JOURNAL OF INTERACTIVE MEDIA IN EDUCATION

León Urrutia, M et al 2016 Professional Development Through MOOCs in Higher Education Institutions: Challenges and Opportunities for PhD Students Working as Mentors. *Journal of Interactive Media in Education,* 2016(1): 18, pp. 1–10, DOI: http://dx.doi.org/10.5334/jime.427

ARTICLE

Professional Development Through MOOCs in Higher Education Institutions: Challenges and Opportunities for PhD Students Working as Mentors

Manuel León Urrutia, Sarah Fielding and Su White

The advent of Massive Open Online Courses (MOOCs) has been altering the Higher Education landscape in recent years. This kind of courses are penetrating in an increasing number of universities, the majority of which do not seem to have intentions to stop offering them in the short term. Such courses are generating new educational scenarios to which universities have to adapt, which creates a set of challenges and opportunities, most of them related to the use of technology in education. This study aims to shed light on such challenges and opportunities when a university employs postgraduate students as MOOC mentors.

For this study, a set of focus group interviews were conducted in an English university to PhD students in various disciplines. In the interviews, participants share their experiences as mentors, especially regarding how they developed certain teaching and digital skills, and how they faced certain challenges related to their digital identity.

The results suggest that participating in MOOCs as mentors can help early career researchers to develop certain teaching, digital, and academic skills that could be beneficial for the institutions they work for, and for themselves. However, their online exposure sometimes raises certain implications for their public image, their working conditions, and their online professional identity.

Keywords: moocs; mentoring; professional development; capacity building; focus groups

Introduction

Massive Open Online Courses (MOOCs) are making a noticeable impact in Higher education Institutions (HEIs) at a global scale. Every year, new universities incorporate MOOCs in their educational catalogues, and the number of courses on offer has not stopped growing since the launch of the first MOOCs in 2008. Data collected by the team of the Class Central MOOC aggregator (https://www.class-central.com) shows that in 2016 the number of MOOCs identified has reached 4000. The same aggregator identifies more than 600 Universities as MOOC providers. Another figure to be highlighted is the number of learners enrolled in MOOCs: more than 35 million in 2015, twice as many as those in the previous year. There is also a tendency towards internationalisation and multilingualism, as the percentage of MOOCs in English has slightly decreased. Spain and France, whose largest platforms are MiridadX and FUN respectively, lead the ranking of non English speaking countries in terms of the number of MOOCs offered.

University of Southampton, GB

Corresponding author: Manuel León Urrutia (mleonurr@gmail.com)

MOOCs and HEIs institutional strategies

Several studies suggest that MOOCs have become an important strategic element in universities across Europe (Jansen & Schuwer, 2015), the US (Allen & Seaman, 2015), and Australia (O'Connor, 2014). The motivations for including MOOCs in the educational offer of HEIs are diverse. Davis et al. (2014) mention visibility of the institutional brand as one of the most important, together with the opportunities that these courses bring to educational innovation. Such innovation has to do with the adaptation that academics need to make in order to address very diverse learning communities with one feature in common: they all learn through the web. Although it has not been demonstrated that educational innovation is the main driver for including MOOCs in HEI strategies, it has been noted that the relationships between MOOCs and educational innovation is a dominant topic in the specialised press (León et al., 2015a). In fact, such innovation in teaching practices could go beyond, towards a change in the Higher Education culture as Kim suggests (2015, p. 1): "The most important innovations catalysed by MOOCs have very little to do with technology, or even pedagogy. Rather, they are innovations at the level of institutional organizational and cultural change." It would be therefore useful to determine how such change of culture is

enacted in the relevant stakeholders of HEIs, such as those with teaching duties.

Related work and scope identification

There is a large quantity and variety of literature related to MOOCs. Many topics around the MOOC phenomenon are addressed, although perspectives from instructors remain underexplored. Liyanagunawardena et al. (2013) identified this niche in their literature review:

> "...most research has investigated the learner perspective, with a significant minor focus on the institutional threats and opportunities. The lack of published research on MOOC facilitators' experience and practices leaves a significant gap in the literature." (p. 217).

There has been published literature addressing this gap later on, such as Ross et al.'s (2014) position paper that examines academic identities and educational dialogues around the production and delivery of MOOCs. The paper argues that the portrayal of teacher's roles in MOOC literature does not totally coincide with their actual experience, which creates certain assumptions and expectations about teaching online that are not always fulfilable. The claims made there are the product of experienced teachers' reflections about their own roles as online educators. An exploration of not-so-experienced reflections in that respect would be a useful complement to this discourse, and this is one of the purposes of the present study.

MOOC instructors' perspectives have also been explored from a socio-technical lens. White & White (2016) have initiated a cross-institutional set of case studies in which a self-perceived change of professional practices has been noticed in learning designers and lecturers as a result of their participation in the production of MOOCs, which often leads to a renegotiation of the meanings of their roles as educators.

