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Introducing MOOCs to Austrian Universities - Is It Worth It to Accept the Challenge?

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ABSTRACT

The paper deals with necessary requirements to implement MOOCs at European universities, by the example of Austria. As the respective general conditions and business environments are obviously different from the university system in the United States, the analysis of advantages and obstacles of offering MOOCs is done from a local point of view including lecturers' and students' perspectives as well as necessary preconditions that have to be established by the universities and the government. Thereby, challenges in the fields of content creation, the supply of MOOCs, the assessment of knowledge and the development of business models are pointed out and discussed.

KEYWORDS *MOOC, middle Europe, higher education, perspective, preconditions, Austria*

INTRODUCTION

If 2012 was the "Year of the MOOC" (Pappano, 2012) when teachers and learners became really interested in it, then 2013 and 2014 are the years when many start to scrutinize the necessity and ability of MOOCs in today's Higher Education. Even if the approach has changed, the discussion itself is still driven by scientists and practitioners mainly from the United States where the MOOC-movement started (McAuley, Stewart and Siemens, 2010) and where the current main providers of so called xMOOCs (Carson & Schmidt, 2012) like Coursera, Udacity or edX are located (Daniel, 2012). In the following text we mean so-called xMOOCs when MOOCs are mentioned. cMOOCs and experiences on that (Arnold, Kumar, Thillosen & Ebner, 2014) are not part of this publication.

European universities are getting more and more involved in the MOOC movement, and in this context it becomes more obvious that the creation and the use of MOOCs in Europe, especially in German speaking countries, cannot be handled in the same way as in the United States because of the different educational systems and framework requirements. Conole (2013) also classified different types of MOOCs and pointed out the main discrepancies. Therefore this publication deals with the challenges faced by German speaking (brick and mortar) universities when they consider offering MOOCs to their students and (taking into account lifelong learning) to other target groups. In our contribution we take the perspective of Austria as a representative of a middle European country. Step by step we will provide and discuss important considerations which have to be taken into account if a MOOC is offered at an Austrian university. We strongly agree that conceptual and theoretical considerations running high quality MOOCs are absolutely necessary (Reeves, 2013) and would like to contribute essential advisements which should be taken into account before entering the MOOC playground.

Before going into detail about MOOCs, just a few sentences about the situation in higher education in Austria. Universities in Austria are financed by the public and studying is in general free of any charges for resident students. Each university itself is responsible for its study programs. At Austrian universities so-called science-driven lecturing is standard which means that there are no fulltime-lecturers who are not involved in research or - the other way round - lectures are given exclusively by researchers. Finally it is not usual to give lectures online, due to the fact that there are no real distance problems. Teaching is more or less almost face-to-face and on campus. Bearing in mind these major characteristics, it becomes obvious that starting a MOOC initiative has to follow different framework requirements than e.g. in the United States.

METHODOLOGY

The idea of this publication is to sum up all relevant and crucial facts, obstacles and challenges that must be taken into account when a MOOC shall be offered. Therefore numerous qualitative interviews with different stakeholders were conducted to gather different points of view. All in all we talked to seven stakeholders covering different aspects of the topic. In detail we interviewed a platform developer, a student, a teacher, an e-learning expert, an instructional designer, a scientist holding a PhD in education as well as the head of the supporting unit responsible for studies and teaching at in one Austrian university. Together with our own in depth experiences of participating in, running own MOOCs and offering a MOOC-platform we elaborated the main points which have to be considered. Each interview has been transcribed and each single mentioned point is categorized into different perspectives which are explained in more detail in the following chapters.

STEP 1 - CONSIDERING CONDITIONS BEFORE STARTING A MOOC (THE LECTURERS' PERSPECTIVE)

By talking about MOOCs it must be taken into account that their main components are video lectures, quizzes, discussion forums and

multiple-choice assessments (Wedekind, 2014). Providing these components means a lot of work for the lecturers as well as for the instructional designers and producers. Thus the following crucial challenges have to be kept in mind:

- Obligation: The production of such materials is not enshrined in the Austrian civil service law of academic staff. I.e. in general nobody can be forced to offer a lecture in the form of a MOOC (or even to enrich his/her lecture(s) with for example additional multimedia material).
- Financial situation: Due to the strained financial situation, there is normally no extra money for such productions, i.e. lecturers have no financial incentive to take on this additional work.
- Reputation: Moreover, there are no other motivating factors such as appreciation within the university or the consideration for habilitation procedures (kind of second PhD at Austrian and German universities). I.e. lecturers who are willing to do the needed extra work do not get any additional benefit for their personal career out of it.

