HEIs without MOOCs

BizMOOC Result 2.1: Guidelines for business, HEIs, learners

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(2) Guidelines for Higher Education

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(2) Guidelines for Higher Education

Authors: Marcin Karwiński/Agnieszka (Żur University of Economics Krakow), Mariya Monova-Zheleva / Yanislav Panayotov Zhelev (Burgas Free University), Francisco José Gallego Dolón (University of Alicante)

With support/input/feedback by all BizMOOC partners: FH JOANNEUM Graz (AT), Open University (UK), University of Alicante (ES), Burgas Free University (BG), University of

Economics Krakow (PL), AVL List GmbH (AT), iversity GmbH (DE), DIDA srl (IT), Košice IT Valley (SK), The National Unions of Students in Europe (BE), EADTU (NL)

1. Introduction

This document provides a number of questions and answers relating to how MOOCs address Higher Education Institutions (HEIs). It is aimed at three broad kinds of institutions: those new to MOOCs, those who have a little experience with MOOCs, and those well-experienced in making their own MOOCs. As such, not all questions are relevant to all readers. The questions are grouped under three main categories:

- **MOOC basics**
  - What are MOOCs?
  - What's the difference from other online courses and open education?
  - What types of MOOCs exist?
  - Are MOOCs generally free?
  - Do HEIs recognise MOOCs issued by other institutions?
  - What reasons are there for HEIS to be involved in MOOCs?
  - What means are there to evaluate MOOCs?
- **MOOC adoption**
  - How much does it cost to produce and run a MOOC?
  - Are MOOCs only an extra expense or also a possible new income source for HEIs?
  - How can HEIs stimulate the creation of MOOCs?
  - What are the options for MOOCs' validation and certification policy?
  - How to finance the production of MOOCs?
  - Is it possible for HEIs to transform existing e-learning courses into MOOCs?
- **Advanced MOOC concepts**
  - Do MOOCs contribute to retaining skilled people in

the country (avoiding brain drain)?
- Do MOOCs work as a marketing strategy for HEIs?
- What regulations may have to be taken into account?
- What are the Intellectual Property issues related to MOOC usage?

There are also two further sets of guidelines, which may be of interest: MOOCs for businesses, MOOCs for Society.

2. Guiding Questions & Answers

2.1. MOOC basics	
What are MOOCs?	MOOC stands for **M**assive **O**pen **O**nline **C**ourses. There is no unambiguous, straightforward and broadly accepted definition of a MOOC, but a European collaborative has developed the following clear operational definition: *"An online course designed for large number of participants that can be accessed by anyone anywhere, as long as they have an internet connection, is open to everyone without entry qualifications and offers a full/complete course experience online for free"* (Brouns et al., 2014). This chapter of the MOOC BOOK describes the basic views of what a MOOC is, discusses the commonalities between many definitions and demonstrates the strong connections to both open and online education.
What's the difference from other online courses and open education?	In relation to the MOOC definition, it is essential to understand the differences from other educational provision. For example, MOOCs differ from 'regular' online courses in at least three aspects: • MOOCs are designed for, in theory, unlimited participants and as such are related to the scalability of education services; • MOOCs are, to some extent open and accessible for free without entry qualifications; • All elements of course provision are provided fully online. Further information on different kinds and characteristics of online or blended courses is provided in the following MOOC BOOK chapter, part "How does a MOOC differ from an online course?" However, with different variations in MOOCs (see next question), some of these elements themselves can be altered, so the difference with 'traditional' online courses can become blurred.

