

## **Massive Open Online Courses as data sources for making decisions in learning processes**

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MOOC (Massive Open Online Course) (Kay, Reimann, Diebold, & Kummerfeld, 2013; Liyanagunawardena, Adams, & Williams, 2013; Martínez Abad, Rodríguez Conde, & García-Peñalvo, 2014) paradigm has opened new possibilities in eLearning (García-Peñalvo, 2008; García-Peñalvo & Seoane-Pardo, 2015) since Stephen Downes and George Siemens created the first MOOC back in 2008, breaking some traditional limits and establishing new ways of interaction with knowledge and people involved in learning processes.

MOOC courses offer new opportunities for learning, features like massiveness of participants, peer-to-peer interactions, free-of-charge, openness or scalability (Martínez Núñez, Borrás Gené, & Fidalgo Blanco, 2014). There are two main types of courses MOOC, the xMOOC with a behavioral approach (occurs in traditional online courses) and cMOOC with a connectivism and networking based approach (Fidalgo Blanco, García-Peñalvo, & Sein-Echaluce Lacleta, 2013). Taking advantage of features of both types of MOOC can apply the cooperative model (Fidalgo Blanco, Sein-Echaluce Lacleta, & García-Peñalvo, 2015).

The combination of MOOCs platforms and other systems used nowadays for enhance eLearning (for example social networks) allows enhancing the learning process, building up ubiquitous learning ecosystems (Laanpere, 2012; Llorens, Molina, Compañ, & Satorre, 2014) where the knowledge is available in a multi-context way (García-Peñalvo, 2015) for the students (García-Holgado, García-Peñalvo, Hernández-García, & Llorens-Largo, 2015; García-Peñalvo, Hernández-García, et al., 2015), which extend the traditional concept of learning platform or Learning Management System (LMS) (Casquero, Portillo, Ovelar, Benito, & Romo, 2010; Conde et al., 2014; García-Peñalvo, Conde, Alier, & Casany, 2011).

The analysis of interaction among users and systems provide great insights about how users use, understand and take advantage of tools and platforms they utilize to perform any kind of task. The fact of analyze the interaction and try to extract valuable knowledge from it, has real application in many areas of knowledge and business, as in digital marketing or in education (Ferguson, 2012; Long & Siemens, 2011), etc.

Furthermore, MOOCs leverage other platforms (even those that are not purely intended to be applied in education) like the social networks and other online tools, applying by this way multi-platform and multi-context approaches that can improve and upgrade the learning experience (García-Peñalvo, Cruz-Benito, Borrás-Gené, & Fidalgo Blanco, 2015).

Thus, these insights retrieved from analyzing the interaction of the students with tools and knowledge can be used to improve MOOC platforms and fix certain flaws of this kind of systems like high dropout rates, etc., but it is especially interesting in the decision-making processes related to learning improvement (Conde-González & Hernández-García, 2013, 2015; Cruz-Benito, Therón, & García-Peñalvo, 2014; Cruz-Benito, Therón, García-Peñalvo, & Pizarro Lucas, 2015).

Journal of Information Technology Research (JITR) is interested in receiving contributions regarding the data gathering from MOOC platforms, its analysis and further decision-making actions.

Current JITR issue comprises four papers. The first one, "A Smart City System Architecture based on City-level Data Exchange Platform" (Chen, Su, Guo, Chen, & Chang, 2015), presents an implementation framework of smart city system based on city-level data exchange platform.

The paper by Briz-Ponce and Juanes-Méndez (2015) entitled "Mobile Devices and Apps, Characteristics and Current Potential on Learning" describes the main characteristics and the use of mobile technologies in this field. The mobile technology's scope covers tablets and Smartphones. To achieve this goal, a survey was conducted in the University of Salamanca and the participants were undergraduate students of Medical Schools and medical professionals. Results reveal that the usage of mobile devices and apps are spread out among them.

The paper entitled "Influence of Personality on Programming Styles: An Empirical Study" by Karimi et al. (2015) presents the results of a survey study on 68 programmers in the University of Stuttgart that measures programming experience, attitude towards programming, five personality factors, and programming styles. Authors found that programming experience is the most influential factor in programming styles but personality is more evident in different programming styles. They conclude that programming styles are a matter of personal preferences and help reveal the influence of personality in programming.

In the last paper Bani-Mohammad et al. (2015) suggest a new non-contiguous processor allocation strategy, referred to as Compacting Non-Contiguous Processor Allocation Strategy for the 2D mesh multicomputers. In their proposal a job is compacted into free locations. The selection of the free locations has for goal leaving large free sub-meshes in the system.

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