

MOOC and OERs in a Virtual Mobility experience

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Abstract. Abstract. The present paper is part of the Erasmus + project “OpenVM: Opening Education for Developing, Assessing and Recognising Virtual Mobility Skills in Higher Education”. The aim of this paper is to share good practices related to the implementation of Virtual Mobility (VM) that partners have been developing throughout the project. There will be presented guidelines for designing and choosing OERs for our VM MOOC and which design principles we have been following for the MOOC design and delivery. The guidelines are inspired by previous experiences of VM and literature analysis and they can be useful to design future VM experiences. In addition, the structure and the evaluation of the pre-pilot mini MOOC named “media and digital learning” is presented in detail.

Keywords: Open Virtual Mobility; OERs; MOOCs.

1 Introduction

Virtual mobility (VM) stands for ICT supported activities, organized at an institutional level, that realise or facilitate international, collaborative experiences in a teaching and/or learning context (Erasmus + program guide). VM activities allow students enrolled in a higher educational institute to access to education elsewhere, supported by curricular, legal and institutional frameworks of participating universities of other higher educational institutes. VM participants can receive instructional support, assessment and gain formal credits from the “virtually” visited institution. This form of student mobility requires the adoption of the Learning Agreement, an instrument, that stipulates the rights and duties of the students and the Higher Education institution (Ubachs & Henderikx, 2018). Since online learning has been growing in recent years, VM can answer to many pedagogical needs, especially for less advantaged students.

VM has a great potential to contribute to the internationalisation and opening up of Higher Education by creating international, collaborative experiences for educators and students as well as equal possibilities of participation in exchange programs, including those who are unable to travel for social, financial or other reasons. VM emphasises cross-border collaboration with people from different backgrounds and cultures working and studying together. It aims also at the enhancement of participants' intercultural understanding and ICT ensure to obtain the same benefits as one would have with physical mobility but without the need to travel. Despite the numerous projects and initiatives promoting VM in the last years, the uptake of the concept in Higher Education is still low and poorly known and, as a consequence, HEIs, educators, and students need more effective ways of achievement and recognition of VM skills necessary to successfully engage in VM experience.

The present paper is part of the Erasmus + project "OpenVM: Opening Education for Developing, Assessing and Recognising Virtual Mobility Skills in Higher Education". The project aims at promoting VM of educators and students in Higher Education, in line with Bologna and Open Education principles (van Mourik Broekman, Hall, Byfield, Hides, & Worthington, 2015) by developing and disseminating tools for an online, open and flexible learning, assessment, and recognition of VM skills using Open Credentials. The project is expected to achieve 7 intellectual outputs related to different aspects of the Open Virtual Mobility ideation and implementation. Although all the outputs are strongly inter-related, the present paper will focus on the activities related to Output 6 named "OER, MOOC, and Pilots". This output is aimed at designing VM OERs and the VM MOOC and ensuring the project sustainability through a piloting phase. The MOOC will provide different kinds of learning experiences, including gamification (Output 5) and collaborative learning activities, supported by the use of the Matching tool, an algorithmic solution to build learning groups (Output 3). The OpenVM MOOC contents are based on the skills necessary to be engaged in Virtual Mobility (identified in Output 1). Participants' knowledge and skills will be assessed through different kinds of e-assessment tools (Output 4) and learning achievements will be recognized through badges (Output 5). The MOOC is integrated into a Virtual Mobility Learning HUB (Output 2) that provides a Personal Learning Environment.

2 General background on OpenVM MOOCs and OERs

The aim of the Open VM MOOC is to help educators and students developing a defined set of VM skills and applying them to Virtual Mobility programs, actions and activities in various academic disciplines (Yuan & Powell, 2013). Like any successful course, the MOOC requires careful planning and continuous revision (Daradoumis, Bassi, Xhafa, & Caballé, 2013). This is the reason why it was necessary to define strategies to provide an Open VM experience. The MOOC Canvas (Alario-Hoyos, Pérez-Sanagustín, Delgado-Kloos, 2013) was adopted to support the design, and to promote discussions between the different stakeholders involved in the creation of a MOOC. The resources (equipment, platform, human and intellectual) were defined before the beginning of the project whilst part of the design decisions (especially in terms of

objective and competences, learning contents and assessment activities) have been negotiated in progress among the output leader and the partners.

