

MOOCs CREATION AND MANAGEMENT METHODS: EXPLORING THE DESIGN APPROACH OF A MOOC ON EUROPEAN HISTORY AND CULTURE

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Abstract

Since their first appearance and diffusion, MOOCs have steadily been integrated into Higher Education programs as part of either blended learning or fully distance learning courses. In this context, MOOC's pedagogical approach, development, and planning strategies have often been central to discussions among MOOC creators and researchers. Not only the setting up of a targeted educational method is needed to allow learners to reach their learning goals and make their distance learning experience valuable but also attention to the collaboration between educators and learning designers during the content creation process represents a pivotal -although sometimes contrasting- element during the MOOC's production process. Recently the KU Leuven's group of European Studies was involved in the development of three content-wise interlinked MOOCs created with the primary goal of providing students with the right tools and knowledge to enhance their expertise in different fields of European Studies. Built on the long-standing KU Leuven's experience in developing humanities-oriented MOOCs, this set of interlinked online courses represented one of the very first KU Leuven's efforts in delivering online courses that content-wise aim at supporting each other. Given the high involvement of educators, it also represents a valuable research case study due to the considerable effort in terms of design planning and coordination/management. Using as a primary example the results of the MOOC on European History, Society, and Culture, created with the support of the KU Leuven Faculty of Arts and included in the aforementioned educational framework, this paper aims at discussing the choices and challenges behind its development, on the one hand. On the other hand, by highlighting the management and learning design strategies used to support the creation of the MOOC and to ensure its pedagogical alignment within the integrated three MOOCs program, it intends to offer new perspectives in the context of content creation management and instructors/educators' coordination, highlighting the dynamics of the relationship between the learning designers and educators.

Keywords: *Massive Online Open Course (MOOC), e-teaching, teachers, learning designers, education.*

1. Introduction

Over the last decade and especially due to a further need and diffusion of distance education methods during the COVID-19 pandemic, Massive Online Open Courses (MOOCs) prompted contrasting debates in relation to elements such as the enhancement of learners' engagement through the application of effective pedagogical methodologies, or the impact of education technologies on Higher Education distant learning programs (Zhu et al., 2018). Nevertheless, minor attention has been given to the "behind the scene" of online courses' management and design in the academic sector, and particularly to the main characters in this field: the educators, here intended as those university academics involved with MOOC development projects, and the learning designers/technologist (White & White, 2016). Indeed, despite their significant impact on the development and design of online courses at a Higher Education level, the role of learning designers in terms of coordination, management, and planning as well as their relationship with the educators started being an object of investigation in the recent past (White & White, 2016; Liyanagunawardena et al., 2013; Veletsianos & Shepherdson, 2016).

Research conducted in the last decade has shown, in fact, how in this context a systematic, teamwork approach, rather than an individualist one, appears to have a stronger and more effective impact on the quality of distance learning products (White, White, & Borthwick, 2020; Seeto & Herrington 2006). In particular, learning designers have been indicated as *bridging, blended* figures (Keppell, 2007) between the academic community and those external departments directly related to the educational technology sector (such as hosting platforms, multimedia experts, copyright advisors, academic textbook

editors, etc.) (White, White, & Borthwick, 2020). Significant, in this context, appears to be also the content creation approach, and the role of the learning designers not only in supporting the inclusion of online courses in the academic contexts (White & White, & Borthwick, 2020) but also in guiding educators in becoming familiar with the methodologies of the content design creation, which is often made further complicated by scarcely user-friendly distant learning platforms (Weller, 2015). Furthermore, all the above-listed elements need to be also put into relation to the obstacles and complexities, in terms of management, collaboration, and co-creation, that the aforementioned *bridging* qualities of the learning technologists can entail (White, White, & Borthwick, 2020).

Zooming on aspects related to the learning designers and educators relationship, this research aims to share and discuss the design and content creation approaches and methodologies applied within the framework of the joint MOOCs development initiative carried on by three different KU Leuven faculties. Also, this investigation intends to fit into the debate revolving around management and coordination best practices in the context of Higher Education distance learning projects.

2. Research framework

In 2021, the group of European Studies at KU Leuven committed to the development of a joint educational project which involved three faculties: the Faculty of Arts, the Faculty of Social Sciences and the Faculty of Law. This initiative had as a main goal the development of three combined MOOCs addressed either to current or future students aspiring at joining the KU Leuven Master's program in European Studies or to learners interested in expanding their knowledge in one of the research domains explored and offered by the distant learning courses. Besides highlighting very different areas of expertise within the European Studies domain, the three MOOCs, hosted on the KULeuven's edX platform - KULeuvenX¹ - aimed at being bonded with each other and developed by applying the same educational framework and assessment methods as well as by producing an overarching, shared visual identity. Despite the extensive KU Leuven's experience in producing humanities-oriented MOOCs, this represented one of the very first sets of combined distant learning courses entirely developed on the basis of internal collaboration among the faculties.

