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Curricular modernization by implementing MOOCs model (MODE IT)

User Guide

for participants in the IO2 training

“Introduction to MOOC design and delivery”

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Contents

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The MODE IT online training program *Introduction to MOOC design and delivery* aims to enable Higher Education teachers to develop and deliver MOOCs as well as to integrate MOOCs into formal curricula in a didactically sound manner. With this training, academic staff in Europe and beyond will receive a unique opportunity to grow towards becoming a MOOC designer, MOOC developer and MOOC integrator in formal education. This Guide aims to give an overview of the training for potentials users, and explains the organization of the course published on the LMS Moodle of Kaunas University of Technology, MODE IT partner: https://open.ktu.edu/course/view.php?id=74.

1. Target groups

The training program might be of help for the following target groups:

MOOCs INSTRUCTORS/INSTRUCTIONAL DESIGNERS: they will get a deeper understanding of the innovative techniques of MOOCs development and delivery, and of supporting strategies for teaching staff and students who will teach/learn via MOOCs. They will acquire these additional digital competences that will contribute to their professional development, and therefore significantly upgrade their qualifications that will be recognized at their home institutions.

HEI TEACHERS AND TRAINERS: they will get free opportunities for their professional development. Their pedagogical and digital skills will be

boosted, and this will lead to increased quality of educational services and to better learning experiences of their students.

HEI STUDENTS: the modules of the training program could be taken by students enrolled in the study programs that focus on (innovative) Education technologies. In this way, they will receive a solid additional input for their future career as instructional designers, or educators.

2. Learning objectives of the MOOC course

The main goal of this training is to help participants acquire necessary knowledge and skills (competencies) that will help them integrate MOOCs or MOOC-based pedagogies into their formal courses and study programs. The participants will be able to:

1. **Develop a deep understanding about essential competencies of student-centered learning;**
2. **Design a course based on the most frequently employed competencies in MOOCs;**
3. **Develop effective, efficient and appealing learning materials for MOOCs;**
4. **Discuss the effective delivery modes of MOOCs in the light of theoretical foundations directly related to MOOCs;**
5. **Employ different techniques and competencies to successfully integrate MOOCs in formal curricula**

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Objectives of Module 1 Foundation of Online Learning

Develop a deep understanding about essential competencies of student-centered learning

The participants will be able to:

1. **Explain the essentials of competence-based learning,**
2. **Apply different ways of developing learning activities that address the identified competences and/or learning objectives,**
3. **Design activities that foster learners' cognitive, emotional, and behavioral engagement and active participation in the learning processes**
4. **Use variety of techniques to monitor the learners' progresses, and provide learners with a feedback on-time,**
5. **Design and implement activities that offer collaboration and teamwork opportunities to the learners,**
6. **Integrate different formative and summative assessment methods and tools in courses,**
7. **Explain the definitions, the importance, and ways to implement technology-enhanced learning and, in particular, online learning**

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Objectives of Module 2: MOOC Course Design

Design a course based on the most frequently employed competencies in MOOCs

The participants will be able to:

1. **Understand the specific concepts related to MOOCs in relation to other forms of online learning.**
2. **Design a course and incorporate learning and assessment activities, which require learners to use digital technologies effectively and responsibly for collaboration and interaction with other learners and instructors.**
3. **Design a course based on meaningful opportunities for learners to reflect on their learning and the learning processes.**
4. **Design a course or program that recognizes the prior formal, informal, and non-formal learning, as well as that provides recognition opportunities by others.**
5. **Identify and develop reliable, valid, and equitable digital assessment strategies, including self- and peer-assessment, in large online courses where learners have different backgrounds, needs, and characteristics.**
6. **Use different methods to increase the motivation of diverse learners towards learning and completing their courses.**
7. **Design a learning plan that maximizes the support for learners' engagement, motivation and deep learning in a course or program.**
8. **Integrate independent learning methods to improve the learners' self-regulated learning skills.**
9. **Design courses which are open to anyone who wishes to learn using OERs.**
10. **Design a course or program that fosters community building among learners.**
11. **Design a methodology and tools to assess the quality of a MOOC.**

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Objectives of Module 3: MOOC Content Production

Develop effective, efficient and appealing learning materials for MOOCs

The participants will be able to:

1. **Apply various learning design principles including multimedia learning design rules to produce open digital learning materials with the appropriate licensing schemes.**
2. **Apply guidelines and good practice examples in the creation of high-quality educational videos using different video recording and editing tools.**
3. **Use other specific tools to produce other types of content like presentations with voice-overs and animated presentations.**
4. **Assess the quality of open educational resources and use variety of strategies to adopt these resources in MOOCs**