In line with the features proposed by Bates (2015), the OpenVM MOOC was conceived in line with the xMOOC definition, since we decided to include the following features:

1. a large number of participants, facilities for the storing and streaming on demand of digital materials, automated assessment procedures and student performance tracking;
2. computer-marked assignments after which students receive immediate computerised feedback. These tests are used both for formative assessment and to provide a badge after the MOOC successful fulfillment. Most assignments are based on multiple-choice and computer-marked questions. In addition, peer-assessment tasks were adopted for competences' assessment. Students were randomly assigned to small groups in order to peer assess e-portfolios contents;
3. supporting materials, such as slides, supplementary audio files, URLs to other resources, online articles and video lectures can be downloaded by participants and they will have Creative CC License;
4. moderation is directed to all the participants rather than to individuals. Participants are expected to moderate each other's comments or questions;
5. badges or certificates are used to recognize the successful completion of a course, based on a final computer-marked assessment.

Eight areas have been identified (Output 1) as main contents for the OpenVM MOOC:

1. Intercultural Skills; 2. Collaborative learning; 3. Autonomy-driven learning; 4. Networked Learning; 5. Media and digital literacy; 6. Active self-regulated learning; 7. Open mindedness; 8. Virtual Mobility Knowledge. For each area, a miniMOOC was created. Three levels are then proposed for each area: beginner, intermediate, and advanced. Each combination of content and level has been called *SubMOOC*. Thus, the OpenVM MOOC was composed by eight miniMOOC and 24 subMOOCs. A SubMOOC is a section of the Open VM MOOC and it has the following characteristics:
1. it refers only to levels of complexity (beginner, intermediate, and advanced);
 2. it refers only to one of the areas identified;
 3. it contains 1 or 2 videos and two textual documents (blog pages, pdfs, presentations); the intermediate and advanced SubMOOCs also have scientific literature references;
 4. once the participant completed a SubMOOC, an Open Badge will be issued;
 5. it lasts one week;
 6. it contains at least 1 formative assessment quiz composed by closed items (MCQ, FIB, T/F, Matching) with included feedback and at least 1 summative assessment quiz composed by MCQ items with included feedback;
 7. the advanced SubMOOCs have a peer assessment based on the Tune Models of Peer Assessment described by Piech and others (2013).

All the miniMOOC will contain approximately 9 Open Educational Resources (3 for the basic level, 3 for the intermediate level and 3 for the advanced level) . An OER is a “digitised material freely and openly offered for educators, students, and self-learners to use and reuse for teaching, learning, and research” (OECD, 2017). In the OpenVM MOOC, OERs are considered the study material that participants could read,

listen, download and re-use for their personal purposes. OERs include slides, supplementary audio files, URLs to other resources, online articles and video lectures. Three main macro-indicators have been identified for the OERs Evaluation (Poce, Agrusti & Re 2015), to assess OER to be included in the Open VM MOOC: 1 Quality 2. Appropriateness and 3. Technical aspects. After creating an OERs assessment grid based on the three main macro-indicators, the project partners were required to provide OERs in different formats and languages, based on the skills content defined in the Intellectual Output 1.

Roma Tre team organized the work as following:

1. each partner has to find at least 9 OERs related to one of the skills defined in the IO1. The skill assignment was based on partners' scientific expertise. Partners had to download the OERs in Google Sheets;
2. the OERs selected are peer-assessed by another partner of the project. Peer-assessors could add comments and feedback and propose alternative OERs. In this way, partners have the opportunity to compare their opinions about OERs that could be included in the VM MOOC.
3. In the last phase, partners work in small groups of two or three people. They are invited to organize the OERs selected and assessed in a miniMOOC, following a provided structure.

The process was conceived to guarantee that each partner contributes to the selection and assessment of the OERs and eventually to the OpenVM MOOC design. Following this process, the partners contribute to the realization of the first mini-MOOC on "Media and Digital Literacy" that will be described in details in the next paragraph.

