Language Massive Open Online Courses

LangMOOC Toolkit

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Language Massive
Open Online Courses

LangMOOCs Toolkit

Erasmus + Programme,
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Globalization in the 21st century has enhanced communication between countries and created a strong need for foreign language learning. It is proven that learning a foreign language improves brain functionality and social skills and fosters cultural awareness. LangMOOC, Language Massive Open Online Courses, is based on this idea. It aims to increase support for foreign languages by promoting multilingualism through the creation of a Massive Open Online Course (MOOC). Therefore, before the implementation of Language MOOC, the projects’ partners researched MOOCs to find the best and most efficient ways to create such tools, by gathering information and good practices. This toolkit is the result of that work.

The LangMOOC toolkit is a collaborative product developed by Active Citizen Partnership (Greece), Iberika Education Group GmbH (Germany), Dacorum Council for Voluntary Service (United Kingdom), the Norwegian University of Science and Technology (Norway), and CESIE (Italy). This toolkit is addressed to language teachers and learners, system administrators, service providers, educators and educational policy makers for languages schools and training centers to utilize Open Educational Resources and MOOCs for language learning.

This toolkit is a guideline that contains the core elements of a Massive Open Online Course and Interactive Language Learning Environment. It is, in a way, a tutorial that provides the various educational and technical tools necessary to create a language MOOC. This toolkit is divided into 6 chapters. Each chapter includes objectives and helpful tips to watch out for when creating your own Language MOOC.

Chapter 1: Content
Here you will learn what is needed to create a LangMOOC and guidelines for the creation and arrangement of the content. This emphasizes three key features:

→ Educational resources chosen for the MOOC
→ Use of interactive tools to illustrate the educational content
→ Activities to put the theoretical knowledge into practice

Chapter 2: Pedagogical Methods
Even though a MOOC is an online learning resource, it has to be interactive.

→ A focus on interactive learning to enhance dynamic learning
→ Initial assessment of the user's knowledge in desired language
→ Static and interactive learning materials to allow users to create an individualized learning plan

Chapter 3: Assessment
This section will discuss the learning process.

→ Methodology for ongoing processes aimed to understand and improve each student’s learning
→ Setting goals and standards to analyze results and determine if the students’ performance matches the expectations and standards
The process has two objectives:
→ Document the learning
→ Improve student learning

Chapter 4: Community Building
It is vitally important to develop a strong and interactive community in order to share information, files and also feedback.
An online community allows students to:

→ monitor their learning
→ design their learning plan to enhance their performance and progress
→ interact with one another to learn
This chapter includes practical tools to foster this community such as video lectures, discussion forums, text editing and tele-conferencing, peer assessment and peer learning. These are all used to ensure active participation of the students.

**Chapter 5: Technical Infrastructure (hardware and software)**
The three major technical points are:
→ Reliability
→ Security
→ Credibility
Three possible platform types have been analyzed in this chapter: Open Source Solutions, Free MOOC Platforms and Learning Management Systems (LMS).

**Chapter 6: Financial Issues**
The costs of the creation and maintenance of such a platform were studied in order to evaluate the feasibility of a MOOC. This chapter includes the:
→ Initial planning in creating a MOOC (technology and resources need)
→ Running costs and the day-to-day delivery of the learning provision
→ Public sector funding
→ Financial management and variances to consider

Overall, this toolkit provides a set of tools to support the design, management and implementation of a Language MOOC, also based on the lessons learned by the project partners during the piloting phase of the language MOOCs developed within the project.
Chapter 1: Content

Objectives:

- Determine the necessary content for a language MOOC: educational resources, interactive materials, and cultural aspects
- Provide examples of existing Language MOOCs to show variability in course styles
- Establish a guideline for content arrangement

The learning units within a MOOC need to be based on each learner’s specific needs. This is why some units may include a short video lecture, while others offer a variety of additional exercises, texts, quizzes etc. The average duration of a MOOC is between 4-6 weeks or three months, depending on the topic and the difficulty of the learning contents. It is important to keep in mind that users will not spend many hours per day on a MOOC. It is important to that the MOOC stimulates participants and gives them motivation to finish the course. For example, in the German pilot course, it was observed that most of the learners had motivational problems after beginning the course and did not complete it. One of the ways to achieve this could be through the establishment of stronger communication between the participants and the tutor through Chat channels or forums.