Objectives of Module 4: MOOC Delivery

Discuss the effective delivery modes of MOOCs in the light of theoretical foundations directly related to MOOCs

The participants will be able to:

1. **Understand the different possibilities offered by the different MOOC providers.**
2. **Design and offer a MOOC-based learning process on various online education delivery tools including LMSs, Web Conferencing, Web 2.0 tools.**
3. **Apply different online communication tools effectively in accordance with the ethical and education principles for establishing better interaction with others in MOOCs or similar online learning environments.**
4. **Apply pedagogical strategies and methods involving social networking in MOOCs and use them in new situations.**
5. **Analyze learners' data collected in any learning environment.**

6. **Assess the effectiveness, efficiency, engagement and endurance of the learning resources and activities to ensure all the learners' access regardless of learners' digital expectations, abilities, uses and misconceptions, as well as contextual, physical or cognitive constraints to their use of digital technologies**

Objectives of Module 5: MOOC in Formal Learning

Employ different techniques and competencies to successfully integrate MOOCs in formal curricula

The participants will be able to:

1. **Explain the importance and methods to integrate a MOOC in a formal course.**
2. **Assess the effectiveness, efficiency, appeal, and endurance of integrating pedagogical approaches often seen in MOOCs into a formal course of program.**
3. **Design a course that requires the integration of a MOOC as a relevant component of the learning process.**
4. **Design a formal study program that requires the integration of MOOCs into the learning process.**
5. **Design an environment and activities for peer support for professional development of instructors.**

The training consists of 5 stand-alone modules covering different aspects of MOOCs:

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Module 1: Foundation of Online Learning

- **Lesson 1.** Competence based learning.
- **Lesson 2.** Activity-based learning.
- **Lesson 3.** Learner engagement and participation.
- **Lesson 4.** Collaboration and teamwork
- **Lesson 5.** Monitoring and feedback.
- **Lesson 6.** Assessment.
- **Lesson 7.** Technology-enhanced learning

Module 2: MOOC Course Design

- **Lesson 1.** Introduction to MOOCs - Specific Theoretical Considerations
- **Lesson 2.** Designing Online Learning Scenarios for Large Cohorts of Students
- **Lesson 3.** Designing Learning Materials for MOOCs
- **Lesson 4.** Creating Assessment Activities for MOOCs
- **Lesson 5.** Assessing the Quality of MOOCs

Module 3: MOOC Content Production

- **Lesson 1:** Digital Learning Resources
- **Lesson 2:** Locating, Assessing the Quality, and Using Open Educational Resources
- **Lesson 3:** Making Good Educational Videos/ Animations / Demos/ Images
- **Lesson 4:** Making Good Presentations
- **Lesson 5:** Co-creation - OER & Publishing

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Module 4: MOOC Delivery

- **Lesson 1:** Introduction to MOOC delivery
- **Lesson 2:** Major academic MOOC aggregators
- **Lesson 3:** Major non-academic MOOC aggregators
- **Lesson 4:** Using Learning Management Systems to deliver MOOCs
- **Lesson 5:** Using other online education tools to deliver MOOCs
- **Lesson 6:** Using synchronous communication tools to interact with and engage learners
- **Lesson 7:** Using asynchronous communication tools to interact with and engage learners
- **Lesson 8:** Using social networking tools in MOOCs to interact with and engage learners
- **Lesson 9:** What is learning analytics and how to collect data
- **Lesson 10:** Accessibility guidelines for MOOCs

Module 5: MOOC in Formal Learning

- **Lesson 1:** Formal vs. non-formal Learning
- **Lesson 2:** Fields of application: Courses, modules, study programmes
- **Lesson 3:** Status quo & best practice
- **Lesson 4:** Quality assurance and content exchange

Each module has an expected workload for the student of approximately 12 hours and is expected to be completed in 2 weeks. It consists of several short learning videos, supplementary learning materials, quizzes for self-assessment, and practical assignments.

A final recommended project work is also included where participants can create their small-scale MOOC putting in practice the skills and competences obtained from the program.

The MODE IT MOOC pedagogical approach is based on autonomous, individual learning with a modular design structure, so that participants can complete either the whole program or just individual modules. The MODE IT MOOC pedagogical approach is also designed in a way to promote micro-learning (or bite-size learning).

The MODE IT MOOC delivery model is based on the use of video-lectures supplemented by support documents that provide further information and references for further reading, quizzes for self-assessment and individual learning assignments.