3 The OpenVM pre-pilot: Media and Digital Literacy

The first miniMOOC (Figure 1) has been realised to be tested during the pre-pilot phase and it is focused on "Media and Digital Literacy". The main topics of the course are open education, open resources and licenses, the web mechanisms that affect learning processes, and media languages (multimediality, hypertextuality). The pedagogical approaches used to design the pre-pilot phase are collaborative and social learning (Andriessen, Baker, & Suthers, 2013); reflective practices (Schön, 2017), and self-regulated learning (Zimmerman, 2013). For each level, students need to read texts, e-books or pdf, watch videos and participate in discussions forums. When they complete all the tasks, they fill in summative quizzes, write a post on their e-portfolios, make and receive peer-assessment in order to obtain the badges.

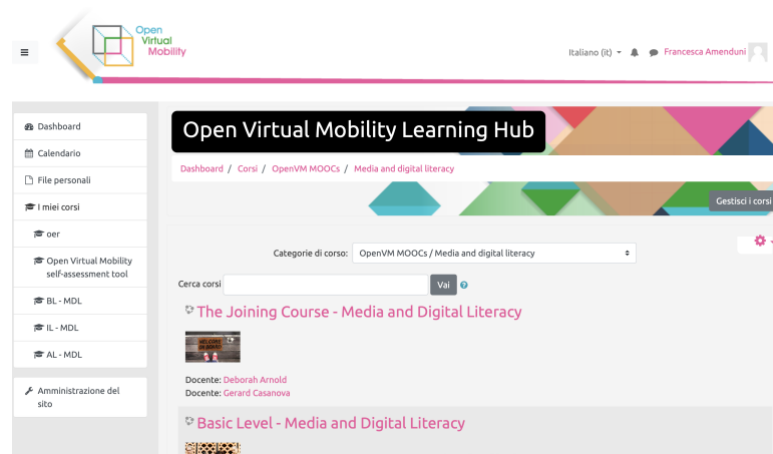


Figure 1 Home page of the course on Media and Digital Literacy

The MOOC has a small narrative, by differentiating personal stories according to the user's profile: teacher and student. The introductory MOOC includes the narrative (scenario, problem-based) and the pre-assessment quiz. According to the score obtained in the pre-assessment quiz, students are invited to enroll in the basic, intermediate or advanced level. The pilot phase lasted approximately 2 weeks: 10 days to complete all the tasks and 4 days to complete the e-portfolio and the peer-assessment.

At the end of the course, students were invited to fill in an online questionnaire aimed at investigating (1) participants' general evaluation, (2) participants' specific evaluation, (3) participants' recommendations for improvement and (4) hours spent to complete the course. Qualitative data from 9 participants have been collected until now. The participants enjoyed the selected contents, especially in form of videos (see the Extract 1). The basic level MOOC was the most endorsed.

E1 *"The MOOC was a useful introduction to Media Literacy. The videos on TEDx are fascinating. The instructions were easy to follow. All in all I liked the course because it is a new way of learning and a new topic."*

Although participants appreciated the opportunity to test their skills through e-assessments and e-portfolios, they also suggested to improve the e-portfolio functionality. Participants would need clearer instructions regarding how to fill in the e-portfolios, providing for instance a template.

4 Conclusion

Virtual Mobility represents a great opportunity to contribute to the students and educators internationalisation. ICTs can guarantee the same benefits of physical mobility without the need to travel. Thus, it is necessary for the technologies employed to be carefully planned and continuously revised. This paper provides useful guidelines to design a Virtual Mobility experience based on the use of MOOCs and OERs. The

guidelines are inspired by previous experiences of Virtual Mobility and literature analysis, and they were used to design the OpenVM MOOC in the Erasmus + project “OpenVM: Opening Education for Developing, Assessing and Recognising Virtual Mobility Skills in Higher Education”. A description of the pre-pilot MOOC on Media and Digital Skills is presented to give a concrete basis for educators and practitioners to design their own Virtual Mobility courses, by following the principles of self-regulated learning.

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