From an organizational point of view, the MOOC implementation structure was mainly based on the continuous cooperation between the contributors, constituted in this case by academic personnel from each of the three faculties represented in the project, and three main learning designers (further supported during the development process by assistants or students). Besides ensuring pedagogical alignment and harmonization across the MOOCs, each of them was responsible for the implementation and coordination of their respective distant learning environment.

2.1. The case study: a MOOC on European History, Society and Culture

The MOOC on European History, Society and Culture, which is used as the main case study in the context of this research, represents one of the results of this academic project. From a conceptual point of view, this particular online course aimed at providing an in-depth analysis of European history, society and culture from a pan-European and transnational perspective. The online course is composed of seven modules (plus a final exam) which aim at using a series of iconic, transformative concepts and historical moments chosen for their relevance to help learners explore and understand European history.

Table 1. Table of contents of the MOOC on European History, Society and Culture.

Module 1	Reason, Rights and Revolutions
Module 2	Ambition for European Unity
Module 3	Technocratic Unity
Module 4	Colonisation and Decolonisation
Module 5	The Avantgarde's New Man
Module 6	Social Europe
Module 7	Borders, Migration and Diversity

¹<https://www.edx.org/school/kuleuvenx>

The MOOC was designed and developed with the contribution of a total of thirteen experts/scholars coming from different departments within the Faculty of Arts (Modernity & Society 1800-2000, Cultural History since 1750, Literary Theory and Cultural Studies, Arabic Studies), in order to reflect a diverse and interdisciplinary approach all over the course. From the very first phases of its development process, the MOOC was based on a two-folded educational approach. Firstly, the learning environment was conceived to be used in a hybrid context, suitable for different categories of students. In fact, the content produced for this MOOC is not only envisaged for a distant learning context but is also meant to be re-used and included in blended learning academic courses. Secondly, it was meant as an environment where not only emphasizes students' interaction and engagement with the content was emphasized but also educators' communication and collaboration.

3. Design, content co-creation strategies

In the first phases of the MOOC development process, particular attention is often given to the implementation of an effective learning and pedagogical strategy, capable of making a positive impact on learners' interaction and engagement with the content as well as on course's completion rates (Phan 2018). However, equal consideration in this context should also be given to allowing a smooth design of the learning structure, easing educators' participation in the MOOC development, which might represent a complex task, depending both on the features of the chosen MOOC platform, on the number of educators involved as well as on the complexity of the project. These factors, specifically in relation to the use of the edX platform, emerged during the implementation of the "European History, Society and Culture" MOOC, and its learning alignment with the other two MOOCs. In fact, like many other MOOC creation platforms, also edX does not guarantee real support to the educators during the content design process but only throughout the course implementation. Therefore, further assistance, in this case, should be ensured by the intervention of learner designers which, besides allowing the course to fit into the Higher Education context, need to ease the MOOC design process and shape and adapt it as much as possible to the technical functionalities of the platform.

In order to face these challenges and ensure a smooth coordination and learning design process, we decided to elaborate a strategy that could operate on two different layers. On one side, we elaborated a management approach that intended to ease the coordination between the diverse groups of educators and learning technology sectors (ICT, edX support, multimedia creators). On the other side, we worked on existing learning design methodologies and adapted them to the features and learning properties of edX learning courses.

3.1. Management and coordination approaches

Especially when they are used in the context of Higher Education programs or large projects, MOOCs require not only a strong educational methodology but also a solid coordination and management strategy which allows not only to facilitate the implementation of the learning environment but also to smoothen the cooperation between learning designers and educators (Pollard & Kumar, 2022). The lack of a clear management approach when realizing and developing an e-learning environment might in fact lead to internal tension and frustration, a *clash of cultures* as defined by Cowie & Nichols (2010) between the academic group and the e-learning specialists.

For this reason, already in the planning phase of the MOOC's creation, particular attention was given to sketching a management plan which could allow parallel and simultaneous coordination in all the implementation phases of the three MOOCs. In this regard, the following elements were at the very basis of this management strategy:

- **Establishment of a solid pipeline structure**, which contributed to reinforcing the learning designers' position as bridging and fundamental forces not only for the translation of the learning material into suitable e-learning material but also for the communication with the technical staff.
- **Preparation of a preliminary implementation plan** with feasible deadlines and milestones.
- **Set up of collaborative environments**, dedicated to every MOOCs module, aimed at boosting interaction within small groups and at facilitating learning designers' support to the educators.