What types of MOOCs exist?	In general, distinctions are made between ‘cMOOC’ (‘c’ for connectivity) and ‘xMOOC’ (‘x’ for multiplication), i.e. whether they are designed for an interactive exchange between students and lecturers or primarily for distribution/multiplication of content. The following distinction is overly simplistic (as there are often collaborative elements in xMOOCs, and cMOOCs can also be quite structured), but it provides an overview of the learning setting to expect in each type: • cMOOCs are based on connectivist theories and place an emphasis on connecting learners rather than presenting content. They focus on the network and the learners are often involved in construction of the curriculum. Therefore, this type of course provides you with more freedom in designing your own learning pathway and to connect with other learners, but it is less structured and designed. • xMOOCs are modelled on traditional course materials, theories and teaching methods (e.g. lectures), providing in most cases high quality (video) content and automated testing or quizzes, and are linear and instructor-guided. Therefore, it depends which setting you prefer when learning. In addition, as the MOOC movement advances, new alternatives in the form of online or blended courses evolve, such as hMOOC (Hybrid-MOOC), SPOC (Self Private Online Course), DOCC (Distributed Open Collaborative Course) etc. This chapter of the MOOC BOOK examines the pedagogy associated with MOOCs and explores how the historical development of MOOCs led to two main schools of thought regarding pedagogy.
Are MOOCs generally free?	Per their definition, MOOCs should be basically free. However, there are monetary costs associated with them and MOOC providers are constantly searching for business models. In this respect, more and more revenue streams are introduced. Examples are: Free participation, but fee-based certification, tutoring, individual coaching, tailoring courses to specific target groups, providing follow-up resources or other services. The “business models” chapter of the MOOC BOOK provides you a (totally-free-of-cost) overview to the monetary costs as well as direct and indirect revenues of MOOCs and their associated services and further readings for related issues. The “certification” chapter outlines different paid-for models of certification in MOOCs.
Do HEIs recognise MOOCs issued by other institutions?	Until recently most universities won’t recognise MOOCs as formal qualifications, but they may be recognised as prior learning – this will depend on the university. The issue around identity and credit is of highest importance. Once a student completes a MOOC, the University needs to ensure that he or she has really learned something and earned the credit. Possible solution is the institutions and MOOC entities to develop partnerships with testing centers and verification technology companies. Recently MOOC providers are offering the possibility to get a formal credit for MOOC completion, and in some cases they are already accepted as part of a formal (Bachelor or Master) program. The credibility of MOOC content and completion is far easier when the MOOC is produced by the HEI. In this case the recognition of credits can be automatic. Some universities partner with MOOC platforms instead of producing own MOOCs and still recognise the credits. For example, FutureLearn has linked programs of MOOCs to particular degree programmes in universities, allowing students to transfer this credit into their study. Delft University offers credits for MOOCs for existing students, allowing them to expand their curriculum. Furthermore, many MOOCs are recognised as part of shorter programmes, for example MOOC platforms offering nanodegrees in partnership such as Udacity or micromaster offered by edX. Therefore, MOOCs are recognized as part of shorter programs. Moreover, Udacity promises a job based on their nanodegrees (so recognised by employers) and edX partners state that micromasters are recognized in their formal (bachelor and master) degrees. As we can see, collaborations between MOOC providers and universities are increasing. In Europe this process seems to take further time, but the EU-wide ECTS system provides a promising basis. The chapter on “recognition“ of the MOOC BOOK provides further information on this topic.