- **Video-lecture: The main resource is a video-lecture of 3 minutes maximum (micro-learning) which can include the combination of visual and verbal information to improve the success of the learning approach.**

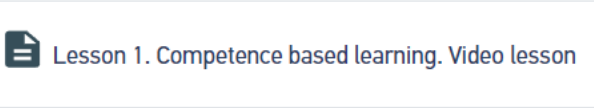

Fig. 1. Video lecture from Lesson 1, Module 1

- **Quiz: For immediate feedback, quizzes in the form of 3 questions will be provided so that the student can self-assess his/her understanding of the content. These interactive elements not only help assess the level of knowledge of course participants but they also increase attention span and enable course participants to engage actively with the content.**

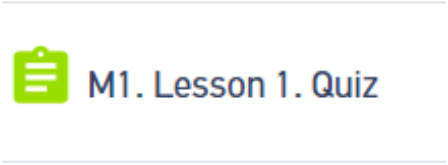

Fig. 2. Quiz from Lesson 1, Module 1

- **Support documents and references: Supplementary reading material will be provided to reinforce the learning. These documents can also reference relevant literature or hyperlink scholarly articles so that the participants can engage with the content comprehensively.**

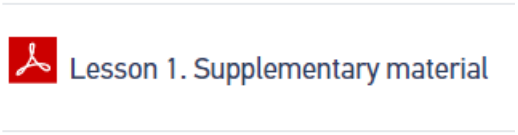

Fig. 3. Supplementary reading material from Lesson 1, Module 1

- **Assignment: Assignments are an elementary component of learning units because they allow the student to reflect and synthesize the acquired information and document the learning progress at the end of each unit. Open-text tasks like short essays, discussion questions, case studies, etc. can be offered taking in consideration that they will require some form of assessment by peers.**

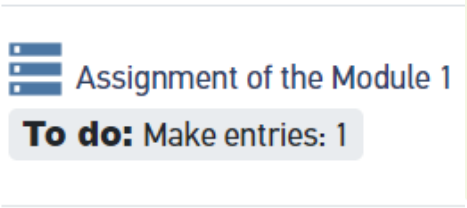

Fig. 4. Assignments from Module 1

4. Assessment & evaluation

Each of the modules has a series of short quizzes, usually after each lesson to check the level of your understanding. The type of the questions is usually multiple choice, with one or several correct answers, depending on the question. However, you might also encounter “select missing word”, “true/false” or “matching” questions. In Fig. 5 you can see an example from one of the quizzes in Module 1.

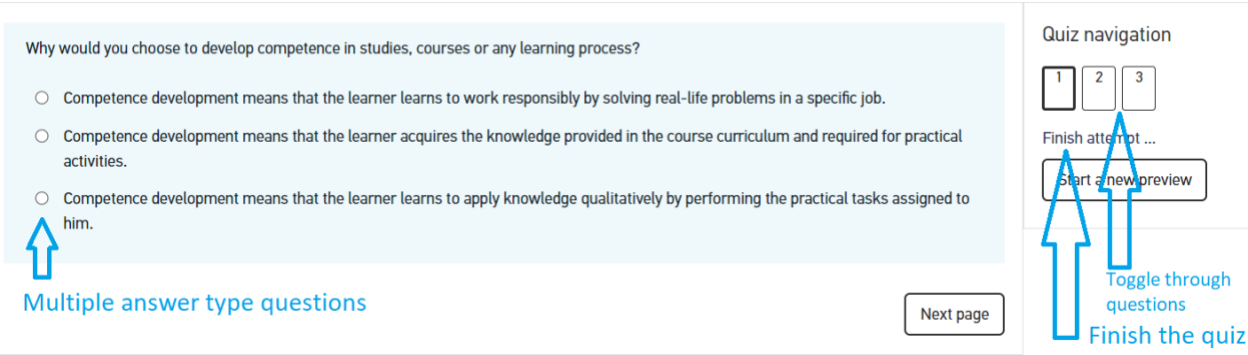

Fig. 5. Example of quiz from Module 1

Some modules also have an end-of-module quiz.

Each of the modules has also a final assignment, and you can see these below:

Module 1 - In this assignment, you have to analyze the instructional design as well as learning and instructional activities of a real course or study program and prepare the redesigned instructional design of the course or study program for MOOC implementation that aims to develop the learners' competence according to approaches of student-centered and online learning courses.

Module 2 - Design a MOOC using the template attached (You may either use the excel or the word template document). Make sure to take the following points into consideration in your design:

- decide on the type of MOOC you want to develop,
- identify your course objectives,
- plan the learning activities,

- plan the types of learning materials and plan for accessibility,
- employ multiple forms of interaction addressing different types of MOOC learners,
- include a variety of digital assessment strategies suited to the learning objectives of your course,
- evaluate the quality of your course using the checklist attached.