Another study (Hew & Cheung, 2014) noted that teaching in MOOCs is an attractive activity because it rewards them by enhancing their visibility and reputation, and offering them the opportunity to experiment with new teaching approaches. There were also some challenges identified, such as the difficulties to engage with large and complex learning communities, as well as the workloads involved in respect of their monetary rewards. This study used secondary data, and again focused on the views of experienced teachers involved in the production of the courses. Later on, Evans and Myrick (2015) published a study on instructors' perceptions, and found that the main learning outcome of experienced teachers involved in MOOCs was related to teaching online as opposed to teaching face-to-face. The most frequently portrayed persona in such study was a professor with gravitas and broad experience who has embarked in the development of a MOOC in which they will be able to share their deep subject knowledge with a large learning community, and has realised that teaching online is more challenging than anticipated.

The above-mentioned studies address MOOCs from the instructors' perspectives, MOOC mentors are still under-represented in the literature, despite being in the front line of contact with the learning communities. Mentors are those who support the learning communities while the courses are being delivered. They can also be called facilitators (Ross et al, 2014), and some major platforms such as edX (Hazlett 2013) and Coursera (Mueller, 2014) refer to them as Teaching Assistants. Mentors in MOOCs usually perform hosting roles and offer technical, pedagogic, and house-keeping support (Leon et al. 2015a), and such roles are usually allocated to junior academics, PhD students, who will be named as Early Career Researchers (ECRs) from now on in the present study.

There are works in which the role of the mentors has been explored (Leon et al. 2015b), and their perspectives have been tangentially touched upon (Alario-Hoyos et al. 2013), but these do not survey their perceptions in great depth. The present study aims to understand how less experienced teachers working as MOOC mentors perceive the challenges and opportunities of engaging directly and on a daily basis with learners, by asking these questions to them directly, synchronously, and in the context of a conversation with their peers/colleagues.

Research questions

Once the scope of the study was identified, two sets of research questions were formulated. The first set addresses the effects of working in MOOCs as mentors, and the second, its implications:

- Do ECRs perceive any effects as a result of working in MOOCs as mentors?
  - Do they gain confidence?
  - Do they acquire any skills?
  - Does it have any influence in their subject knowledge?
- Do ECRs perceive any implications as a result of working in MOOCs as mentors?
  - Do they perceive any impact from their own interventions?
  - How do they perceive their online exposure?
    - How do they perceive their working conditions?

Methodology

Rationale for a qualitative method

In order to address the proposed research questions, a qualitative methodology was chosen for a number of reasons. First, this type of methodology has gained prominence in academia over the last years, and its currency is widely accepted (Schettini & Cortazzo, 2015). Secondly, various literature reviews around MOOCs highlight the need for more qualitative studies in the area (Liyanagunawardena et al., 2013; Veletsianos & Shepherdson, 2016). In a bibliometric study, Veletsianos and Shepherdson (2015) report a proliferation of quantitative studies with a positivist inclination, probably due to the current easiness for collecting data either automatically or through surveys that attract large numbers of participants. For this reason, Veletsianos and Shepherdson (2016) consider imperative widening the spectrum of methodologies to study the MOOC phenomenon. The present study aims

to contribute in this respect with a qualitative methodology. Another motivation for a qualitative approach is the nature of the research questions. The nature of the information to be elicited was considered more likely to be elicited through a structured conversation, in which more nuanced responses were likely to be obtained.

The data gathering research instrument: focus group interviews

Focus groups was the chosen research instrument for gathering data. This has been described as "a form of group interview that capitalises on communication between research participants in order to generate data" (Kitzinger, 1995, p. 299). Focus groups have been used successfully in contexts similar to that of the present study, in which perceptions of participants towards the enactment of a new technology in the organisation they work for, and its relationship with their professional development, have been studied. For example, Denning and Verschelden (1993) assessed the effectiveness of focus groups for determining the training needs of staff in a child welfare agency. According to the paper, the use of focus groups resulted in a productive brainstorm of ideas and suggestions from the participants. This information in turn led to an accurate assessment of the current tools being used for training purposes, and the needs of staff in this respect. The methodological evaluation in this article is particularly relevant to the present study due to the similarities between the subjects and the context. The subjects in both cases are professionals working in an organisation that provides a public service. Also in both cases, these subjects evaluate tools, or technologies, for two main purposes: their professional development and the service they provide.

Another example is that of Gillespie et al. (2010). In this case, the context is staff in universities and their perceptions towards certain structural changes that affect their working conditions. The focus groups aimed at investigating occupational stress as a result of the aforementioned structural changes. The researchers established a set of broad themes reflected in broad open-ended questions to be asked of the participants. Different sets of sub-themes emerged, aided by the follow-up questions of the moderators. As a result, the study provided a comprehensive set of responses that filled the different categories in which the occupational stress question was divided. The present study follows a similar procedure. A set of broad themes are previously established and are represented in the questions made by the moderator/researcher in the focus groups interviews. The objectives are also similar: the overarching question in all the stages of the present study is what effects do MOOCs have for university staff, both in terms of their practice and their working conditions.