What reasons are there for HEIS to be involved in MOOCs?	The most important reasons for higher education institutions to be involved in MOOCs are: 1. **Using MOOCS for financial reasons.** Production of MOOCs can affect HEI's economics by lowering costs (same course for numerous students can save teaching hours) or increasing revenues, generating additional income (from learners outside of HEI). A proper integration of MOOCs in higher education can contribute to a more effective use of teaching time and a flexible learning offer to traditional students and lifelong learners. Reuse of MOOCs provided by other institutions contributes to cost-efficiency of the educational offer. This can happen taken appropriate adaptation and repurposing in line with the concrete necessities and priorities of educational goals and programs. On top, it is potentially possible to translate free access MOOC students into paying students, or to reach international students (Zhenghao et al., 2015). The chapter on "business models" of the MOOC BOOK provides further information on this topic. 2. **Engaging in MOOCs for image/reputation/visibility reasons**. Some MOOCs produced by HEIs can be addressed to prospective students, which can affect student recruitment. MOOCs hold a significant marketing potential, extending the reach of the institution and access to education, building and maintaining the institution brand, for example when MOOcs addressed for learners from developing countries or students with no access to education or those who cannot afford it (Dillahunt et al., 2015). Providing access to open MOOC platforms increases the visibility and positive image of HEIs. Enhanced image will also affect employer branding in the long-term. The chapter "Drivers" of the book, where are discussed the main reasons HEIs to get involved in MOOCs, provides more information. 3. **MOOCs as opportunity for innovation.** MOOcs produced for HEIs community can improve quality, diversity and attractiveness of on campus offering. Enagaging in MOOCs can foster creativity and innovation at HEIs. The MOOC production process involves innovation in teaching and learning in terms of course content and forms of acquiring new knowledge, which can significantly contribute to improving educational outcomes for MOOC participants and on-campus students, improving overall teaching quality, and to the transition to more flexible and online education. On top of that teaching through MOOCs enables tracking of educational effects, learners' progress and growth in a specific subject area much more precisely than traditional courses, which advances our research on teaching and learning (O'Connor, 2014). The chapter on "innovation" of the MOOC BOOK provides further information on this topic. 4. **Responding to the demands of learners and societies.** HEIs engage in MOOCs for reasons relating to their core mission. MOOCs enable access to quality education to as many as people possible and contribute to continuous education of various social groups. MOOcs can be addressed to unemployed helping them to develop certain skills needed for employability. They can also contribute to the free training of employees. MOOCs can serve as great platform to enhance the knowledge circulation in the society, including disseminating new research results (Hanley, 2014). The delivery of high quality digital educational content via MOOCs should be done with in-depth focus on the MOOCs' target audience, availability in multiple languages and adaptability to a concrete cultural context. Delivering MOOCs in the native language increases the reach of education and is considered as a way to preserve cultural identity. The chapter on "LLL competences" of the MOOC BOOK provides further information on this topic. 5. **As a resource and follow-up for traditional courses**. This is usually the first step for HEIs to engage in MOOCs. It takes time for faculty to adapt to the possibilities of MOOCs. It will take a significant investment in "humanware" to transform the way teaching is delivered– either on campus, totally online, or somewhere in between (blended). No one is going to invent a perfect device or platform that transitions faculty members overnight from the old way to a new one (Azevedo, 2012). Many other people–course designers, multimedia specialists–have to provide support. Whether that effort is managed centrally by a senior administrative leader or distributed across the existing administration–and how it is facilitated–are matters of institutional culture. The chapter "Types" provides more information about the existing types and approaches to MOOC didactics and possible future trends in the domain. 6. **Specialization within education process**: HEIs typically provide services that include teaching, assessment, accreditation and student facilities as a package to all learners, whether they require them or not. MOOCs could contribute for **unbundling the process of education,** which means that different parts of this process could be outsourced to specialised institutions and/or be provided in collaboration by several providers. Thus the MOOCs from several providers could be used as a resource for traditional University courses. MOOCs are seen as an accelerator of these unbundling processes by outsourcing or splitting among partners the marketing efforts, ICT/delivery platform, exams, learning analytics services (Robertson and Komljenovic, 2016).

