have conducted a study analyzing the impacts of factors affecting the intention to use Google Lens. The Extended Unified Theory of Technology Acceptance and Use Model has been adapted to measure user behavior in terms of performance expectation, expected effort, social influence, enabling conditions, hedonic motivation, utilitarian value and perceived risk. Using data of 395 participants, the study results showed that performance expectancy had statistically significant and positive impact on behavioral intention, utilitarian value had a statistically significant and positive influence on behavioral intention, social influence also had statistically significant and positive impact on behavioral intention, perceived risk had statistically significant and negative effect on behavioral intention.

In the second paper entitled '*What is Not in line with Moroccan Online Education? Attitudes and Future Prospects*', Sbaï et al. presented a study to investigate the attitudes of teachers and students towards distance education during the COVID-19 pandemic at Moroccan high schools. It also tries to investigate its weaknesses in order to come up with recommendations that can improve the online teaching / learning experience. The results of two questionnaires (student and teacher questionnaire) show that the vast majority of teachers believe that they do not have the ICT skills necessary to run online courses that could be as successful as their on-site counterparts. Most students, on the other hand, have expressed their dissatisfaction with distance education and believe that this change has had a negative effect on their overall academic success.

In the third paper entitled '*Learning Via Mooc: Feedback From The Moroccan Experience*', HANTEM 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 facilitate the classes' management.

In the fourth paper entitled '*Dynamic assessment approach for science subjects, modeling the performance of the learning operation*', DIYER et al. have presented a dynamic assessment approach for a science subject session using an intelligent system that helps the teacher make the right decision instantly. The authors present an approach for evaluating scientific subjects based on actions to be carried out. The intelligent system, in relation to the performance of the students, proposes these actions to animate a session. Reports generated allows the teacher to remedy difficult situations and adjust his teaching method.

In the fifth paper entitled '*Collaborative Tutoring Architecture: A Generic Case Based Reasoning Multi-Agent*', Ennaji et al. propose to equip the Learning Management System with a generic intelligent tutoring module. This module is based on the combination of Case Based Reasoning (CBR) and Multi-Agent Systems (MAS). The main advantage of this generic module is to offer the learner individualized follow-up and to prevent dropping out of school. Personalized monitoring is carried out by combining machine tutoring and human tutoring. This combination of CBR and MAS allows the adaptation of the learning process according to the profile of the student.

Finally the sixth paper entitled '*Teachers' Perception of Distance Learning during the Covid-19 Pandemic: The Moroccan High School as a Case Study*', The study presented by Mouaziz et al. investigated the issue of distance learning during Covid-19 pandemic. It primarily emphasized Moroccan teachers' perception and beliefs towards this form of teaching. this study aimed to highlight teachers' experiences with digital tools and the extent to which they maintained a positive interaction with their students. Based on the findings obtained out of the questionnaire and interview, it is obvious that distance learning is still in its initial steps, as it is faced with numerous technical and pedagogical obstacles. This means that teachers are in a dire need to be trained and empowered technologically in order to help their students become independent and introduce the best for them

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