The use of focus groups for this particular study entailed certain methodological risks. Participants knew each other, a situation that Agar and McDonald (1995) advise to avoid, as there are many statements that may not be uttered because they are commonly known in the group, and sometimes such tacit ideas are those that are sought in the investigation. The risk increases when the interviews facilitator also knows the participants. However, Jarret (1993) explains how the absence of strangers in the room can help the investigator elicit the required information, as long as such information is not considered as sensitive. That was the case of the present study: the relevant information to be elicited was not considered sensitive. Also, the power relationships between the participants and the facilitator were not considered to pose any risk to the data gathering process. Therefore, as Morgan argues, "where differences in group dynamics are not an issue, practical concerns may govern the choice between strangers and acquaintances" (Morgan, 1998, p. 10).

The interviews were planned according to the epistemological orientation of the study, within the spectrum established by Steward and Shamdasani (2014), the extremes of which are the socio-constructivist approach and the phenomenological approach. In the phenomenological approach, the researcher focuses on the perceptions, as well as on the subjective and idiosyncratic motivations of an individual. In the socio-constructivist approach, the emphasis is placed in the co-construction of meanings by the group. The present study considered more important what each participant had to say, rather than the fact that they had worked in teams, and that they were reporting their experiences in group. For this, more questions in the group interviews were addressed to individuals than to the whole group. However, certain elements of the socio-constructivist approach were also adopted, with the intention of gathering themes that are more prone to emerge in group conversations. For this, some questions were posed to the whole group for everyone to discuss.

Participants

Once permissions were cleared with the university's ethical committee, four focus group interviews were conducted to 20 participants in groups of four to six people. The number of interviews was decided based on Morgan's recommendations, who suggests that more than six iterations can lead to data saturation (Morgan, 1997). In fact, the fourth and last interview was showing signs of such an extreme. The groups of participants had varied backgrounds: oceanography (one group), archaeology (one group), and Web Science (two groups). Most participants' ages ranged between 25 and 30 years old, although the age factor was not taken into account in the analysis. The genders were balanced, but neither this factor was taken into account in this analysis, although future work will conisder it as an important element to be analysed.

For practical purposes, all participants in this study working as MOOC mentors belonged to the same institution, but they had different line managers and were instructed with different mentoring strategies. Such variety, however, does not mean that the results should be deemed as generalizable, and further iterations of this study in different institutions are planned as future work.

Regarding their teaching experience, participants were classified as having 'broad' (1 participant), 'none' (11 participants), 'some' (5 participants), and 'unassigned' (3 participants). Participants were categorised as having broad experience if they had been working full time as teachers at any point in their careers. "Some experience" was

considered for those who had worked part-time in the past in few occasions. Regarding their online academic and professional identity as ECRs, participants were divided in three categories according to their responses: The first category were constantly active in maintaining an online professional and academic profile (9); the second were those who thought they should do so (4); and the third category were those who did not feel the need to do so (1).

The interview questions

The interviews were not strictly structured, although the questions posed defined the conversation topics. These questions were the following:

- Can you tell me a little about your previous experience of:
  - Teaching
  - Online teaching/learning
  - MOOCs (Massive open online courses)
  - Your online professional identity as an ECR
- What are your thoughts on the importance of communicating with the public about your field of study?
  - Are there any wider benefits for your field of study?
  - Are there any wider benefits for your career?
  - Can you think of any other impact of your work as a facilitator?
- What was the most useful thing that you learned as a result of participating in the facilitation team?
- What are your thoughts on the importance of the working environment for this particular task?
  - How did you communicate with the rest of the facilitation team?
  - How important for you was face-to-face interaction with the team?
- What (if anything) did you find particularly surprising or unexpected about the MOOC or your participation?
- What would have been useful to know before you started facilitating on the MOOC?
- Do you have any further comments?

The data analysis: template analysis

The written transcripts of the interviews were analysed with the use of an analytic instrument derived from the thematic analysis called "template analysis" by King (2012), one of its main precursors. Template analysis can be defined as "a structured technique for analysing qualitative data that enables researchers to place some order on their data from the start of the analytic process" (Cassell, 2008, p. 221). A thematic analysis approach was chosen because it draws more attention to qualitative aspects of the material analysed than other methods such as content analysis (Joffe & Yardley, 2004). The main reason for prioritising qualitative elements was that it was aimed at finding a variety of arguments in depth, rather than determining the frequency with which they would occur in the conversations.