What means are there to evaluate if a MOOC offering is good enough?	Before undertaking a MOOC, you may wish to assess and review its quality on different levels, in order to ensure it is of a high quality, and that it meets your learning/teaching needs. There are a number of ways you can identify and assess the quality of a MOOC: • Look for a clear description of the course- including the breakdown of the modules available, it's intended learning goals and outcomes. • Examine the materials available on the course – ensure the video is of high quality, and that there are e-books and other high quality materials available to download as part of the course • Are there opportunities to work in groups and with other participants – to share ideas and experience, through the use of online communication tools? Can you interact with an instructor? • Will you receive continuous feedback and progress tracking? • Does the MOOC offer a certificate or statement of participation? This chapter of the MOOC BOOK provides more information about quality evaluation of MOOCs.
2.2. MOOC adoption	
How much does it cost to produce and run a MOOC?	Production and development for MOOCs vary between courses and between countries. The amount of money invested is typically dependent on factors such as: • staff costs – number of faculty, administrative and instructional support personnel taking part in the process • length of the MOOC (e.g. 4 or 12 weeks); • hours of video material produced and quality of videography • programming for special features (computer code auto-graders, simulations, gamification, virtual labs and others) • production of further cost-intensive resources, such as graphs, animations, overlays etc. • copyright permissions • type of delivery platforms • post-production services and technical support for participants Naturally, the production of MOOCs by HEIs is highly dependent upon the existing knowledge, experience, equipment and content available prior to course production, etc. Every time the course is running on a MOOC platform, operational costs for teachers, assistants, facilitators and mentors are incurred. Additional costs are needed for the MOOC platform, a fee (annual or per MOOC) for a partnership with a MOOC provider, marketing, etc. This chapter of the MOOC BOOK focuses on existing MOOC business models describing its monetary costs as well as direct and indirect revenues of MOOCs and their associated services, and offers further readings for related issues.

Are MOOCs only an extra expense or also a possible new income source for HEIs?	The production and launching of MOOCs is definitely an extra expense for an HEI. The costs connected with the MOOCs development and implementation can be reduced by: • involving the target audience in either the development (young people learning to code) and/or the operation of the MOOC (peer-to-peer assessment, p2p tutoring, etc.) • providing the MOOC on your own institutional platform and not outsourcing it to one of the MOOC platforms. • using open source software for MOOC platforms or use freely available (social media) tools on the internet in network MOOCs • cost efficient video recording tools • using of existing material and OER or even re-use complete MOOCs from other institutions • a low cost partnership for those services that are scalable and best organised cross-institutionally. In spite of unavoidable and necessary costs, MOOCs carry several potential opportunities for increasing income. These might include: • Raising institutional visibility • Building a stronger brand • Improved pedagogy (large samples of data contribute to increasing teaching and learning effectiveness) • Increasing student enrolment • Reaching new students in conditions of continuously changing student demographics • New projects and partnerships due to enhanced exposure. Direct revenue streams can be generated only through additional services or products sold on-line as complementation or expansion of the core MOOC. Overall, MOOCs do not yet have a sustainable economic model. Their production costs are high if the quality is to be competitive, and their benefits or potential returns are indirect and often long term. However, improved image and visibility, a stronger brand, higher student enrolment thanks to a positive opinion gained through HEI MOOCs and new collaboration avenues are long-term benefits which are absolutely key for any HEI in today's global competitive educational services environment. This article discusses how "Colleges and universities begin to assess the benefits of MOOCs".
How can HEIs stimulate the creation of MOOCs?	The fact that MOOCs require considerable investment and, at the same time, do not guarantee immediate returns is certainly another reason for caution, particularly in times of economic and financial crisis. You cannot expect much progress in MOOCs if additional funding is not available and appropriate adjustments of the regulatory frameworks that support universities' activities (of both students and staff) and their institutional partners are not ensured. As in all areas where strategic institutional and national developments are required, policymakers and university associations and networks should facilitate dialogue and exchange among them. See more in the BizMOOC paper "Identification of regions and players lagging behind in MOOC Initiatives" Main motivation drivers for HEIs regarding the MOOCs creation include: enhancing education opportunities for students, increasing the Institution's visibility and renown, and ultimately increasing student enrolment. In order to stimulate the creation of MOOCs, HEIs need to convince other parties to engage in the participation and creation of MOOCs by addressing the interests of these parties with said MOOCs. HEIs can play the role of driver in the process of MOOCs creation and popularisation. This can be done by constructing coalitions between universities, businesses, organizations and institutions and achieving the synergy effect both in terms of cost effectiveness and in terms of multiplying benefits. See more in the BizMOOC paper "Drivers behind MOOCs /reasons to get involved".