Module 3 - Produce a digital learning resource for one of your lessons/courses. The digital learning resource should contain both text and a multimedia artefact (video, image, animation, presentation. Keep in mind all the advice you received during this module. You can choose to use any tool you want for creating the digital learning resource, either suggested by us or one of your own choosing.

Module 4

1. Considering what you have listen and read in this Module, select your MOOC delivery platform. Is it going to be your institutional LMS? An open MOOC provider like Udemy? A different tool? Think about your target groups, your content and activities formats, your familiarity with the different tools, etc.
2. Once you selected your MOOC delivery platform, create a space for your MOOC. This might include registering at a MOOC provider as instructor or asking your support services for a space in the institutional LMS, etc...
3. Familiarize yourself with the tools that you have available to customize your space...

4. Upload the contents, create the activities, setup your space. Make a module ready...
5. Submit here your assignment. The assessment of this assignment will be done differently according to the chosen platform. In some cases it will be possible for you to create a student account so that we can access your MOOC and check it (in that case just submit here the link to the MOOC and the access username and passwd). If that is not possible you should submit a video recording of the simulated use of your MOOC. Show us how a student would enter the MOOC and what tools he/she could use (in this case, submit here the video).
6. After you receive comments from your peers on your assignment, you might want to make your MOOC available also for your peers. If so, publish the access info and/or video on the Learning Cafe so that they can provide additional feedback.

Module 5 - assignments after each Lesson:

- **Lesson 1** - Select a module that you have taught in the past. Create a syllabus for this module showing the workload of the module for all learning activities. Finally, define one lesson of the module to be replaced by a MOOC. Justify your decision professionally.
- **Lesson 2** - Find any degree programme on the internet and analyse it in terms of its formal criteria. Then try to transfer these criteria into a matrix. Then search the internet for a continuing education programme and create a matrix for it as well. Then try to credit the continuing education programme to the degree programme according to the mechanisms you have learned.

- **Lesson 3** - This task follows on from the task in Lesson 01. Research a MOOC that you think is suitable for the module chosen in Lesson 01. Then break down the MOOC schematically into its individual components/learning activities and evaluate them in terms of workload and content. Finally, make a reasoned statement as to whether the researched MOOC is suitable for use in "your" module. In doing so, also comment on the requirements of the "Standards and Guidelines for Quality Assurance in the European Higher Education Area". The aim of this assignment is to generate a best practice for the integration of MOOCs into formal learning. We look forward to your contribution.

- **Lesson 4** - After you have discussed with the other participants which project members you need for your project "Integration of a MOOC into an existing curriculum", now create a job advertisement for a project leader. Describe exactly which team the project leader will lead and what his/her skills and functions are.

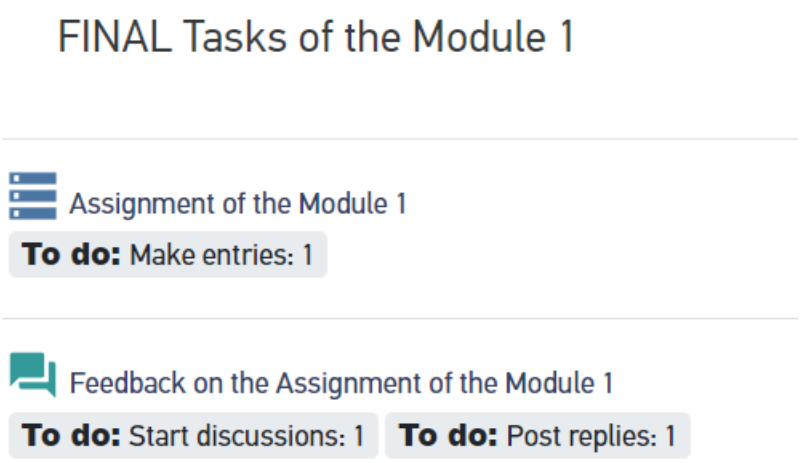

Fig. 6. Final assignment of Module 1

The evaluation could be done either by the tutors of the course, trained teachers from each of the project's partners, or by other learners, as a peer-review feedback. Each course has several forums integrated and dedicated also for evaluation.

5. Integration methods of MOOCs in traditional higher education

Credit transfer MOOCs

Description: Validation and integration of a full MOOC course in HE curricula.

Credit transfer recognition of finalised MOOC courses or MOOC micro-specialisation in HE accredited specialisations.