The themes were extracted from the research questions and they were divided in two blocks accordingly: effects and implications. The "effects" block referred to how ECRs perceive changes in their practice and experience as a result of working as mentors. The "implications" block was related to more practical issues arising from the tasks they were allocated as professionals, such as the workload,

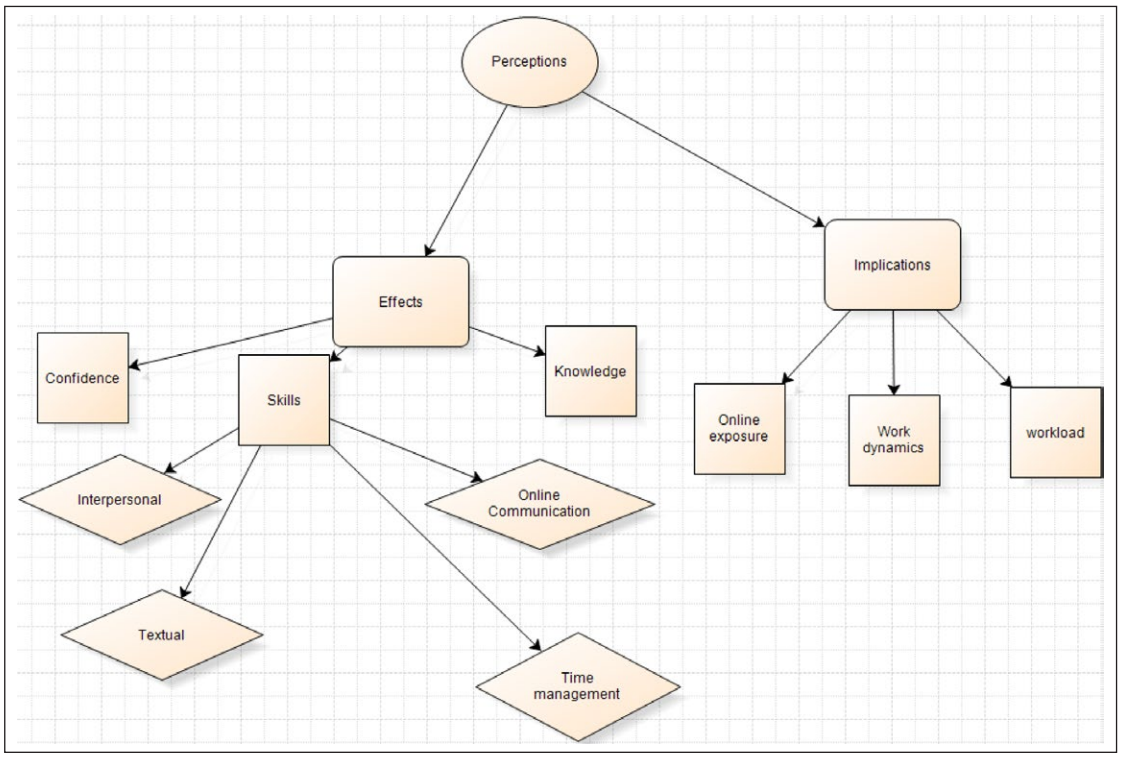

Figure 1: Themes of the analysis.

liaising with peers and line managers, and being exposed to public online scrutiny.

The model in **Figure 1** was used as a template for the analysis:

Findings

In the sessions, all participants contributed with a wide variety of ideas regarding the proposed themes. Steered by the investigator, participants made comments about all the themes in the model, as shown below:

Confidence

Nearly half of the participants touched on the confidence theme. A matrix performed with NVivo showed that most participants who mentioned confidence (7 out of 9) had no teaching experience. Participants tended to perceive gaining confidence in their professional skills as a result of participating in MOOCs as mentors. Such improvement in their confidence was produced in several contexts, for example around their subject knowledge:

> "I think it will be because that is one of the issues why I don't have a big profile online, I don't belong to professional stuff online, I think it is that element of, well, actually there is a lot of people out there who disagree and think all my work is wrong, and I think part of going through a PhD is becoming confident in the field" (Focus group 2, participant 3, F2P3 from now onwards)

In the extract above, the participant perceived that they gained self-confidence when discussing their work with unknown people in the web. In the extract below, another participant explains how they overcame their insecurities about their subject knowledge:

> "I thought it was quite nice when you knew the answer...for me because I changed fields slightly when coming to my PhD so I always feel like I don't know anything compared to everyone else...so it was quite nice to know that I did know stuff, and that I could share it..." (F2P4)

It was observed that some participants were aware of the transferable benefits of self-confidence when sharing knowledge:

> "I think teaching of any kind of description, online or off-line, is a really good experience for any kind of job you expect to get, any sort of career, just because of that confidence in being able to put across your points in an organised manner, whether by writing or by speaking, that's fine. And a MOOC is quite good for a transition" (F2P4)

Skills

Participants in all groups stated that performing mentoring tasks helped them hone a wide range of skills. Based on William's framework for roles and competencies in distance education for staff in HEIs (2003), most of the skills mentioned by participants can be classified under interpersonal skills, such as conflict resolution, caution, diplomacy, dealing with confronting opinions. However, there were also mentions to textual skills such as synthesis or speed-reading, and other skills such as online communication, time management, and pedagogical skills such as attention to diversity, both cultural and cognitive.