As mentioned in the research report on a MOOCs pedagogical framework, there are a variety of components that can be used within a MOOC. These components can be modified by difficulty level to encourage progress. It is advisable that each MOOC begins with an introduction to the language and includes grammar and syntax for each level. Most MOOCs include a tutorial (either a video or written instructions) on its organization, sections, learning content, objectives and activities. Video lectures given by professors, reading exercises with multiple choice tests or other exercises are other common features in MOOCs. Courses may include a list of FAQs and tasks for students, such as uploading their own material or videos or doing homework exercises.

Here is a guideline on how to create and arrange the contents in a language MOOC.

Where to start...

First, there are three key features of a Language MOOCs’ content:
1. Choice or development of the right educational resources
2. Use of interactive tools, media and technology
3. Inclusion of activities that promote cultural awareness aside from language skills

Educational Resources

Educational resources are important to the success of a MOOC, and there must be authentic educational resources to help users fully comprehend the language.

A language MOOC should include:

- Structure / rules of the language
- Grammar (adjusted to the chosen level of the learner, such as alphabet, verbs, vocabulary, etc.)
- Listening, speaking, pronunciation, and writing
- Lexicon (e.g. greetings, personal introductions, how to communicate in daily situations such as shopping, asking for directions etc.)

For example, Instreamia’s Spanish MOOC makes users repeat sentences and words so they understand how to use the language in a real world situation. This method of learning allows users to gain fluidity and learn a new language through repetition. Basic grammar rules must be clearly structured and assisted by vocabulary, writing, and pronunciation exercises.
Use of interactive tools, media and technology

The use of media and technology is essential to the success of a MOOC. When creating a MOOC, it is very important to make it highly interactive. The use of technology increases interaction through the use of interactive word games, quizzes (fill in the blanks, multiple choice) online discussion groups and flash cards.

Tactical use of media can vastly increase user activity and can engage a wider audience. This can be effectively done through the use of videos, quizzes and tests. Media is not only a way to engross users, but it also continuously evaluates and monitors learning to track progression.

It is also possible to adjust questions to match the level of the user. Each user will have a learning profile through which it will be possible to accurately monitor and estimate the user's level and figure out which tasks are too arduous for him/her. Learning is far more efficient by tailoring the learning materials to each user's individual needs based on their user profile.

Videos are arguably the best way for learners to learn a language because users are able to listen to native speakers for pronunciation and examples of cultural references. Technology should be used to track progress, monitor how many hours the user is spending on the course, and determine what areas need improvement. It is possible to decide whether or not to make the learning self-paced and progressed. This means users can set their level and determine how they choose to progress, or they can use a software that monitors their learning.

Overall, in terms of media and technology, the use of tactile features can be very attractive for users. An example is the platform called Language Exchange, which includes tactile quizzes where learners have drag and drop tasks as seen in the picture on the right.

Interaction and active involvement of participants is the main focus of a MOOC.

Activities that promote cultural awareness and language skills

A MOOC should also comprise of activities that increase language skills and cultural awareness. With reference to the promotion of cultural awareness, which represents another important element of success of any language course, some activities about idioms and cultural aspects of the language (e.g. recipes) were introduced in the various modules. For instance in the Italian course, exercises were used to encourage an understanding of the language and its use in real word situations and engage students in the Italian culture. Also in this case it could be useful to add some activities introducing or clarifying aspects linked, for instance, to dialects, non-verbal communication, history and lifestyle.

As shown in the Spanish MOOC example below, language immersion can be fashioned through interactive videos in Spanish.
This creates a feeling of familiarity with the proper pronunciation and tonal use of words. It is recommended that you use various types of activities to engage in learning, because this allows users to change tasks depending on which way they prefer to learn (auditory or kinesthetic). In addition, the opportunity to chat and talk with other users will create a learning atmosphere where the language is practiced. Communication between learners can be far more beneficial than just quizzes. This real world application of the language is crucial to achieving fluency.

