Understanding MOOC Learners:
Insights from Participation in Coursera MOOC

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ABSTRACT

Massive Open Online Courses (MOOC) are the latest online teaching and learning medium through website and are seen as a key factor in future lesson delivery. One well-established and popular MOOC is Coursera which is provided by Stanford University. Online participation and interactions are complex phenomena and the answers to the questions in regard to Courserians' participation gave considerable insights into knowledge construction in discussion forums. The successful construction of knowledge requires active participation. This article is aimed to observe a Coursera community in its natural setting and to investigate the participants' experiences in Coursera discussion forum. The data was derived from over 60 online interview forums with Coursera learners. Field note data was extracted from 160 days of interaction with the participants. Analysis of the qualitative data revealed some insights about learners' feelings, challenges, ideas and recommendations.

KEYWORDS

Coursera, Knowledge Construction, MOOC, Netnography, Participation

1. INTRODUCTION

Over the last few decades, the emergence of information and communication technologies (ICTs) and their wide application has affected and sometimes transformed educational systems (Chen & Jones, 2007). One of the current technologies in distance education which has emerged due to this transformation is the delivery of courses in the form of Massive Open Online Courses (MOOCs). The large number of classmates in MOOCs needs a medium to enable them to interact with each other and with lecturers. This need is fulfilled by means of discussion forums (Dringus & Ellis, 2010). Discussion forums are essential components of an effective online course and provide the main part of asynchronous communication (Mak, Williams, & Mackness, 2010). Asynchronous discussion forums are a common feature of online courses which enable learners and lecturers to communicate with each other regardless of time and distance barriers (Nandi, Hamilton, & Harland, 2012). In this regard, the discussion forum in MOOCs is considered as a communication and learning tool which facilitates learners' interaction and engagement in its environment (Mak et al., 2010). Through this interaction, members can share and acquire experience and/or knowledge (Harasim, 1993). In other

words, knowledge construction can take place in a community of learners and instructors who have social interactions and share their experience and knowledge (Su, Yang, Hwang, & Zhang, 2010). This process is called "collaborative learning". Discussion forums in MOOCs are a ground for interaction and hypothetically a platform for knowledge construction via collaborative learning.

On the basis of our review on MOOCs, one of the MOOCs issues relates to be a community for knowledge construction purposes (Saadatdoost, Sim, Jafarkarimi, & Mei Hee, 2015). Today, much knowledge sharing and knowledge construction take place in online environments (Cress, Kimmerle, & Hesse, 2009; De Wever, Van Keer, Schellens, & Valcke, 2010; Fang & Chiu, 2010; Fields & Kafai, 2009; Held, Kimmerle, & Cress, 2012). Knowledge sharing is conducted in online forums while knowledge construction happens in a community (Gruender, 1996).

Creating a learning environment in which knowledge is being constructed is the intention of any educational system (Garrison, 2006). Knowledge construction is identified as a goal of collaborative learning in most studies (Bruffee, 1999; Dede, 1990; Garrison, 2006; Harasim, 1995; Hargreaves, 2007; Koschmann, 1996; Reis & Karadag, 2009; Su et al., 2010). Garrison (2006) states that "the goal of the collaboration is to create a community of inquiry where students are fully engaged in collaboratively constructing meaningful and worthwhile knowledge". However, in MOOCs, whether or not a community is built is under doubt and question. For instance, Gaebel (2013) claims that a learning community cannot be built by the Coursera model. Coursera only creates a crowd that in most cases lacks initiative, loyalty and interest to go beyond a discontinuous and informal connection of a learning process (Gaebel, 2013). One of the causes of this failure is that much of the conversation in these MOOCs happens inside the system (Caulfield, 2013) and a continuous and informal connection among the participants is missing. To overcome this issue, and expand the conversation out of the system, Twitter and other social media channels are used by some MOOCs (Caulfield, 2013). Hypothetically, the use of these tools could create more relationships and connections in social networks which will last even after the end of the course. However, it is not clear whether or not these channels are successful in building a community in these MOOCs and consequently lead to knowledge construction. Based on our main research question: "How can knowledge construction occur in MOOCs?", the specific purpose of this paper was the following: To understand Learners' participation in Coursera MOOC. The contribution of this paper to our whole study is to discuss leaners' participation in MOOCs and investigate the effect in knowledge construction. This paper is structured in some sections. Section "Theoretical Framework" discusses about constructivism, Section "Method" focuses on data collection, data analysis, coding and, recoding, Section "Findings from elicited data" provides a discussion of the learners' participation experience in Coursera, Section "Findings from Filed note data" provides a discussion of researchers' observation. Finally, "Conclusion", "Implications" and "Future work" sections are presented.

2. THEORETICAL FRAMEWORK

The roots of constructivism lie in the work of Piaget (Piaget, Cook, & Norton, 1952; Piaget & Wells, 1972), Dewey (1966) and Vygotsky (Cole, John-Steiner, Scribner, & Souberman, 1978). Constructivism is a theory of learning which claims that knowledge is constructed by the learners rather than simply transferred or transmitted (Kafai & Resnick, 1996). Constructivism in education has two different categories: critical and social constructivism. Critical constructivism states that knowledge is created from the integration of internal conflicts. Furthermore, social constructivism claims that knowledge comes from the relationship between the knower and the known (Kanuka & Anderson, 2007). Vygotsky is most often associated with social constructivism (Kanuka & Anderson, 2007).

Social constructivism and collaborative learning consider learning as a social interaction (Hodgson, 2002). The primary focus of social constructivism is on learning through group collaboration and knowledge building (Shih & Swan, 2005). According to a definition provided by Montiel-Overall (2005), collaboration is a process in which two or more persons work together to

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