Textual skills

Several participants perceived an increase in their ability to assimilate more text in less time, which they considered as a key skill in the digital economy:

> "to be able to read the information very quickly, instead of starting and reading it word for word, you start scanning your way through, and then you pick up something very, very quickly, six or seven in a row for example" (F1P2)
> – R. So do you think there is a difference in your quickly reading skills between before and after you started?
> – P3. Huge! (F1P3)

Teaching skills

For several participants, working as MOOC mentors was their first teaching experience, a first contact with learning communities that was generally considered as beneficial for their career:

> "I was thinking that if you want to get some experience on this while you are doing a PhD, afterwards you can say that you have been involved with the creation of course material and the delivery of it, facilitating and helping people understand stuff, which you might not ordinarily get unless you end up teaching a module for your supervisor and that sort of thing. So yes, it seems like there is a good opportunity there." (F2P4)

Attention to cognitive diversity was also a skill that participants thought to have developed:

> "I think that one of the most valuable outcomes is that we don't actually interact with ... they aimed it at A-level students this time around and we don't normally interact with them, so that's quite an important step. Sometimes I think a lot of academics don't realise how far they've come in terms of their own language, how to break it down and that's a fairly valuable skill" (F4P5)

Such attention to diversity entails empathy, patience, awareness of learner's previous knowledge. Participants perceived having developed these skills by mentoring in MOOCs, especially given the asynchronous nature of their interventions where they had time to think about them before making them:

> "And to have a bit more patience with the people with whom you're communicating, because that's very

> important, obviously people may not get it in one go, but the MOOC gives you an opportunity to explain yourself and if people don't get it they can say 'well I don't understand, can you explain it a little bit further?'. That's quite advantageous, you don't always get that in the real world. You get one chance to explain yourself and that's it! If you fumble it..." (F4P2)

It should be taken into account that working with MOOCs as mentors involves direct contact with large learning communities. That can become a valuable experience as communicators:

> "From my particular perspective, I think I had an advantage in the sense that I gave a lecture about my specific research. So when I was engaging with people, both it did really helped me think through the particular issues related to my area of study, like "talk about that" and supposedly be expert in that. So I know I can do that, so yes, it was a huge benefit for me in that respect." (F1P4)
>
> "I think it makes a contribution similar to any kind of teaching does effectively, so all the things you get like gaining confidence on the exposure to different arguments and things like that, so I think it helps a lot in those, if anything in a slightly "bat away" or like a confident environment, because personally I am a lot more confident in front of a PC than in front of a lecture theatre full of people I guess. I found it particularly useful and nice and easy to sort of teaching things. It is a good start." (F2P2)

Online communication skills

Several participants perceived a growing ability to communicate online. Some realised the differences between teaching online and offline, such as the following, who observed how they could gather a wider range of arguments than in a classroom:

> "I think with the exposure to arguments and things like that, I think, because of the nature of the MOOCs in a lot of cases you can be teaching to thousands of people rather than just teaching, let us say, a lecture room full of people, you get all sorts of different responses and different debates and discussions about things that you would not get in the classroom, even in the most diverse lecture hall, you probably would not get the same scale and scope of responses as what you get online, so I think that does help." (F2P3)

Knowledge

As ECRs, all participants were experts in their subject areas. However, working with MOOCs helped them consolidate their knowledge. In some cases, participants found connections that helped them widen their scope:

> "For me, I have never worked on this project before. All my research is on ***anonymised location*** so the connection between ***anonymised location*** and the questions that people are raising are very applicable to my own research and things that I might need to consider in the future. In that respect, it has been helpful." (F3P3)

Other participants perceived they gained knowledge when facing challenging questions:

> "I had very limited, I had some understanding of evolutionary biology...but some people were asking about skin pigment on deep sea squid. I found myself spending half a day reading ten papers to answer one question." (F4P2)

And some others refreshed and consolidated their knowledge:

> "I have to agree with that. Just because I have worked in the ***anonymised project*** since my Masters, last time I was writing it was kind of a bit of a refreshment of my masters dissertation." (F3P4)

Their exposure to a wide learning community encouraged them to ensure they had solid knowledge in their area:

> "I did a lot of research to make sure that your concepts are completely right...otherwise you can be brought down." (F4P6).

Perceived implications

Working with MOOCs as mentors also entails some implications to ECRs. Most of them are derived from the novelty of the teaching practices associated with these courses. People involved in MOOC teaching face an unprecedented online exposure. Also, due to such novelty, their tasks and accountability are usually not clearly defined.

Online exposure

Perhaps one of the most salient implications identified by participants was that of online exposure to large numbers of people:

> "the nature of the MOOCs in a lot of cases you can be teaching to thousands of people rather than just teaching, let us say, a lecture room full of people" (F2P3)
>
> "just in that you have to deal with a much wider audience that you usually would have to deal with in any other teaching duty at the university"(F3P4)

Also, mentors do not always "own" the materials of the course, and they do not feel comfortable when being questioned about the validity of content that they have not created:

> "I think that what I was not expecting when some of the participants addressed people personally,

> and asked them specific questions, if you are not an educator, if you are only a facilitator, you won't expect people to address you personally, and to direct questions to you, by your name! I think we had an incident once, in ***anonymised MOOC***, regarding this, and it was a question directed to me, and I didn't appreciate it, especially because it was about content that I had not created."(F1P3)

Work related implications

Participants worked in teams and were accountable to a coordinator and the lead educators. There was no consolidated protocol; they were trained, but not in a formally established training programme, and the selection processes were also casual. That created certain perceptions of unrealistic workloads, especially in one of the groups:

> "I think the 8–10 comments requirement for an hour was my average at the end was about 6–7 comments in an hour...that was just how long it took. I often did more than an hour as well to do that...if it was a subject that I wasn't sure about as well..." (F4P4)
>
> "Even just reading the contents takes an hour, more than an hour." (F4P1)

Also, there was a generalised feeling of underpayment, given the value of their work:

> "We touched on an issue that I think does need to be fed back...and I'm going to speak for everyone; this is not a financially viable way to earn money for a mentor. It is hard work. It is 8 times harder than demonstrating in a classroom." (F4P5)

Discussion

As seen in the findings section above, working in MOOCs as mentors is perceived as offering a wide range of opportunities for professional development, although it also carries certain implications that need to be considered. The following aspects arisen from the findings are outlined below:

Working in MOOCs as mentors can generate self-confidence

Confidence in one's skills is considered a fundamental factor in professional development, especially when changes are introduced in organisations. As Eraut (2010, p. 269) suggests, "Much learning at work occurs through doing things and being proactive in seeking learning opportunities, and this requires confidence."

In the focus groups, participants perceived certain gain in confidence as a result of their work with MOOCs. That could be due to several reasons. First, the online asynchronous setting allowed mentors certain breathing time to think about their interventions, such as the case of the participant being able to "spend half a day reading ten papers to answer one question." (F4P2). Second, as some participants reported, the anxiety and stage fright that some teachers face in their early careers (Scott, 2007) was reduced. Third, a first contact with a learning community in relatively informal settings such as a MOOC forum can help overcome the so-called "imposter phenomenon", by which some professionals in their early careers feel not sufficiently equipped with the knowledge, skills and experience required for their position (Clance & Imes, 1978). As we could see, some participants such as F2P3 perceived "not having a big profile", or F2P4 considering themselves as not knowledgeable enough "compared to everyone else".

Mentoring in MOOCs can help develop a wide range of digital and pedagogical skills

Universities are professional settings where the digital skills are increasingly valued. Developing such skills is therefore a strategic objective, especially in terms of staff capacity building (McAulay et al., 2010). Also Salter and Hansen (1999) note the need for strategies for professional development in Higher Education to satisfy the increasing demand of online education. Participants in this study such as F2P3 who found it beneficial having been exposed to a diversity of arguments, perceived having developed certain interpersonal skills in online settings, identified as essential in online education (Hampel & Stickler, 2005). According to some participants in the study, their interactions with MOOC learners helped them develop their teaching skills in web 2.0 settings where the ability to foster collaborative learning is imperative (Roberts, 2004).

Attention to diversity, both cultural and pedagogical, is another pedagogical skill that has been recognised as highly demanded by learning communities in online settings (Knox, 2014), which some participants in the study perceived they acquired, as in the case of F4P2 who noticed that interacting with learners with diverse cognitive abilities helped him explain himself more clearly.

Working with MOOCs requires awareness of online professional identity

Social media presence can have a positive influence in the professional practices of educators (Wheeler et al., 2005), although it can create some anxiety in some cases, as it was discussed by some participants in the study such as F1P3, who did not appreciate having to take responsibility for the content presented in the MOOC they were mentoring. Therefore, attention to digital identity as a fundamental part of academics' digital professional skills is imperative (Littlejohn et al., 2012).

Clear job descriptions are needed for MOOC mentors

Some participants in the study, such as F4P4, perceived their workload was higher than expected. Some of them did not know what was expected from their job, in both qualitative and quantitative terms. This denotes the need to clearly establish duties and responsibilities as well as performance criteria in the job descriptions for the recruitment of MOOC mentors.

Conclusion

This study has reported the experiences of academics in their early careers working in MOOCs as mentors. From their accounts, it can be argued that such tasks can produce effects such as consolidating their subject knowledge and providing them with the self-confidence needed in higher education settings, often deemed as having high expectations on quality standards. Participants also perceived that these tasks can enhance a wide range of online communication and pedagogical skills. These skills can be valuable not only for themselves in their own careers, but also HEIs could benefit from having staff with these skills in their transition towards a digital economy. Participants in the study also reported that working in MOOCs as mentors also involves certain risks and implications, such as unclear expectations of performance, perceptions of exceeding workload and underpayment, lack of support, and an unbalanced exposure to the scrutiny of high numbers of unknown people. Advantage could be taken from such findings, as for the moment MOOCs neither play a central role in the professional lives of these ERCs, nor a central role in HEIs institutional strategies. MOOCs can therefore be used as testing grounds for new scenarios where, online offerings may well become part of the institutional strategic agenda of an increasing number of universities. Such transition can be made less abrupt with the gradual incorporation of MOOCs. These can therefore become a helpful element for the aforementioned transition towards a digital economy in HEIs. As this report has shown, working with MOOCs can equip ECRs working as mentors with tools and strategies to adapt to such a transition. This adaptation involves the development of a particular skillset for this purpose, and the ability to adapt to new relationships and new roles in the workplace.