Another example can be taken from the **Open2study** platform, ([Chinese Language and Culture](https://open2study.com)) as seen below. Cultural awareness is essential to language learning. Awareness with learning is a crucial element to learning a language. This allows users to have greater understanding of the culture attached to the language they wish to learn and to be aware of different dialects and the ethnic groups. National cuisine and social diversity should also be considered. This aspect is important because it increases sensitivity and multiculturalism. By focusing not only on the gain of linguistic aspects, but also cultural elements, the students will develop a deeper interest of a language. In doing so, learning becomes more practical.

Users will have a greater understanding of the culture and will have an increased awareness of cultural references to better engage with people.

**Content Arrangement**

The content arrangement of a MOOC is essential to creating an effective MOOC. It is recommended that everything be in a clear, easy to read structure as seen in the picture. An introduction should be given to explain the different steps of learning a new language. This can be put into steps that reflect each user’s level and learning goals.

Application of different learning tasks (vocabulary, grammar, listening, reading and comprehension) must be considered to create a MOOC. It is beneficial to add extra reading as seen in the picture from Open2learn. This gives learners who wish to learn more the option to progress at their own pace. Here is an example of how to arrange the contents index for a language MOOC:

1. Basic introductions (greetings)- videos, quizzes, assignments
2. Culture and regional dialects-videos, quizzes, assignments
3. Numbers- videos, quizzes, assignments
4. Months and weeks- videos, quizzes, assignments
5. Basic grammar rules- videos, quizzes, assignments
6. Past present and future- videos, quizzes, assignments
7. Specialized vocabulary
   - Politics
   - Environment
   - Business
   - Health and Well being
In terms of structure, the piloting phase of the LangMOOCs project allowed the consortium to analyze the effectiveness of selected topics and the arrangement of the contents, grammatical notions and exercises under each section.

The figure to the right displays an example of the structure in the Italian language MOOC.

It is possible to monitor progress and to efficiently learn through clear and concise descriptions of each stage’s contents. This also allows users to choose which type of activity they want to do and track their personal progress.

It is important to use videos as a way to learn; thus it is recommended that an introductory video (2-3 minutes tutorial) be put on the first page of the MOOC. This video should explain what users will learn, how the MOOC works and how to use it. Users will enhance their learning by actively understanding and interacting with the page. It’s very important to include both a written and video explanation on how a MOOC works, although it is most likely people will prefer the video. This provides a definitive way to ensure engagement and to understand how to operate a MOOC.

In version 2 of the Italian Language MOOC an introductory video was produced by CESIE through a tool called PowToon which is freely accessible online. The video helped to increase the interactivity of the course compared to version 1 of the MOOC.
When arranging the layout of a MOOC, it is important to clearly define the structure of the levels from beginner to advanced, thus allowing the users to easily access the areas and level they wish to advance from without having to start from the beginning. By adding another section for learners which contains specialized language topics (based on the student’s level) e.g. politics, the environment, business and other subjects, users may learn specialized language skills, which is essential if they want to use their language in a defined or professional setting.

Overall, fluidity and simplicity are the fundamentals to successfully arrange the contents of a MOOC. Everything should be shown in a clear pinnacle structure in short sentences. To simplify, topics and classes should be presented in a clear ascending order from easy to difficult, and each section should have a brief summary of about 1-2 short sentences to explain what will be covered. This allows the information to be understood clearly as it is more digestible in an implicit way. As shown in the picture below, short sentences are the most efficient way to clearly explain how the activity works.

Another aspect which can be replicated from the picture is the use of rhetorical questions to explain what the learner has do in the activity. This is far more engaging than using normal sentences, because it is a question, which forces the reader to think and engage with the activity.

Videos and media, an attractive layout, as well as the addition of interactive activities are fundamental aspects for the success of a MOOC.

From the Pilot courses, the consortium tested the following topics: family and professions, surroundings, geography and transport, food and culture, shopping, money and prices, human body, and one free choice from each partner for the A2 level. It became apparent that even though the topics were the same, the content created varied. While making a Moodle MOOC course, be sure to use topics that are appropriate for the level and language being taught. With Moodle it is possible to present the content in a varied way to keep the users engaged and challenged. You can easily change your format, and design to accordingly to the content, for example by deciding between “Topic format”, “social format” or “weekly format” on your course. You can also choose modules where the student needs to achieve a certain score on assessments before progressing in the course. This gives opportunities for variation in the platform, and thus creates customized learning.

