

# ***Variation of HE academics' experiences of designing MOOCs: a discussion through the lens of networked learning***

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## **Abstract**

There has been abundant research studying academics' conceptions of and approaches to teaching, learning and other academic related activities in higher education (HE). However, most of the research in this area is in the traditional classroom HE context and there is very limited research in online teaching and learning contexts. Furthermore, research tends to mainly focus on academics' experiences in teaching and learning in general, and there is very little research studying academics' course designs, in particular.

MOOCs (massive open online courses) originally emerged as a new online teaching form linked to connectivism and large networks of learners, which attracted a lot of interest from HE providers and researchers. Although there is plenty of research literature studying learners' MOOC experiences, there is a lack of research on academics' experiences of MOOCs. With more and more HE institutions partnering with MOOC platforms, HE academics involved in designing MOOCs are asked to follow certain procedures and prescribed formats in the designing process. There is hardly any published research on academics' experience of designing MOOCs to understand the possible variations in their understanding of and approaches to designing MOOCs and the possible links between their perceptions and networked learning theory. This research aims to fill this research gap through a phenomenographic study of the UK HE academics' experience of designing MOOCs to gain understanding of the possible variation in their perceptions and discusses links with different dimensions of networked learning. The research results could inform course designers and MOOC development stakeholders as well as provide insights to researchers in this area.

I (first author) interviewed 22 academics from different UK HE institutions who have experience of designing MOOCs. The initial data analysis based on 14 transcripts revealed 5 categories of HE academics' perceptions of designing MOOCs. This short paper presents the preliminary analysis of the first stage and discusses the results through the lens of networked learning. The next step is to continue data analysis through consulting the remaining transcripts to refine and modify the emerged categories and constitute the structural relationship between the categories to form the final outcome space.

## **Keywords**

Networked learning, Phenomenography, MOOC, HE academic experience

## **Introduction**

There has been abundant research studying academics' conceptions of and approaches to teaching, learning and other academic related activities in higher education (HE). However, there is very limited research in this area in the online context. Furthermore, research tends to mainly focus on academics' experiences in teaching and learning in general. There is very little research studying academics' understanding and approaches to the process of course design in particular (Ziegenfuss, 2007). MOOCs (massive open online courses) originally emerged as a new online teaching form linked to connectivism and large networks of learners (Downes, 2011), which has attracted a lot of interest from HE providers and researchers. Several researchers (Liyanagunawardena, Adams & Williams, 2013; Veletsianos & Shepherdson, 2016) identify research gaps in MOOC contexts: although there are plenty of research studies of learners' MOOC experiences, there is a lack of research on academics' experiences in MOOC contexts. With more and more HE institutions partnering with MOOC platforms (e.g. Coursera, edX, FutureLearn, Udacity), academics involved in designing MOOCs for these platforms are asked to follow certain procedures and prescribed formats in the designing process. Some researchers argue that these MOOCs are based on a traditional university transactional pedagogical model

(Siemens, 2013) which emphasises delivery of content rather than connectivism (Downes, 2011) or development of a community of networked learners engaged in conversation, i.e. networked learning (NELC, 2021).

This research takes the form of a phenomenographic study of UK HE academics' experiences of designing MOOCs to gain an understanding of the possible variations of their perceptions of and approaches to designing MOOCs. This includes considering whether their perceptions are linked to networked learning, in some way. The objectives of the research are to identify the different ways in which the research participants experience MOOC design and constitute the structural relationship between the categories to form the outcome space (conception map). In this paper the variations of conceptions revealed in the preliminary data analysis are presented and discussed with mapping to different aspects of networked learning.

## Research Design

Phenomenography originated from a series of empirical studies in conceptions of teaching and learning in 1970s. Ference Marton defined phenomenography as “a research method for mapping the qualitatively different ways in which people experience, conceptualize, perceive, and understand various aspects of, and phenomena in, the world around them” (Marton, 1986, p.31). The ontological and epistemological assumptions underpinning phenomenography and its second order perspective make it distinctive from other qualitative research methodologies in studying people's experience of a given phenomenon: first, phenomenography takes a non-dualist ontological assumption (vs. cognitivism) and concerns the relations that exist between human beings and the world around them. Second, phenomenography takes second order perspectives (vs. discourse analysis, grounded theory) about people's conceptions of the world instead of making statements of the world from researcher's perspective. Third, phenomenography focuses on the variations of experience rather than the essence (common) of the experience (vs. phenomenology). Fourth, the outcome of phenomenography is a hierarchically structured and internally related (vs. content analysis) set of categories of description which represent people's different ways of conceiving a given phenomenon (e.g. in this research, designing MOOCs).