Advantages:

- **In Europe it can be based on ECTS (European Credit Transfer System) (e.g. some courses on iVersity, FutureLearn).**
- **Students and teachers develop new digital literacy skills.**
- **Learning autonomy, self-assessment, assuming responsible learning objectives.**
- **Virtual mobility is implemented (new skills for an open life long learning student).**
- **Reducing the costs and the administrative burden on HEI.**

Challenges:

- **Validation and integration – different stakeholders with different goals**

- **(international bodies to validate the course quality? E.g. EADTU OpenUp Quality Label)**
- **Different national legislation and quality assurance standards and regulation**
- **Recognition of online ECTS is accepted only in some EU countries, and it requires a formal assessment**
- **Less MOOC courses offered in non-international languages**
- **Evaluation and assessment (method, qualification, etc)**
- **Strategy for co-operation between teaching staff, courses, universities (a challenge but the main future advantage)**

MOOCs/ OERs integration in a course

Description: Integrating a full MOOCs/OERs in a course as part of course activities, group work, project, laboratory

Implemented mainly by universities and professors who also produce the course, but also by some professors (method used by us)

In two ways:

1. **Student chooses the MOOCs/OERs independently (give full control to students)**
2. **Student follows the MOOCs/OERs indicated by the professor**

Advantages:

- **Exposure to a global learning community**
- **Access to quality information, resources**
- **Integrated face-to-face discussions with some tutor support in class**
- **The curated use of information – better analyse & synthesize abilities**
- **Control given to student, student autonomy in assessing their own learning needs**
- **Students and teachers develop new digital literacy skills**
- **Open scholar – open student; Openness to culture of knowledge-sharing and re-use, open education**
- **Partially the Virtual mobility is implemented, students gain new skills as an**

open lifelong learning student
- **Reduced costs for HE course production, but similar in teaching hours**

Challenges:

- **Evaluation and assessment of student activity in a MOOC (partial, if MOOC is completed, percentage of course assessment)**
- **Complex course design management for professors**
- **Complementarity and synchronicity of the MOOC with the traditional course**
- **MOOCs/OERs curation and quality validation**
- **Different national legislation and quality assurance standards and regulation, to allow online courses to be integrated even partially in face-to-face HE**
- **Less courses in not international languages (mid-size countries, non-English speaking students)**

MOOCs/ OERs elements as resources

Description: Integrating MOOCs/ OERs as external course resources, reference, bibliography

The MOOCs/OERs selection and validation is done by each professor

Advantages:

- Open scholar – open student; Openness to culture of knowledge-sharing and re-use, open education
- Access to quality information, resources
- Integrated face-to-face discussions with full tutor support
- Retrieval learning
- Reduced costs for HE course production, but similar in teaching hours

Challenges:

- Time-consuming as not a clear MOOCs/OERs quality approved repository exist
- Professors prior experience in designing and running online courses is needed
- Evaluation and assessment of student work
- Copyright of OERs

6. Getting support

The course can be found on:

- The KTU Moodle platform - https://open.ktu.edu/course/view.php?id=74
- Iversity – https://iversity.org/en/courses/introduction-to-mooc-design-and-delivery [1]

If you need support you can contact one of the tutors from the partner universities:

Module 1 - Rita Butkiene (rita.butkiene [at] ktu [dot] lt), Daina Gudoniene (daina.gudoniene [at] ktu [dot] lt), KTU

Module 2 - Ela Akgün Özbek (elaaozbek [at] gmail [dot] com) & Abdullah Saykılı (asaykili [at] anadolu [dot] edu [dot] tr), AU

Module 3 - Diana Andone (diana.andone [at] upt [dot] ro) & Vlad Mihaescu (vlad.mihaescu [at] upt [dot] ro), UPT

Module 4 - Ana Barata (bpm [at] isep [dot] ipp [dot] pt), Piedade Carvalho (pbc [at] isep [dot] ipp [dot] pt), Carlos Vaz de Carvalho (cmc [at] isep [dot] ipp [dot] pt) & Dirceu Esdras (diresdras [at] gmail [dot] com), IPP

Module 5 - Tim Brüggemann (brueggemann [at] fh-mittelstand [dot] de), FHM

Each of the modules has forums integrated, where learners can discuss amongst each other or with the course trainers.

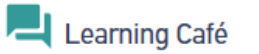

Fig. 7. Learning Cafe - Forum for discussions

[1] The course on Iversity has several differences, due to technical specificities of the platform, such as the lack of Discussion Forums, lack of peer-evaluation possibilities and different forms of quizzes.