Build on these key ideas, arrange your contents in an effective way and you’ll create a successful MOOC!
Chapter 2: Pedagogy

Objectives:

• Identify the teaching methods used in a MOOC
• Provide examples of activity types
• Outline the importance of interactive materials in a Language MOOC

MOOCs, as their name indicates, are massive online open courses and with the advancement of cMOOCs (connectivity MOOCs), online learning is more interactive and engaging than ever before. cMOOCs are not just a form of frontal learning; they incorporate pedagogical methods that are transforming online learning. The most important thing to remember while creating a MOOC is that even though these courses are online, they must be interactive. The next step is to use the interactive aspects to enhance dynamic learning. These resources are what make MOOCs special, and this chapter will give an overview of what pedagogical methods MOOCs use and how to use them effectively for the greatest number of diverse participants.

A MOOC is paced with reading, lectures, and activities, and although some MOOCs are self-paced and some are controlled, students are responsible for completing the readings, grammar explanations and exercises. As mentioned in Chapter 1, a MOOC’s learning profile is essential to determine which level the user is in at enrollment. Figure 1 is an example of a “Test your knowledge” quiz with 25 questions that the user should complete before beginning the course. The quiz should have a range of challenging questions to most adequately determine the level.

Figure 11
Once the user has determined which level to begin with, the next step is to begin with the static parts of MOOCs. These static materials are crucial in maximizing the effectiveness of a course. Each unit will be prefaced with lectures focusing on grammar and real-world usage of the topics. Figure 12 shows the lesson breakdown for an online Moodle course. There is an important vocabulary section to be completed before the listening section. Many MOOCs also use video materials to present dialogues and listening exercises to students. Recorded lectures [see figure 4] may be used to best inform users. The users are encouraged to listen or watch more than once so that they get a deeper understanding. Maybe the most vital to each section is an interactive exercise. This exercise, in Figure 12, is a vocabulary and expressions exercise that directly relates to the listening. Upon completion of this exercise, the user will have already been exposed to all the information through the static materials, and now they must test their knowledge!

As seen in figure 13, a B1 grammar lesson is presented with explanations followed by many examples of application. The static section of a course will include an introduction to the topic, acquaintance with new vocabulary and grammar, sayings and phrases, use in real communicative situations, and grammar and syntax that are relevant at the language level. In order to learn a language, users will have to have a good grasp of vocabulary and grammatical rules to apply their knowledge in a real world situation. These grammar sheets should be written in a clear and understandable structure to provide the students with a reference sheet they can always access to clear up any questions they may have. Although MOOCs are highly interactive resources, these materials act as a point of reference for users' learning basis.
Interactive Learning Materials

Quizzes and graded exercises are used to test the user’s overall understanding. The quizzes should have a variety of exercise types including, but not limited to, multiple choice, fill in the blank, and short answers.

With Moodle the consortium’s pilots utilized some of its internal tools to quiz a user’s learning. These tools, which can be varied and added to, include:

1. Cloze-answers
2. Drag- and- drop on picture
3. Drag- and- drop on text
4. Multiple choice questions
5. Short answers
6. Pick missing words
7. Free text

It is a good idea to use a variation of exercise types when creating a Language MOOC to keep the user engaged and challenged. Including a vocabulary review is also a great way to build on each unit’s topic. Here are some other interactive aspects that can be used to enhance the learning process.

Communication is key to online learning and the success of MOOCs. This includes peer-teacher interactions, and open class community.

1. **Peer-peer assessment:**
   - Refers to students grading and commenting on each other's work. This builds an open community to share what each student has individually learned with the other members of the course.

2. **Course hangouts:**
   - Allows for users to discuss relevant topics in a structured manner. There is a topic given by the teacher and users meet in real time to practice their speaking skills.

![Figure 15](image1.png)

![Figure 16](image2.png)
3. **Peer feedback:**
   - Allows students to test their deeper understanding of content by providing comments on their peers' work.
   - Encourages interaction between users to enhance their communication skills.

