

# Chapter 41

## MOOCs in Initial Teacher Training: Perspectives and Learning–Teaching Needs

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### ABSTRACT

*The main aim of this research is to understand future teachers' attitudes, knowledge and needs about Massive Open Online Courses (MOOCs). These courses may be a supplementary resource in higher education that can fill fields of knowledge which the curriculum could not encompass. In addition, this type of course can contribute significantly to both initial and continuing teacher training. For this reason, understanding students' perspectives on MOOCs is essential. For this reason a questionnaire was administered to students of the Bachelor in Teaching of Childhood Education, Bachelor in Teaching of Primary Education and Master in Training Teachers of Secondary Education (n=145). The results indicate that a large part of the sample confirm not that they do not know anything about MOOCs. The chapter concludes that universities need to train future teachers in MOOC culture. Keeping the focus on the book section "RIA and education practice of MOOCs", this chapter provides a valuable research insight into the topic of "educational training design."*

### INTRODUCTION

Massive Open Online Courses (MOOCs) are a new teaching and learning model in higher education. According to Daradoumis, Bassi, Xhafa, and Caballé (2013), the first open online course

for a large number of participants was launched in 2008, but the concept became widespread in 2012, when several large universities started their own MOOCs.

The next section provides a background to the chapter by reviewing studies that state four ideas:

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1. MOOCs complement the curriculum of university degrees (Bruff, Fisher, McEwen, & Smith, 2013; Capdevila & Aranzadi, 2014; Siemens, 2013).
2. There is little research about MOOCs in higher education (Liyanagunawardena, Adams, & Williams, 2013).
3. Initial and continuing teacher training needs great improvement (González, Castro, & Lizasoain, 2009; Tejada, 2013; Valdés, Angulo, Urías, García & Mortis, 2011).
4. Understanding students' characteristics and perspectives is essential for course design, development and assessment (Bruff et al., 2013; Cross, 2013; Daradoumis et al., 2013; Grünwald, Meinel, Totschnig, & Willems, 2013; Guàrdia, Marina, & Sangrá, 2013; Mackness, Mak, & Williams, 2010; Robledo et al., 2010).

This sets the framework for the study presented here which used an internet based survey with an online questionnaire of 145 students of degrees in teaching students. The principal aim of this research is to understand future teachers' attitudes, knowledge and needs about MOOCs.

## **BACKGROUND**

MOOCs may be a supplementary resource in higher education that can fill fields of knowledge which the curriculum could not encompass. Both initial and continuous teacher training are deficient so these courses could play an essential role (Siemens, 2013) or, at least, generate a discussion about opportunities and threats (Capdevila & Aranzadi, 2014). Teacher training is of a low quality in some countries such as Spain (where this research is carried out) (González et al., 2009), particularly training in information and communication technologies (Tejada, 2013; Valdés et al., 2011). It needs to improve, and MOOCs can support it. However, the MOOC culture is not

rooted in future and present teachers. These courses are a relative new element which are scarcely researched (Liyanagunawardena et al., 2013). Knowing what future teachers' perspectives are about MOOCs is very important for their training and to identify what their learning-teaching needs. Important research about students' perceptions about MOOCs is presented by Bruff et al. (2013), but they do not research teachers' perspectives. This study was carried out with 10 students in a focus group and an interview (14 Likert-scale and three open-ended questions). According to students' perceptions, the most important results indicated that:

- The major advantage of MOOCs was its greater flexibility, customization and accessibility. Students saw as encouraging structured self-paced learning.
- MOOCs are very useful for training.
- The online discussion boards are seen as useless, and the students prefer face-to-face discussion.

Similar results are found by Mackness et al. (2010). From an interview with 22 students the most important results are:

- Approximately a half of the sample (59 percent) said that autonomy is an advantage of MOOCs. However, other students, especially those new to MOOC culture, showed that this is also a problem because they needed continuous support.
- Openness is understood to be a positive aspect due to the characteristics of MOOCs (namely massive and open), but it is sometime a handicap (above all, language differences).
- There are some barriers in connectivism and interactivity, such as (1) a knowledge gap in technology and subject/topic, (2) quality of personal connections, (3) difficulties of connection and language.

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