22 academics from different UK HE institutions were interviewed. They all had experience of designing MOOCs in the UK based platform FutureLearn. A purposeful sampling (Patton, 2002) strategy was used to select research participants to provide a diverse range of cases to maximise variation. The demographic distribution was:

- Academic experience: from 2 to 32 years,
- Discipline: 6 natural sciences, 6 social sciences, 5 humanities/languages, 3 computer science,
- Gender: 12 female and 8 male,
- Age range: mid-30s to late 60s,
- HE institution: 6 different HE institutions,
- MOOC designing experience: designed 1 to 12 MOOCs.

The interviews were originally planned to be face-to-face but due to the pandemic all interviews were conducted online. All the interviews were recorded and transcribed verbatim for data analysis. The data analysis in a phenomenographic study involves “an initial identification of a set of categories of description, analysis of the structural relationship between the categories independently of the transcripts, and an iteration between the transcripts and the structural relationship, until a stable set of categories is constituted” (Trigwell, 2006, p.371). Data analysis was heavily influenced by Bowden (2005) and Åkerlind (2005a): first, use original whole-of-transcript (vs. pool of excerpts/meanings) to keep analysis in context; second, balanced priority given to meaning (categories of description) and structure (relationship between categories) so these two intertwined aspects can be co-constituted adequately in the final outcome space. To deal with the issue of managing large amounts of data, Åkerlind's (2005b) strategy was used, i.e. to carry out a preliminary data analysis using a sample of 14 transcripts. The transcripts were analysed as “a whole set” at a collective level as the aim of phenomenographic study “is not to capture any particular individual's understanding, but rather to capture the range of understandings across a particular group” (Åkerlind, 2005b, pp.76).

## Preliminary results and discussion

The preliminary data analysis resulted in an initial identification of a set of categories of description. Categories of description are an abstract tool used to describe understanding of the phenomenon (Dahlgren & Fallsberg, 1991), thus each of the categories represents a qualitatively different way of experiencing. The identified five categories are described and evidenced by the quotes from interview transcripts below and mapped to different dimensions of networked learning. Interviewees are identified as S01, S02 etc. to maintain confidentiality:

**Category A: Designing MOOCs is to produce a series of short, visually interesting and accessible learning materials to engage learners with different abilities.**

‘Short’ is considered an important feature in designing MOOC content by research participants: *“if we did make a film, it should be no more than about 10 minutes long”* (S01); *“you have to break it down, really, to small elements ..., to like five minutes, blocks of information”* (S02). Research participants explained that this is what they were told to do: *“she would say, that's not going to work, some of these steps are too big, you need to divide them up into individual tasks”* (S03). “Visually interesting” and “accessible” are considered as the other two most important features in designing MOOC content: *“that needed to be in short, kind of exciting, visually interesting sound bites”* (S01); *“the materials should be accessible, and easy for students to learn”* (S06). Some related these features, which are considered in the designing process, to the intention of “engaging learners”: *“that needed to be in short, kind of exciting, visually interesting sound bites, you know, you wouldn't go on for too long ... you need to draw them in and keep them there”* (S01); *“I think the other thing for online learning is that, again, it's around engagement ...back to what I said before about making sure things are bite size”* (S06). Some described these design considerations in a way that related to learner’s online experiences and different abilities: *“learners clearly are more inclined to keep watching the videos and keep going with the course if they find it visually interesting”* (S04); *“[create] things to make the online experience a bit more dynamic, and exciting and interesting”* (S02); *“you have to make it accessible to all levels of learners and to try to make it interesting to all levels”* (S05). In general, this conception focuses on the aspect of promoting connection between a learning community (of learners with different abilities) and the learning resources they use - according to Goodyear et al.’s (2004) definition of networked learning.