4. **Student-teacher interactions:**
   - Allow teachers and students to have communication with each other. The students can ask for clarifications and the teachers can provide feedback on the student's work.

The collaborative aspects of online learning are critical to success. Forums and open discussions are used to discuss course content with other users and professors to build community learning. However, from the pilot courses, the consortium found that in order to achieve the greatest level of communication there should be an administrator who fosters the discussions (for instance, in the writing exercises), assigns additional tasks to learners, etc. This administrator should be easily accessible and there should be a clear explanation of how and when to contact him or her.

![Image](image1.png)

**Figure 17**

The forum can also be used as a place for sharing external language learning resources. Youtube channels, media websites, online games, and blogs can assist users in further learning. External resources can be shared between users and teachers as well as permanently posted for accessibility.

MOOCs foster a student's autonomy to learn when they want using the methods best for each individual. Self-paced learning allows a course to be accessible to the greatest number of participants because they can determine when they want to learn. Overall, MOOCs must incorporate static and interactive learning methods in a clear and understandable way for all users. The first step is to provide users with grammar and vocabulary reference sheets with a variety of exercises, which are then followed by peer-peer assessments and open discussions. In this way, MOOCs can replicate a conventional classroom with flexibility and ease depending on each individual learner's goals.
Chapter 3: Assessment

Objectives:

- Determine the assessment basics and strategies for Language MOOCs
- Discover examples of assessment methods
- Understand useful tips for designing a MOOC’s assessment strategy

Designing the right assessment strategy for a MOOC is a real challenge. In contrary to other online courses, the assessment strategy for MOOCs need special attention because of their unique characteristics: very large participant population with diversity of language, culture, age, motivation experience and background knowledge. When it comes to Massive Open Online Language Courses designing an efficient assessment strategy becomes even more challenging.

In the end of this chapter, you will also have the possibility to assess the knowledge acquired with a “self-assessment” questionnaire.

Assessment: Basic “Knowledge pills”

A. Assessment basics

Assessment is the way instructors gather data about their teaching and their students’ learning (Hanna & Dettmer, 2004).

There are 3 basic types of assessment:

**Diagnostic assessment:** The goal of a diagnostic assessment is to help you explore and identify your students’ current knowledge (of a topic, language etc.) and their skill sets and capabilities, in order to help you better plan what to teach and how to teach it. This can be done with pre-tests, self-assessments, discussion board responses, brief private Interviews.

**Formative assessment:** The goal of formative assessment is to get feedback about student’s progress toward one or more goals in order to identify areas that may need improvement. This can be done with self-assessments, peer-assessments, instructor feedback, computer-generated feedback, feedback from mentors and people outside of the course.

**Summative assessment:** The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark. This can be done with final examination and final project (Bull, B. 2014).

Remember that students can also evaluate the course (teaching effectiveness, content, etc.) and the instructor can do a self-evaluation.

B. MOOC Assessment basics

The selection of appropriate assessments strategies should match instructional goals and objectives. In MOOCs, there are usually different types of activities and assessments that align with the different pedagogical “philosophies” of MOOCs (detailed in Lang MOOC Del.1 & 2).

**xMOOCs Assessment:** The majority of xMOOCs/xMOOLCs adopt the traditional pedagogical model and give more emphasis on the summative type of assessment (score is based on learners’ performance in tests during and at the end of the course).
**cMOOCs Assessment**

cMOOCs / cMOOLCs support a nontraditional pedagogical model that focuses on connected and collaborative learning. In that case the typical assessment strategy is based on formative assessment and less on summative (peer or self-assessment assignments).

**Assessment strategy for MOOLCs**

In Language MOOCs, the design of the assessment strategy is not a simple task as we need to combine all types of assessment with an emphasis on formative assessment.

It is highly important to remember that learners should be put at the center of the learning process before we start designing any course content, assignment or assessment. One big difference between a MOOC and a traditional course is that a MOOC is completely voluntary. MOOC learners decide what they want to participate in and how they wish to participate. A language learner should feel really motivated to take a language course. This can be done by personalizing the course, which includes assessment processes as well.