What are the options for MOOCs' validation and certification policy?	Assessing and certifying learners' achievements is a challenge facing those who provide online education: it implies integrating online learning practices into formal curricula and finding ways to validate technology-supported learning in non-formal and informal settings. Validation and recognition instruments used in formal education must adapt to the emergence of a much more diversified educational offer, including new education providers and the new forms of technology-based and technology-enhanced learning. Currently, certain HEIs already validate the learning effects of MOOCs as part of their policy on the validation of non-formal and informal learning. Students can gain ECTS points by completing certain MOOCs (a list of MOOCs eligible for validation must be constructed in this scenario). However, this institutional-level validation is not enough given the European HE environment, where students are highly mobile. Learning effects and ECTS points obtained through MOOCs which are validated by one HEI can be declined by another HEI. In this context, even national level regulations and guidelines are not enough. In the case of the European region, the Bologna Process plays a significant role. The European Credit Transfer and Accumulation System (ECTS) is a tool of the European Higher Education Area (EHEA), so it is only used within HE systems, making studies and courses comparable and transparent across the European Union. Therefore, there is an urgent need to work towards unifying the validation and accreditation criteria in relation to MOOCs across the European Union. The biggest challenge in this context is the development of new tools and procedures for validating and recognising MOOCs which can only be best achieved if a partnership between MOOC providers (regardless of whether they are HEIs or other providers and industry) were created for this purpose. These new tools should respect the principles set out in the Council Recommendation for the Validation of Non-formal and Informal Learning in synergy with established validation and recognition tools and contribute to the creation of a European Area for Skills and Qualifications, the latter aiming to address the diversity of practices across Member States and promote an effective recognition across borders. See more in the BizMOOC paper "Issues for MOOC recognition / certification / accreditation". In Europe, the provision of higher education is funded and partly controlled by national governments. But there are significant differences between the HE systems. The continental European approach to higher education is related to state funding in which most institutions have equal resources and status while the more market-based U.S. model has mixed private-public funding and provision with large difference between HEIs. These differences reflect in institutional policies. See more in the BizMOOC discussion paper "BizMOOC-paper-04-Drivers behind MOOCs".
How to finance the production of MOOCs?	MOOCs offer a complete course experience to learners for free. Since direct revenues from MOOC courses are often lower than the cost to produce and host the courses, the cost are not (directly) paid by MOOC participants but by other parties, usually the creators of the course. An optimal approach to financing MOOC creation and dissemination is coalitions and partnerships with public institutions or private businesses. Sharing the costs can be driven by multiplying benefits and participating in the payback. MOOCs can generate revenue streams that compensate for the development and operational costs. The turnover could be achieved via additional customer-focused services that can be derived from the free MOOC offerings such as: issuing certifications and paid Statements of Participations; donations; "Specialized" Course Curricula, individual coaching, remedial courses, tailored courses for employees as part of professional development training (e.g., Small Private Online Course based on a MOOC), training people who need specific qualifications to access HE. More details in the BizMOOC discussion paper "Existing MOOC business models".
Is it possible for HEIs to transform existing e-learning courses into MOOCs?	t is possible to transform existing e-learning courses into MOOCs. Contents from the e-learning course can be a great starting point to creating a MOOC. This can be a type of content recycling, by transforming the content into a new form adequate for MOOCs. Several aspects, which differ MOOCs from e-learning courses must be kept in mind: • MOOCs are open courses, therefore it is difficult to predict the number of learners – your technology must be ready for bigger numbers • unlike on-campus e-learning course, MOOC learners do not need to learn the same thing at the same time – ensure a clear layout and instruction enabling learners to learn at their own pace • unlike typical e-learning course, materials provided to MOOC learners must be in bite-size chunks • ensure a user friendly registration procedure and a efficient help-desk for your learners • the e-learning content is usually addressed to University students limited to one university while MOOC learners might come from all parts of the world – the content and instruction must be adjusted accordingly (universally comprehensive terminology, culturally aware, clear communication) • While your e-learning student are usually obliged to finish the course, your MOOC learners are not – think how you will encourage high completion rates MOOCs play a role in human development and support long-life learning. Transforming university e-learning courses into MOOCs is challenging, requires adapting a global audience perspective of learners from various backgrounds and ensuring feasibility of use.

