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Widening disabled learners' participation to HE through the use of MOOCs

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Widening disabled learners' participation to HE through the use of MOOCs

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Abstract

Massive Online Open Courses (MOOCs) are making low-cost learning opportunities available at a large scale to diverse groups of learners. Therefore, MOOCs need to be accessible so that they can offer the flexibility of learning and benefits to all. To direct efforts towards developing accessible MOOCs, it is important to understand the current motivations of disabled learners. Analysis of data from existing MOOC surveys that request disclosure of disability provides quantitative information such as the proportions of disabled learners participating in MOOCs; their reasons for participating, and the types of MOOCs they prefer. Interviews from selected participants for this research, capture in-depth the experiences and motivations of disabled learners while participating in them. This paper outlines the interests that disabled learners who have experience participating in MOOCs have in studying Higher Education (HE) programmes, and the possibilities MOOCs offer them as vehicles to complement or offer alternative paths to their HE studies.

Introduction

MOOCs have emerged as a popular mode of learning that is now being widely-researched and developed in distance education. MOOCs offer materials such as video lessons, readings and peer-to-peer activities, and provide interactive user forums to support community interactions among learners, educators and facilitators. The need to incorporate greater access to Open Education and MOOCs for those who declare disabilities has been highlighted (US Department of Justice, 2015; Inside Higher Ed, 2016).

Not many researchers have interacted with accessibility stakeholders in MOOCs to understand better the accessibility processes and learner needs. Coughlan et al. (2016) aim to understand the social, contextual and organisational issues behind the development of MOOCs; while Liyanagunawardena and Williams (2016) have explored pre-course survey data to show evidence that learners in their old age are participating in MOOCs. These studies lack an understanding of learner needs.

For this research project, we are employing a mixed-methods research programme to understand the complexity of the issues related to disability and MOOCs. In qualitative studies involving interviews, we have explored learner motivations and educators' viewpoints on how MOOCs can be valuable for disabled learners; and quantitative analysis of survey data has

provided an understanding of the demographics of disabled learners who take up MOOCs. To assess the current state of MOOC accessibility, we have designed a MOOC accessibility audit to evaluate MOOCs. This mixed-methods research approach will yield guidelines for the design of MOOC platforms that meet the needs of disabled learners.

Methodology

This paper focuses on two studies used to understand disabled learners' experiences while participating in MOOCs. We combine an analysis of standardised pre- and post-course surveys used by the Open University to gain feedback on their FutureLearn MOOCs. Respondents declaring disabilities are identified in the sample, and questions ask them about their educational interests and goals. This data also provides insights into the disabled learners who are participating in MOOCs, the subjects they prefer, and their state of satisfaction with the MOOCs. As reported in Iniesto et al., (2017), we have explored data from 8 MOOCs from 2015. The total number of learners who completed the pre-course survey is 14,396. Of these, 752 respondents declined to answer the question 'Do you consider yourself to have a disability' reducing the total replies to 13644. The number of learners who consider themselves as disabled is 1468 (10.8%). A smaller number completed the post-course surveys where the total number is 2564, of which 2259 responded, and the number of disabled learners was 255 (11.3%).

Limitations of this analysis are that we undertook it with a small number of MOOC presentations and that a simple disability marker may not reflect the diversity of the population. A disability should not be limited to physical problems; it also depends on the social and cultural environment of the individual, age or economic difficulties (Mole, 2013). We should not assume that these results generalise to the whole of the disabled learner population, or that this population is homogenous. Therefore the steps we are taking at the time of writing this paper include analysing related data (such as demographics, completion rate and satisfaction and categories of disability), and increasing the sample of MOOCs and their survey data to form a more comprehensive picture.

To complement this, we have conducted semi-structured interviews; a total of 15 disabled learners who had responded to the Open University MOOCs surveys in FutureLearn and were willing to be contacted for research purposes have been approached by us and interviewed. These semi-structured interviews were conducted to understand the motivations of disabled learners from MOOCs, the current barriers they experience in their learning due to 'inaccessible' design of MOOCs and how improvements could be made to their learning experience. The semi-structured nature of the interviews enabled us to expand on the interviewee's comments during the interview. An inductive approach to coding the interviews was followed on the complete transcripts. We read the transcripts and annotated using the six-phase thematic analysis methodology by Braun and Clarke (2006). Synthesising the qualitative and quantitative data has allowed us to capture an in-depth view of disabled learners' experiences using MOOCs.

Results

Preliminary analysis of the MOOC survey data shows that in comparison with other learners, disabled learners are particularly interested in taking up MOOCs to determine if they can study at a higher educational level or to link the knowledge acquired during the MOOC to voluntary work (Fig. 1).

Learners declaring a disability have less experience of participating in online courses for continuing professional development when compared to the rest of the survey population. Disabled learners tend to have greater previous experience in online courses that allow them to get university credit, which appears related to their interest in studying at a higher educational level.

The survey data showed that one of the key points of interest for disabled learners is how the use of MOOCs they can help learners in their HE journey, or can be a feasible alternative to access to high-quality educational content.
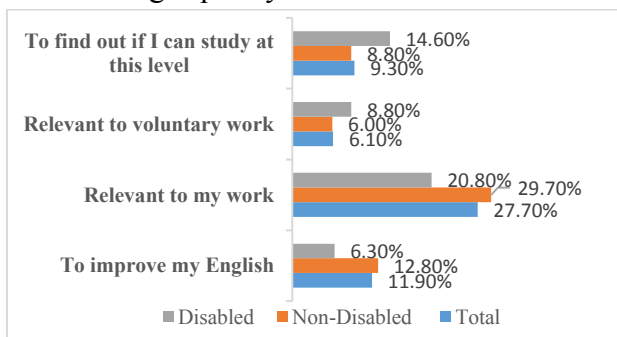

Figure 1: Interests of disabled and non-disabled learners in MOOCs

The preliminary analysis of the interviews shows that disabled learners who are already participating in HE are using MOOCs to supplement their degree studies:

> *I did learn some things yeah because obviously, I did it before I started properly on my law course, so I learned quite a lot*

Disabled learners are also using MOOCs as a way to get started with online learning:

> *I think maybe FutureLearn should do well any of them they are going to do something about getting started with online learning.*

Finally, disabled learners think the use of MOOCs should be encouraged by universities to gain preliminary knowledge on an HE topic before starting the formal university course:

> *I found it very useful, and I know there's a lot of mature students with the Open University and a lot of the mature students who are good with technology / I think it should be like a little bit of compulsory unit or something before starting.*

The survey and interview data help to triangulate the results of this research and link the different motivations given by the learners with the indicators provided by the general questions in the surveys.

Implications

By researching their motivations, prior educational experience, and experiences gained through MOOCs, we will gain a better understanding of how disabled learners can be supported into HE. MOOCs are expected to provide routes to HE study and to widen participation by being free and openly available. This research has identified disabled learners who are using MOOCs for this purpose, and that their motivations and experiences differ from those of other students. We hope that more research in this area can identify strategies such that MOOCs offer effective routes to build confidence, offer useful educational experiences, and widen participation in the benefits of distance learning.

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