1st AS point: A self-assessment “diagnostic” test is ideal for identifying each learner's language level and to get useful information about the strengths and weaknesses of the learners. In this way the content and assignments prepared could be more effectively matched with the skills and the learning needs of the learner.

2nd AS point: A “formative” assessment plan that focuses on the multiple and ongoing support of the learner is the next important point of our assessment strategy. Scaffolding the learning process of each participant is crucial in Language Learning. This can be done in several ways such as providing [instant automated feedback](#) (quizzes etc.), [peer to peer feedback](#) (discussion forums, comments or reviews to collaborative or personal tasks, social media networking discussions, peer to peer chatting, hangouts, Skype conversations, automated peer assignment tasks, project based peer to peer assignments), [teacher to student feedback](#) (answers to forum questions, email reviews of essays or activities with open ended questions, reviews of project-based personal assignments), [group to group](#) (reviews to project based group assignments), [student to “open authentic community”/Natives](#) (discussions, comments, sharing in Open Social Networks) and [self-assessment](#) (automated quizzes for testing your learning improvement with suggestions for grammar and new practice).

3nd AS point: All language learners should be responsible for their own learning. Even though the final grade is not the purpose of the learning a final test can help all students to check the improvement of their language skills (measurement of quantitative assessment data). For sure obtaining a certification, ECTS or even a badge can be a great motivation for many people even though this shouldn't be their basic aim.

**Examples**

1. Coursera ([www.coursera.org](http://www.coursera.org)) uses a calibrated peer review, including students in the assessment of their peers. The students hand in their essays, and get scored by their peers. (Check the 1st LangMOOC report to find all the useful info about this type of assessment).

2. Instreamia ([www.instreamia.com](http://www.instreamia.com)) uses authentic interactive videos in order to test learners’ listening comprehension via simple knowledge checks, such as a fill-in-the-blank listening problem. It also gives the possibility to learners to ask for their peers’ or their teacher's feedback in every step of the activity. Instreamia also offers a “diagnostic test” and supports adaptive and personalized learning/assessment processes: It offers an advanced spaced repetition system that optimizes review and retention of new vocabulary and structures. What is really useful is that it can visualize the learning process of the learners according to the basic language skills practiced (writing, listening, etc.).

3. UNED COMA ([https://coma.uned.es](https://coma.uned.es)) has a rich automated award system that includes a series of 35 badges (3 levels of badges: gold, silver, bronze) for assessing participants’ learning activities and their social behavior in the discussion forum.
4. Mixxer (www.language-exchanges.org/) has as overall aim to support language learners and teachers to find a language exchange via the free voice over IP phone program Skype. Students can create their profile, they can add the native and target language that they want to practice and they can also find a partner individually. Once they have found a potential partner, they send a message proposing times to meet and eventually communicate via Skype. It also provides a profile dashboard where you can check all the points that you have gained by your peers for your help to their writing assignments.

5. EdX (https://www.edx.org/) offers the possibility of authentic communication as it uses extensive set of social networking options for real interaction (using Google Groups and Google Hangouts with groups of 10).

6. MOOCs developed within the LangMOOC project on Moodle: For example, The Italian LangMOOC course was designed with the idea of continuously tracking users’ progress through regularly graded activities, whose results are combined and weighted for the final grade. The Norwegian course has six 45 minute lectures to cover reading, writing, speaking and listening for each topic. Different exercises with added vocabulary practice tested the users’ learning progress. The partners utilized an array of exercise types to focus on all aspects of language learning complemented by forums and discussions to encourage interactions. As you can see from the German LangMOOC, different grammar, listening, reading, writing, and speaking exercises were practiced in each topic.

For all courses, a pre-evaluation test was taken immediately after enrollment, which provides the students with an overview of their learning needs in relation to the topics covered in the course, while the final test represents a chance to test all the knowledge acquired throughout the entire course.
Useful tips

Before you start working on the design of your MOOC assessment strategy have a look at the following useful and practical tips:

- **Allow formative assessment to be formative:** Allow the participants to use this feedback to improve and refine their work without focusing on accumulating scores but putting emphasis on the learning goals.

