

# Learner-centered mobile MOOCs

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**Short Abstract:** This paper proposes mMOOC-LPM, a learner-centered mobile Massive Open Online Course (MOOC) model that is based on the learner's perceptions about the characteristics of both the MOOC itself and its platform. This model describes the factors of the MOOC itself and the MOOC's platform that affect the acceptance, and use of the MOOC by the mobile learners.

**Keywords:** Easy-of-Use, Effectiveness, Efficiency, Interoperability, Personalization, Satisfaction, Security, Technology Acceptance Model, Ubiquity, Usefulness, Learner Control, Learner Perceptions.

**Extended Abstract:** Massive Open Online Courses (MOOCs) have the potential to transform not only education but also society. They will bring open quality education to everyone at anyplace anytime. Educational Institutes have developed MOOCs to allow anyone to be educated. Although there is an enthusiastic acceptance of these educational tools, the learners' retention is low. This fact is due to not adequately taking into consideration the learners' needs, habits, perceptions, goals, and behaviors into the design of the MOOCs. In order this new revolution happens, Learners should accept, use and succeed in the offered MOOCs. So, it is extremely important to understand what Learners need, want, and expect from MOOCs. Also, it is urgent to clarify what prevents them of completing a MOOC. In this paper, we investigate factors that affect the acceptance and continuous use of MOOCs by learners.

A Mobile Massive Open Online Course (mMOOC) is an online course openly accessed by a very large number of mobile participants at their convenience anywhere anytime. A mMOOC offers educational content, mobile activities, interaction and collaboration to many mobile

learners as they move from one place to another. The use of mobile networks, cloud computing and learning analytics enables the development of smart learning environments that will support various innovative mobile pervasive and ubiquitous educational services (Papamitsiou and Economides, 2016). The educational activities would be location-dependent and/or time-dependent. For example, mobile learners may sense the weather at their current locations and combine their meteorological measures in order to form a current weather map. Also, mobile learners may measure and compare location-specific and time-specific pollution during an environmental educational activity. Similarly, there are many opportunities for mobile education on the field such as a farm, vineyard, forest, lake, river, zoo, archaeological or historical site, village or city, hospital, factory, craft or art studio (Vasiliou and Economides, 2007). A mMOOC offers the following facilities: Educational Methodology and Syllabus, Educational Content, Mobile Applications (to download on mobiles), Mobile Activities, Interaction, Assessment, and Certification. All these facilities are important for effective learning.

A mobile learner should be able to access the educational content, perform a mobile activity possibly cooperating and/or collaborating with other learners via multiple mobile devices and networks without interruption as s/he moves from one place to another (Economides, 2009).

In this paper, we propose a model that considers the major factors that affect the acceptance of mMOOCs by the Learners. It includes MOOC's characteristics (such as content, presentation, activities), as well as MOOC platform's characteristics (such as usability, functionalities, performance, reliability, security, interoperability) (Perifanou and Economides, 2014).

## References

Economides, A. A. (2009). Adaptive context-aware pervasive and ubiquitous learning. *International Journal of Technology Enhanced Learning*, Vol. 1, No 3, pp. 169-192.

Papamitsiou, Z., and Economides, A. A. (2016). Learning analytics for Smart Learning Environments: A meta-analysis of empirical research results from 2009 to 2015. In J.M. Spector et al. (eds.), *Learning, Design, and Technology*, pp. 1-23.

Perifanou, M. and Economides, A. A. (2014). MOOCs for foreign language learning: An effort to explore and evaluate the first practices. In: *Proceedings of the 8th International Technology, Education and Development Conference (INTED)*, 10th - 12th March, Valencia, Spain.

Vasiliou, A. and Economides, A. A. (2007). Mobile collaborative learning using multicast MANETs. *International Journal of Mobile Communications (IJMC)*, Vol. 5, No. 4, pp. 423-444.