And even if lecturers follow their intrinsic motivation for good education to take all the effort they have to deal with additional challenges:

- Copyright: The Austrian copyright is very strict and distinguishes clearly between teaching in a lecture hall (which is considered to be an academic context) and teaching with the help of online components (which is considered to be a public context). Therefore, while using third party content in the form of a scientific quote is legal within a lecture hall, the same way of providing the content as a video lecture may cause serious legal issues, due to the fact that they may be at risk of not being allowed to provide content in that way. This means that lecturers - who of course are aware of this issue - hesitate to make their presentation available to the public. The use of Open Educational Resources (OER) can be a solution in this matter (Schaffert, 2010). But OER-contents are rather rare and many lecturers do not even use the existing sources because they tend to rely on familiar materials like published (and printed) books because they follow habitual routine.
- Replacement: In the civil service law of academic staff there exists no (!) regulation whether and how the production of materials used in a MOOC replaces traditional teaching activities, i.e. lecturers in fact have to face an additional time exposure, which they do not get paid for. Moreover, they depend on the decision of their university management whether they are allowed (or encouraged) in general to produce MOOCs. However, at the moment there is no general guideline in Austria if (and under which conditions) the actually prescribed presence of lecturers in classrooms may be replaced by online teaching activities
- Instructional Design: Teaching with the use of MOOCs needs special educational concepts including instructional design, communication strategies and a basic knowledge about educational technologies (Khalil & Ebner, 2013). Normally lecturers per se do not have any of these skills, they need to be trained. Many of them would attend such trainings to increase their didactic knowledge but most Austrian universities do still not offer further education in this subject area. Therefore, many lecturers refuse to produce MOOCs because of their didactic and technical uncertainty.

Summing up Step 1, there is no real motivation for a lecturer to do a MOOC as well as a negative financial situation with little monetary backing and more or less no real benefit for his/her personal career. Furthermore, the lecturers have to struggle with copyright issues and need training to get the required knowledge to deliver a technically sound and well-supported piece of work.

STEP 2 - SUPPLY OF MOOCS (THE INSTITUTIONS' PERSPECTIVE)

Currently there is no clear opinion whether universities should host their MOOCs on their own servers or if they should participate in consortia like Coursera or EdX, which started doing business with Google (Oremus, 2013). A decision on this question of course depends on the existing infrastructure and the technical possibilities as well as the strategic focus of the respective university. Assuming that Austrian universities would rather use their own information systems (due to the fact that they do not really rely on third-party products), they have to consider the following challenges from a technical point of view:

- Information System: Although almost every university in Austria runs a learning management system, these systems are not designed to host MOOCs in a proper way. This means that universities have to invest much time as well as money to develop and operate their own MOOC-platform.
- Privacy Policies: If the successful completion of a MOOC by students should be credited to their study, it must be known whether these students are enrolled at the university as well as fulfill all degree requirements. I.e. an interface between the user management of the MOOC platform and the students´ database is needed, a requirement which may affect privacy policies. Since by definition a MOOC is open to anybody there must also be a technical solution to distinguish enrolled students from independent learners.

From a legal and organizational perspective the following obstacles have to be overcome:

- Curricula: If a MOOC has to be part of a regular course, it must be included in the respective curriculum. Since adapting a curriculum is a large administrative effort, the usage of MOOCs as part of a regular study program needs to be planned thoroughly in advance. Currently, there is no real evidence that Austrian universities have already begun to consider how to integrate MOOCs into their curricula.
- Critical Mass: MOOCs by definition should be attended by a critical mass of participants. Apart from a few massive face-to-face courses such a course format would probably fail to attract a sufficient number of participants (even if enrolled students and individual learners are put together) in a small country like Austria. I.e. that Austrian universities (the reputation of which cannot compete against e.g. Harvard or MIT) either have to cooperate and offer joint MOOCs or they need to spend a rather huge amount of financial and personnel resources to promote their MOOCs properly. At present there seems to be no common strategy on this matter.

Summing up Step 2, the infrastructure, privacy policies and the effect on the curricula must be taken into account from an institutional perspective. Further problems could also occur such as the multiple reuse of content or the question of a sufficient number of participants being enrolled to make the course sustainable.

STEP 3 - REVIEW OF KNOWLEDGE ACQUISITION AND RECOGNITION (THE STUDENTS' PERSPECTIVE)

Almost all of the current MOOCs offer tools for self-evaluation (e.g. quizzes), use multiple-choice assessments to examine the learning outcome and award certificates of attendance and completion. But students who pass these exams won´t be awarded credit points (Gaebel, 2013). This concept is not really attractive for regular students who seek to finish their studies as soon as possible. Hence, if Austrian universities want to implement MOOCs as successfully as possible they have to consider the following conditions:

- Credits: Under Austrian conditions MOOCs only make sense to students if they will be credited for their studies (which is currently rarely the case). I.e. universities have to develop certain strategies