**Category B: Designing MOOCs is to learn new skills and experiment with a new approach to education.**

Designing MOOCs is perceived as a process of professional development in this conception: *“we were really experimenting with not just kind of new content, but whole new ways of doing the content”* (S04); *“so this just added a new layer, layer to one’s general terror for a person involved in teaching”* (S10); *“it as a new, a new, a new approach to education so which is an exciting adventure”* (S16); *“I also felt that some of these skills that are kind of required would allow me to generate some really useful teaching materials”* (S21). This conception focuses on personal development in academic practice and considers “designing MOOCs” as a chance to learn something new, which actually acknowledges that “designing MOOCs” is different from designing courses in their already familiar HE teaching and learning context. Participants described many different elements (e.g. “massive number of audience”, “video-heavy”, “no credit bearing” in exploring this new landscape compared with designing conventional HE courses. The experiences described in this category, to some extent, are related to what Boon and Sinclair (2012) describe as: “transformative experiences encountered by academics in adjusting to, and participating in, networked learning environments”.

**Category C: Designing MOOCs is to create social learning experiences and bring people together for conversation.**

This conception focuses on the aspect of promoting “human/inter-personal relationships” and “collaborative engagement” in networked learning (NLEC, 2021, p. 314): *“So the idea that it’s a social learning experience, and people having conversations”* (S15); *“they could study ... in their own time, largely at their own pace, but still as part of a social group that would let them explore”* (S17); *“a social learning experience that enables people to learn from each other”* (S19); *“what I want to enable in the MOOC is what I want people to have a conversation”*(S10). Participants depict a pedagogical view of “learning through dialogue”. They emphasized “social group” and “conversation” as their focal points which clearly linked to the dialogical and collaborative perspective in networked learning. It’s very interesting that they didn’t specify defined roles of “learners” and “tutors” as the subject of “conversation” and “social groups” but rather using “people” broadly. This word choice revealed the dimension of “informal learning” in research participants’ understanding of “designing MOOCs”.

**Category D: Designing MOOCs is to broadcast higher education and showcase research to public.**

There are two dimensions in this conception. One is the “broadcast” view which focuses on delivering content and resources globally and flexibly: *“I think that, that MOOC was, was broadcast if that’s the right word”* (S05); *“the kind of films we ended up with on the MOOC, ... the final result is really, you know, very impressive, I think it’s like a TV film ... to broadcast education”* (S1). The other dimension emphasizes “designing MOOCs” as a chance to take higher education (teaching and research) outside of the paywall and make it freely accessible to the public: *“we can use that support [in creating MOOCs] and kind of broadcast these ideas that we know there is a kind of public for or an appetite for”* (S12); *“the idea of making an open course was ... really attractive. So, ... it was available widely, hopefully, right across the world, and it was free”*(08); *“it was about showcasing research, attracting more students”*(S10).

**Category E: Designing MOOCs is to use research-informed higher education to influence people, make impact on society and change the world.**

This category of description focuses on the dimension of “intention” of the phenomenon: *“[MOOCs] could generally raise the level of understanding in some of these areas, society could have a more informed decision”*

(S08); “if I promote this idea more effectively [through MOOCs], I can change the world in a more, in a more significant way” (S08); “I believe very strongly in impact-led research ... I believe very, very strongly that academics should be making an impact on society [through MOOCs]” (S17). This conception is related to Category D, to some extent, in terms of emphasizing connections between higher education and public/society. However, this is distinctive enough as a different way of experiencing “designing MOOCs” due to its focus on the “intention” of influencing and impacting on society. It appears to be more complex, inclusive and at a high level in the conception map. This conception is somewhat in line with the suggestion of promoting networked learning applications “in broader educational, social and political movements” (NLEC, 2021, p. 317).

## Conclusion and next step

This research investigated the different ways that HE academics perceive “designing MOOCs” and how the various conceptions found in this study relate to networked learning. The initial data analysis revealed five conceptions of “designing MOOCs”. Each category of description is discussed and mapped to different aspects of networked learning. This preliminary analysis (Åkerlind, 2005b) shows that research participants’ focal awareness of the same phenomenon (designing MOOCs) differs in various dimensions. These five different ways of experiencing designing MOOCs are related to different aspects of networked learning, e.g. connection between learning community and learning resources, social learning, human relationship, networked learning and social impact. In phenomenography, potentially, each category is part of a larger structure in which the category are related to other categories of description. It’s a goal of phenomenography to discover the structural framework within which various categories of understanding exist (Marton, 1986, p.34). Therefore, the next step in the research is to constitute the structural relationship between the emerged categories to create the outcome space. Relating the categories to networked learning, to some extent, clarifies the relationship between the categories. A limitation is that this preliminary analysis is only based on 14 transcripts thus the remaining transcripts will be intensively consulted in order to refine and modify the final outcome space.

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