

# Chapter 75

## Teacher, Students, and MOOCs: Innovating and Researching Teacher Training

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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 are a supplementary resource in Higher Education that can fill fields of knowledge in which the curriculum could not encompass. In addition, these types of courses can contribute significantly to teachers, both in initial and in-service, training. For this reason, the students' perspectives towards MOOCs are essential in these terms. In this way, fundamentally a questionnaire was administered to the students in the Degree in Teaching of Childhood Education, Degree in Teaching of Primary Education, and Masters Degree in Teacher Training of Secondary Education (n=145). The results indicated that a large part of the sample confirmed that they did not know anything about MOOCs. Therefore, Universities need to train competent future teachers in MOOCs culture. This chapter provides insights into the topic of advancing next generation elementary teacher education through digital tools and applications.*

### INTRODUCTION

Technology is a social reality that changes cultures and, therefore, all levels of education. Massive open online courses (MOOCs) are an example of this idea, representing a new teaching and learning model in higher education. Gómez, Monge, and García (2016a) say that the first course similar to MOOCs was born in 1922. At that time, New York University began offering courses by radio with a massive and open character. The model was soon replicated by other universities and institutions. The onset of MOOCs was strongly related to open resources and codes movement, allowing information exchange,

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recognizing its original authorship, and promoting collaboration between users. This movement gave rise to free content licenses (for example, Creative Commons) and open content publishing (for example, Open Course Ware project), an online publishing initiative created to provide free access to university teaching materials published under Creative Common licenses. In addition, it introduced Khan Academy, a non-profit organization offering a collection of educational videos with tutorials and lessons on mathematical organization. One of the differences between these types of initiatives is that they not only leave materials accessible, but also the entire training action.

It can be considered that the first MOOC was launched in 2008 by Manitoba University under the acronym CCK08. The small course gave support to 24 students via an open access network. The network admitted 2,200 registered participants, of whom about 150 were actively interacting at different times. This course, which provided both theoretical and practical levels of connectivism foundations, was unique and pioneering due to its high number of attracted users, as well as the learning experience it provided.

The characteristics of these courses include (Castaño & Cabero, 2013):

1. Similarities with an onsite class;
2. A start date and deadline;
3. Assessment mechanisms;
4. Virtuality;
5. No charges;
6. Openness;
7. Massification and no admission criteria; and
8. Massive and interactive participation.

In the same case, Milheim (2013) shows other principal features, including:

1. Openness;
2. Massive registration and educational dropout;
3. Limited interaction between students during the courses;
4. Prestigious and expert universities as the most representative institutions that design and promote MOOCs; and
5. Low cost for students and universities.

Online, openness, and massification are the most important and consensual characteristics of MOOCs, regardless of authors, period of time, or research line.

The relative process of MOOCs is usually described in five phases:

1. Registration at platform and courses
2. Presentation/tutorial about the course
3. Learning modules (pills, discussion forums, assessment, tests, blind peer review, badges, and karma)
4. Final assessment
5. Certification

Silva and Salgado (2014) affirm that other particularities of MOOCs refer to benefits and risks during teacher education (Table 1). Meanwhile, Milheim (2013) shows some disadvantages:

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