(especially considering the curricular integration) on how MOOCs can become comparable to regular lectures.
- Assessment: To examine a huge number of students (who are enrolled for a MOOC) technical and organizational solutions need to be developed. These solutions must ensure that students are completing the exams by themselves.
- Learning Outcomes: The learning outcome guidelines have to be defined to regulate how a specific learning outcome is measured. E.g. the measurement may include the participation in discussions in the form of forums as well as a successfully passed examination.
- Third-party MOOC: Additional guidelines need to be developed to regulate the conditions under which the completion of third-party MOOCs will be awarded with credits so that students know for sure if it is worth (in the sense of her/his study progress) to enroll for a MOOC.
- Role of participants: MOOCs will be attended by regular students and individual learners at the same time but only the first group may be awarded credits. Thus, different types of certificates must be labeled.
- Quality: Eventually, guidelines for quality assurance have to be defined considering the quality of video lectures and quizzes as well as the collaborative performance of the students and their learning outcomes - not to forget measures against plagiarism (Lackner, Kopp and Ebner, 2014).

Step 3 can be summarized that from the students' perspective questions concerning credits, types of assessments and learning outcomes must be answered. Furthermore students strongly claim the appropriate quality of the MOOCs and the permission of integration of so called third-party MOOCs. Finally, the institutions have to bear in mind that because of the openness of MOOCs different kinds of participants can enroll for the course.

STEP 4 - FINANCING OF MOOCS (THE GOVERNMENT'S PERSPECTIVE)

It is obvious that a large amount of money is needed to develop and provide MOOCs. The operators of MOOC-platforms in the United States have worked on different business models in the meantime. These models include: certification (students pay for a badge or certificate); secure assessments (students pay to have their examinations invigilated/proctored); employee recruitment (companies pay for access to student performance records); applicant screening (employers/universities pay for access to records to screen applicants); human tutoring or assignment marking (for which students pay); selling the MOOC platform to enterprises to use them in their own training courses; sponsorships (third party sponsors of courses); tuition fees (Daniel, 2012).

However, these business models cannot be adapted easily to the conditions of Austrian (and most of the European) universities. This is for the following reasons:

- Tuition: The majority of students does not pay tuition and/or examination fees in Austria or several other European countries.
- Recruitment: Privacy policies are rather strict in Austrian universities, i.e. it is inconceivable to sell students' data to third-party institutions. Because there is nothing to sell to enterprises, no well-frequented MOOC-platforms have been established in Europe by now.
- Sponsorship: Sponsorship has no big tradition in academia in Europe.

Considering these circumstances step 4 can be summarized that there are not too many options left for Austrian universities to finance the development and provision of MOOCs. On the one hand they may try to adapt the business models established in the United States, on the other hand they may ask the ministry of education or other governmental institutions for additional funding.

Lecturer	Institution	Student	Government
Financial situation	Information system	Third-party MOOC	Sponsorship
Replacement	Multiple lecturers	Role of participants	Recruitment
Copyright	Privacy Policies	Assessment	Tuition
Obligation	Curricula	Credits	
Reputation	Critical Mass	Quality	
Instructional Design	Reuse of content	Learning Outcomes	

Table 1 Obstacles and challenges from different perspectives

CONCLUSION

All the obstacles mentioned above are summarized again in Table 1 (as an enumeration not as a classification): Are there any good reasons why Austrian universities should accept the challenge to provide MOOCs to their students? Again the main reason why universities in the United States currently accept the challenge (namely to promote their institution, professors and study programs) holds not much value for Austrian universities, as they do not compete with each other in the manner of their American counterparts. Nevertheless, one reason for the implementation of MOOCs might be that Austrian universities may fulfill their obligations in the field of lifelong learning by providing scientific content to the general public.

Furthermore, there is also a unique selling point called creditability. If the universities manage to overcome all mentioned obstacles that come along with the implementation of MOOCs into regular study programs, this will have an innovative impact on the prospective specification of MOOCs. Dropout rates would decrease tremendously because enrolled students are awarded credit points (which is usually the strongest motivation to finish a course). Overcrowded lecture halls would be a thing of the past because students have the opportunity to learn online. Recorded lectures could be re-used by different institutions, which grants lecturers more time to coach their students personally. The coverage of the associated challenges is accompanied by the enhancement of the instructional design of MOOCs. In this context the "third model" mentioned by de Freitas (de Freitas, 2013) could be a good basis: The model suggests "using a third of recorded materials, a third of activities including quizzes and assignments and a third of time for social interactions".

Finally, taking into account the specific Austrian (and European - at least German-speaking -countries) conditions, the development and provision of MOOCs as proposed above will be a long and bumpy road. However, considering the possible outcome as a substantial step towards tomorrow´s higher education landscape it might well be worth it to accept the challenge.

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