As future work, a deeper analysis of ECRs opportunities for continuous professional development (CPD) will be undertaken. For this, more iterations of the focus groups will be conducted, this time with an emphasis on different aspects of the CPD and capacity building of ERCs. The results will be mapped against two official measures for professional development. One is Vitae's Researcher Development Framework (RDF), and the other is the Higher Education Academy's (HEA) UK Professional Standards Framework (UKPSF) for teaching in Higher Education.

Competing Interests

The authors have no competing interests to declare.

References

Agar, M and **MacDonald, J** 1995 Focus Groups and Ethnography. *Human Organization*, 54(1), 78–86. DOI: http://dx.doi.org/10.17730/humo.54.1.x102372362631282

Alario-Hoyos, C, Pérez-Sanagustín, M, Delgado-Kloos, C, Parada G, HA, Muñoz-Organero, M and **Rodríguez-De-Las-Heras, A** 2013 Analysing the impact of built-in and external social tools in a MOOC on educational technologies. In *Lecture Notes in Computer Science.* Berlin, Heidelberg: Springer. DOI: http://dx.doi.org/10.1007/978-3-642-40814-4_2

Allen, I E and **Seaman, J** 2015 *Grade Change: Tracking Online Education in the United States.* Babson Survey Research Group and The Sloan Consortium. Retrieved from http://www.onlinelearningsurvey.com/reports/gradelevel.pdf.

Cassell, C 2008 Template Analysis. In R. Thorpe & R. Holt (Eds.), *The SAGE Dictionary of Qualitative Management Research.* (pp. 221–223). SAGE Publications. DOI: http://dx.doi.org/10.4135/9780857020109.n105

Clance, P R, and **Imes, S** 1978 The Imposter Phenomenon in High Achieving Women: Dynamics and Therapeutic Intervention. *Psychotherapy Theory, Research and Practice,* 15(3), *1–8.* DOI: http://dx.doi.org/10.1037/h0086006

Davis, H, Dickens, K, León Urrutia, M, Sánchez Vera, M del M, and **White, S** 2014 MOOCs for Universities and Learners. An analysis of motivating factors. In *Proceedings of the 6th International Conference on Computer Supported Education.* Barcelona. Retrieved from http://eprints.soton.ac.uk/363714/1/DavisEtAl-2014MOOCsCSEDUFinal.pdf.

Denning, J D and **Verschelden, C** 1993 Using the Focus Group in Assessing Training Needs: Empowering Child Welfare Workers. *Child Welfare*, 72(6), 569–579. Retrieved from http://www.researchgate.net/publication/232578468_Using_the_Focus_Group_in_Assessing_Training_Needs_Empowering_Child_Welfare_Workers.

Eraut, M 2010 Informal learning in the workplace. *Studies in Continuing Education*, 26(2), 247–273. DOI: http://dx.doi.org/10.1080/158037042000225245

Evans, S and **Myrick, J G** 2015 How MOOC instructors view the pedagogy and purposes of massive open online courses. *Distance Education*, 36(3), pp. 295–311. DOI: http://dx.doi.org/10.1080/01587919.2015.1081736

Gillespie, N A, Walsh, M, Winefield, A H, Dua, J and **Stough, C** 2010 Occupational stress in universities: Staff perceptions of the causes, consequences and moderators of stress. *Work & Stress*, 15(1), 53–72. DOI: http://dx.doi.org/10.1080/02678370117944

Hazlet, C 2013 Supporting Communities of Teaching Assistants (TAs) and Students in MOOCs | edX Blog. Retrieved from http://blog.edx.org/supporting-communities-teaching 21-10-2016.

Hew, K F and **Cheung, W S** 2014 Students' and instructors' use of massive open online courses (MOOCs): Motivations and challenges. *Educational Research Review*, 12, pp. 45–58. DOI: http://dx.doi.org/10.1016/j.edurev.2014.05.001

Jansen, D and **Schuwer, R** 2015 Institutional MOOC strategies in Europe. *Status Report Based on a Mapping Survey Conducted in October-December 2014.* Mimeo.

Jarrett, R L 1993 Focus group interviewing with low-income minority populations: A research experience. In *Annual meetings of the American Sociological Association, 1988, and the American Sociological Association Problems of the Discipline Conference,* Oct 1990 Sage Publications, Inc. DOI: http://dx.doi.org/10.4135/9781483349008.n12

Joffe, H and **Yardley, L** 2004 Content and Thematic Analysis. In D. F. Marks & L. Yardley (Eds.), *Research methods for clinical and health psychology* (pp. 56–69).

Kim, J 2015 Better Residential Learning is the True Innovation of MOOCs. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/blogs/technology-and-learning/better-residential-learning-true-innovation-moocs.

King, N 2012 Doing template analysis. In Symon, G., & Cassell, C.(eds.), *Qualitative organizational research: core methods and current challenges*. (pp. 426–450). London: SAGE.

