

Editorial for EJEL Volume 17 Issue 2

The eight papers published in this issue reflect on research into the current trends in E-Learning, namely the use of blended learning, the issue of quality in e-Learning, student as well as community engagement, interaction with fellow learners and with online content, gamification, serious audio-only games, teacher support and motivation and engagement factors for MOOCs Learners.

The paper by Mystakidis, Berki and Valtanen *Patras Blended Strategy Model for Deep and Meaningful Learning in Quality Life-Long Distance Education* is based on the experiences of distance lifelong learning programmes in the University of Patras' Educational Center for Life-Long Learning. The authors discuss how the principles and attributes of deep and meaningful learning can be combined with project management in practice and be incorporated in an e-Learning quality strategy. The results of the evaluation indicate that the e-Learning quality strategy led to e-Learning programmes that used active learning methods to achieve high learner satisfaction towards deep and meaningful learning.

Purkayastha et al in their paper *Critical Components of Formative Assessment in Process-Oriented Guided Inquiry Learning for Online Labs* developed a student team learning monitor (STLM module) in an electronic health record system to measure student engagement and implement the social constructivist approach of Process Oriented Guided Inquiry Learning (POGIL). Using iterative Plan-Do-Study-Act cycles in two undergraduate courses over a period of two years, the authors identified critical components that are required for online implementation of POGIL.

López Carrillo et al reported some interesting research into using gamification in a teaching innovation project at the University of Alcalá, where they have come up with a new approach to experimental science practices. The authors developed a series of new laboratory practices under the umbrella of gamification methodology for pre-service teachers. The methodology was applied twice in laboratory practice in two consecutive academic years: 2017-2018 (5 groups, 150 students) and 2018-2019 (6 groups, 183 students) at the University of Alcalá. The authors conclude that gamification influences motivation through the elements proposed to carry out practice.

Zalavra and Papanikolaou explore the potential of the 'Learning Designer' as a Teacher Support Tool. This study was carried out with pre-service teachers who first developed a course by designing it using a Learning Design (LD) tool and then implemented it as a course in Moodle. The findings suggest that the graphical representation of learning design provided by the Learning Design tool supports designers to structure learning activities. The conclusions reveal the potential of the Learning Designer to support teachers as designers and are of value both to researchers involved with developing LD tools, as well as to practitioners interested in harnessing an LD tool to promote LD practices.

Lee Yen Chaw and Chun Meng Tang in their paper *Driving High Inclination to Complete Massive Open Online Courses (MOOCs): Motivation and Engagement Factors for Learners* adopted the Motivation and Engagement Scale (MES) by Martin (2007, 2009) to collect responses from university students to explore the relationship between motivation and engagement and how positive or negative engagement swayed learners' inclination to complete a MOOC if they were to enrol in one. Their findings show that there was a statistically significant positive relationship between positive motivation and positive engagement, between negative motivation and negative engagement, and between positive engagement and the inclination to complete a MOOC.

In the paper *3-M Model for Uncovering the Impact of Multi-level Identity Issues on Learners' Social Interactive Engagement Online* Charbonneau-Gowdy and Chavez unravel the complex social psychological aspects that contribute to learners' willingness, or unwillingness, to engage in interacting with others and with content online – an essential determinant of successful learning and quality Blended Learning (BL) programmes, using findings from a recent qualitative longitudinal study of a BL programme in a large private-for-profit university in Chile. Abundant evidence suggests a model for BL in higher education institutions which could lead to decisive, strategic and coordinated action at each level and measurable improvement in student online learning engagement and outcomes.

Rovithis et al look at bridging audio and augmented reality towards a new generation of serious audio-only Games, and suggest that audio games can be designed and implemented for the delivery of targeted curricula through an engaging learning experience, whereas fusing audio game mechanics into new interactive technologies, such as augmented reality environments, will further enhance the students' immersiveness in the learning process. By establishing the theoretical framework for the design of educational audio games, as well as educational augmented reality audio games, the authors review existing approaches and argue that the inherent features of both audio interaction and augmented reality systems agree with the official educational goals formulated by the Greek Ministry of Education and the International Baccalaureate Institution.

Pappa and Homer in their paper *A use case of the application of advanced gaming & immersion technologies for professional training: the GAMEPHARM training environment for physiotherapists* discuss the application of advanced gaming and immersion technologies for the continuous training of physiotherapists and argue that the inherent complexity of physical therapy training could be served effectively by immersive learning innovations and professionals could benefit greatly. The authors apply the Design Science Research Methodology (DSRM) to implement a suitable training solution for the promotion of authentic, comprehensive learning. The paper consolidates the findings to produce the system requirements and presents the design of a prototype training environment for physiotherapists based on advanced gaming technologies.

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Guest Editor



Antonios Andreatos is Professor of Computer Engineering at the Hellenic AirForce Academy. His research interests include Engineering Education, Active Learning methods, Learning in Virtual Communities, FOSS, OER, MOOCs in Education, Security Education, Cryptography, Steganography, Network Security and Educational technology, IoT, etc. He is involved in the scientific committees of conferences and reviewer in several journals.