3.2. Re-adapting the ABC design methodology

The ABC Learning Design is based on the theory that Dianne Laurillard developed in her work "Teaching as a design science" (2012), where fundamentals of learning theories are combined together with instructional design principles in order to set up the basis of the student's knowledge creation. Afterward, in 2014 those principles were further developed and concretely applied to a series of seminars led by University College London (UCL) in order to support instructors in the design of online or offline

learning programs (Young et al, 2016). These generally consisted of live workshops, where academic teams collaborated in the creation of a sort of visual storyboard representing the future course. By assembling together a series of learning activities required to meet the module’s learning outcomes and assess the students, the educators are asked to virtually recreate the content of their program or course (Young et al, 2016). This methodology spread out especially as a consequence of the COVID-19 pandemic when education institutions were necessitated to reinvent themselves and turn their -originally- live courses into digital courses (Young et al, 2016).

Although the ABC Design approach was mainly developed for traditional academic courses, we saw in it the possibility of using the same concept to support the development of edX MOOCs. The storyboard traditionally used during the ABC Design session was in fact modified and adapted to the type of structure (composed of modules, sections and units) that is present in all the edX MOOCs. By using a collaborative excel sheet, we created a set of different virtual storyboards, which mirrored the number of modules the MOOCs consisted of and which could be used to recreate through a set of learning activities, taken from the ABC design methodology (practice, acquisition, inquiry, discussion), the entire learning structure of each modules’ section.

Figure 1. Example of ABC Design virtual storyboard used for the European History, Society and Culture MOOC.

Module 4: Colonization and decolonization						
Subsection: 1. Colonialism in Facts & Forms						
Learning activity 1	Practice	Acquisition	Inquiry	Acquisition	Practice	
(Learning activity 2)						
What	have a guess	Video on evolution of colonization	Learning by finding out.	Accordion	Quiz: to check if students know which territories were colonized, when and by whom	
Materials	quiz	Video	Exploration & reflection	Text	Quiz	
Content		Video similar to this one https://www.youtube.com/watch?v=2iNk26iDwe4 "500 Years of European Colonialism"	Definition of "colonialism"	Based on Osterhammel - Colonialism: a Theoretic Overview	Which country belongs to which empire? List of important cases. Some that are not so obvious today (Vietnam, Guyanas, Braz.	
Who						
Status	Not yet started	Finished	Started	Started	Not yet started	
Subsection: 2. Colonialism in Practices						
Learning activity 1	Practice	Acquisition	Practice	Acquisition	Discussion	Practice
(Learning activity 2)						
What	have a guess	Screencast with background voice	Image Overlay	podcast	Discussion	Knowledge check
Materials	quiz	podcast	Pictures & text.	podcast integretad from	Questions	Questions
Content			Look at the pictures and give a short explanation why a certain picture is colonial. Once the answer is written next to picture, they can click	Interview with Lisa Lowe on her book Intimacies of four continents	Questions such as (1) what is the core of Lisa Lowes argument? (2) how is liberal philosophy connected to slavery? ..	Questions on dimentions of colonialism & colonial entanglements
Who						
Status	Not yet started	Not yet started	Not yet started	Finished		Not yet started

Furthermore, the collaborative storyboard was enriched with further information indicating the exact type of activity, the type of material to be used, the completion status as well as the name of the educator who had to produce that specific activity. These learning theories were then implemented during recurring meetings where the educators were supervised in sketching their own modules. This allowed them to thoroughly structure each element of the online course on the basis of the type of content they wanted to offer. This provided all the partners involved in the MOOC production with the right tools for understanding the MOOCs’ structure and for creating educational activities. Also, it contributed to boosting teamwork spirit and creating a solid basis in terms of mutual trust and respect between educators and learning designers.

In fact, the purpose of adaptation of the original ABC design approach, aimed not only at extending the use of this methodology to MOOCs but also at facilitating the application of the methodology process from an organizational point of view, especially given the high number of educators involved in the creation online courses such as the MOOC on European History, Society and Culture. The implementation of this sort of hybrid collaboration -which was further incorporated into all three MOOCs-, made up of both online and onsite meetings and discussions, contributed to easing the design process of the whole MOOC.

4. Conclusions

In this paper, we presented the coordination and management approaches applied to the development of three interlinked MOOCs on European Studies, produced in the context of a Higher Education project. In particular, the MOOC on European History, Society and Culture produced by one of the faculties involved in the initiative, was used as a main case study to highlight the learning design and coordination challenges the team responsible for the MOOCs development came across and the strategies that were implemented in order to facilitate the creation of the MOOC. Moreover, it aimed at bringing direct attention to the complex -and sometimes underestimated- dynamics that often occur between educators and learning designers, and that appear to have often a strong impact also on the quality of the final product.

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