Kitzinger, J 1995 Qualitative Research: Introducing focus groups. *BMJ*, 311(7000), 299–302. DOI: http://dx.doi.org/10.1136/bmj.311.7000.299

Knox, J 2014 Digital culture clash: "massive" education in the E-learning and Digital Cultures MOOC. *Distance Education*, 35(2), 146–177. DOI: http://dx.doi.org/10.1080/01587919.2014.917704

Leon, M, White, S and **White, S** 2015a, May MOOCs in Higher Education Magazines: A Content Analysis of Internal Stakeholder Perspectives. In *International Conference on Computer Supported Education* (pp. 395–405). Springer International Publishing. DOI: http://dx.doi.org/10.1007/978-3-319-29585-5_23

Leon, M, White, S, Dickens, K and **White, S** 2015b Mentoring at scale: MOOC mentor interventions towards a connected learning community. In, *EMOOCs 2015 European MOOC Stakeholders Summit,* Mons, BE, 18–20 May 2015. 4pp.

Littlejohn, A, Beetham, H and **McGill, L** 2012 Learning at the digital frontier: a review of digital literacies in theory and practice. *Journal of computer assisted learning,* 28(6), pp. 547–556. DOI: http://dx.doi.org/10.1111/j.1365-2729.2011.00474.x

Liyanagunawardena, T R, Adams, A A and **Williams, S A** 2013 MOOCs: A systematic study of the published literature 2008–2012. *The International Review of Research in Open and Distributed Learning*, 14(3), 202–227. DOI: http://dx.doi.org/10.19173/irrodl.v14i3.1455

McAuley, A, Stewart, B, Siemens, G, Cormier, D and **Commons, C** 2010 *The MOOC model for digital practice. Massive Open Online Courses: digital ways of knowing and learning*. Charlottetown, Canada. Retrieved from www.elearnspace.org/Articles/MOOC_Final.pdf.

Morgan, D L 1998 *The focus group guidebook*. Thousand Oaks: SAGE Publications. DOI: http://dx.doi.org/10.4135/9781483328164

Mueller, E 2014 Community Teaching Assistants: Coursera's Student Warriors – Center for Instructional Technology. Blog post in CITblog: DE SIG@Duke: Arizona State University's Innovation and Online Unit. Retrieved from https://cit.duke.edu/blog/2014/07/community-teaching-assistants-courseras-student-warriors/ 21-10-2016.

O'Connor, K 2014 MOOCs, institutional policy and change dynamics in higher education. *Higher Education*, 68(5), 623–635. DOI: http://dx.doi.org/10.1007/s10734-014-9735-z

Roberts, T S (Ed.) 2004 *Online collaborative learning: Theory and practice*. IGI Global. DOI: http://dx.doi.org/10.4018/978-1-59140-174-2

Ross, J, Sinclair, C, Knox, J, Bayne, S and **Macleod, H** 2014 Teacher Experiences and Academic Identity: The Missing Components of MOOC Pedagogy. *Journal of Online Learning and Teaching*, 10(1). http://jolt.merlot.org/vol10no1/ross_0314.pdf.

Salter, G and **Hansen, S** 1999 Modelling New Skills for Online Teaching. In *Ascilite Proceedings*. Brisbane.

Schettini, P and **Cortazo, I** 2015 *Análisis de datos cualitativos en la investigación social*. Buenos Aires: Editorial de la Universidad de La Plata.

Scott, S 2007 College hats or lecture trousers? Stage fright and performance anxiety in university teachers. *Ethnography and Education*, 2(2), 191–207. DOI: http://dx.doi.org/10.1080/17457820701350582

Veletsianos, G and **Shepherdson, P** 2015, June 19 Who studies MOOCs? Interdisciplinarity in MOOC research and its changes over time. *The International Review of Research in Open and Distributed Learning*. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/2202/3351.

Veletsianos, G and **Shepherdson, P** 2016, March 1 A Systematic Analysis and Synthesis of the Empirical MOOC Literature Published in 2013–2015. *The International Review of Research in Open and Distributed Learning*. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/2448/3674.

Wheeler, S, Kelly, P and **Gale, K** 2005 The Influence of Online Problem-Based Learning on Teachers' Professional Practice and Identity. *ALT-J: Research in Learning Technology*, 13(2), 125–137. Retrieved from http://eric.ed.gov/?id=EJ820154. DOI: http://dx.doi.org/10.1080/09687760500104088

White, S and **White, S** 2016 The socio-technical construction of MOOCs and their relationship to educator and learning designer roles and practices in HE. In, *EC-TEL 2016, Lyon, France, Republic of FR, 13 – 16 Sep 2016.* 8pp.

How to cite this article: León-Urrutia, M, Fielding, S and White, S 2016 Professional Development Through MOOCs in Higher Education Institutions: Challenges and Opportunities for PhD Students Working as Mentors. *Journal of Interactive Media in Education,* 2016(1): 18, pp. 1–10, DOI: http://dx.doi.org/10.5334/jime.427

Submitted: 06 July 2016 **Accepted:** 17 November 2016 **Published:** 21 December 2016

]u[*Journal of Interactive Media in Education* is a peer-reviewed open access journal published by Ubiquity Press.

OPEN ACCESS