2.3. Advanced MOOC concepts	
Do MOOCs contribute to retaining skilled people in the country (avoiding brain drain)?	As an example, only 43 % of Coursera students' derive from North America (UNESCO, 2013, pp. 5-6). The remaining 57 % are distributed around the world and derive from Asia (26 %), Europe (17 %), South America (10 %), Australia (2 %) and Africa (2 %). In the meanwhile, Coursera expanded even further to the Asian market. According to the MOOC provider 'edX', more than half of their students are from developing countries (The Economist, 2014, p. 21). A MOOC is a really accessible, easy way to further your knowledge and understanding of a particular area, gain new skills in a specialism, and learn in a diverse and innovative educational environment alongside other learners. This approach goes beyond geographical borders, so a person from a developing country can obtain knowledge without needing to travel abroad and consequently reduce the possibility of an eventual brain drain. Furthermore, these new skills can easily revert to local development and social improvement. Further information in the BizMOOC papers: • Identification of regions and players lagging behind in MOOC Initiatives and MOOCs • Existing MOOC initiatives in higher education and business sector and the distribution of MOOC learners in EU28.
Do MOOCs work as a marketing strategy for HEIs?	MOOCs can be a powerful tool within HEIs' marketing strategies. The broad range of possibilities and high success expectations can motivate Universities to extensively adopt this kind of courses. However, the amount of institutions offering MOOCs in the same field is constantly rising, making it more important to determine and compare the quality of the different courses. Further information in the MOOC BOOK chapter "Drivers behind MOOCs/reasons to get involved and Existing MOOC quality models". In some cases, formal recognition is the main motivation for learners. Awarding credits or certifications is also a good way to confer some credibility on these courses. Further information in the MOOC BOOK chapter "Issues for MOOC recognition / certification / accreditation".
What regulations may have to be taken into account?	MOOCs were not meant from the beginning to be part of formal education, but as time passes, more and more students have been enrolling in these types of courses, and are requiring some kind of certificate. Thus, legal frameworks are changing to adapt to this new reality. However, this framework very much differs from country to country. Further information in the MOOC BOOK chapter "Existing MOOC initiatives in higher education and business sector and the distribution of MOOC learners in EU28". Especially in the case of Intellectual Property Rights (IPRs) that may have a stronger basis. These are territorial rights whose scope depends on national legislation, despite a certain degree of harmonization by virtue of international agreements. Therefore, MOOC promoters and/or creators must take into account not only their national IPR legislation but also the international IPR framework. Further information in the MOOC BOOK chapter "Massive Open Online Courses and Intellectual Property Rights Issues".
What are the Intellectual Property issues related to MOOC usage?	Intellectual Property Rights (IPRs) are territorial rights whose scope depends on national legislations, despite a certain degree of harmonization by virtue of international agreements. Therefore, MOOC promoters and/or creators must take into account not only their national IPR legislation but also the international IPR framework, namely copyright exceptions, ownership and authorisation and delivery of contents including copyleft-based models and the so-called Open Educational Resources. More detailed information in the MOOC BOOK chapter "Issues for MOOC recognition / certification / accreditation".

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