- **Creativity and gamification of the learning process:** Consider adopting a more playful and engaging assessment system, such as “game based vocabulary” (mission, challenge, action plan etc.) or an award automated system with badges, Karma, or points when someone completes an assignment, helps a peer, shares a good idea or useful content, invites a peer for discussion, creates a subgroup for an open discussion, etc. You may include FB “likes”. All these actions can be really motivating for learners.

- **“Deep Learning” Assessment:** It is good to assess your students’ progress through learning activities that drive motivation and attain high levels of learning: ask them to reflect and to analyze an aspect of their everyday life based on the week’s topic using guiding questions with open-ended answers, ask them to evaluate and solve complex problems or to conduct research that they will then present orally in a hangout.

- **Student-initiated feedback:** As a teacher you should encourage students not only to post questions to the discussion forums, a common activity in MOOCs, but also to post artifacts and ask for informal tips or feedback.

- **Narrative assessment:** A useful idea is to adopt a narrative assessment plan where peers provide the feedback in a narrative form using a checklist. This way they can have control of the whole learning process.

- **“Open Graded” Rubrics:** Adding space for peer reviewers to give written comments to justify the grade can work very well with rubrics based on instructor created criteria. Setting deadlines for this type of assessment is also useful.

- **Active & Personalized learning through assessment:** Choosing a system that can be applied to the learning needs of the learners is important. For example: quizzes that can apply questions according to the answers or the interest of the learners, or questions that change when the learner repeats a specific quiz in order to practice a skill, project based activities with clear assessment criteria accustomed to the learning needs and preferences of the learners (give choices to the learners), etc.

- **Flexibility:** You should ask for learners’ feedback and you should be flexible to make the appropriate changes regarding your assessment strategy.

- **Visualization of the learning process:** Evidence based improvement with data mining can be beneficial for learners as they can better control or personalize their learning especially if they can choose the content or the type of assignments that they prefer the most.

- **“Open access” portfolio:** aggregating all student’s activities in an “open portfolio” would be ideal for continuous feedback by teachers and peers.

**Extra Tip:** Check out both LangMOOC reports for more theoretical and practical information about assessment processes (assessment theory, MOILLE framework/questionnaire and representative MOOLC examples).
Chapter 4: Community

Objectives:

• Discuss what an online learning community is and how it helps
• Learn how to build a community to enhance language learning
• Consider different methods to most effectively use your online community

One of the biggest differences between an ordinary online course and a MOOC is the community part. This can be achieved in many ways. For example, through the creation of working groups and teams to carry out specific tasks. In this sense, social networking and social bookmarking tools can be useful to encourage peer cooperation. Different ways of sharing information and files, like Dropbox, will also be useful, especially within the group.

Community and social interaction with peers are also vital in giving students a proactive role in their own education rather than a reactive role in generating and receiving feedback. Through different ways of interaction, discussions and assessing, both from lecturers and peers, MOOCs can transcend the conservative and more traditional way of providing online training.

A key aim in MOOCs will have to be self-regulated learning; making students aware of their own strategies and ways of learning the curriculum. According to Pintrich & Zusho (2002) self-regulated learning refers to the degree to which students can access, regulate, change and modify aspects of their learning process, for example their thinking, their motivation towards the subject and the learning methods and their own behavior during the learning process [1]. MOOCs are primarily directed towards the areas of lifelong learning. Students attending MOOCs will most likely be divided in two groups; 1) Lifelong learners highly motivated and interested in new knowledge and learning and 2) Lifelong learners in need of knowledge in order to enter the labor market or changing their profession. It is especially the second group that needs attention, since they will be most vulnerable and attentive towards the feedback, assessment and social inclusion they receive.

Video Lectures

Video lectures are an integrated part of more or less every MOOC. It is natural to see the lecture as a static part of the lecture, but it is also possible to make it more interactive. This can, for example, include leaving comments on the lecture or making the lecture interactive through tasks.

In figure 20, we see an example of an interactive video from b5p.org [2].

In this example the user stops the video at his own initiative and answers the quiz. The results are displayed and the video continues. This way the video lecture becomes more interactive even though it is still not a part of community.

On the other hand, it is not a problem to allow students to make these videos and distribute them to peers. That way they can interact, get feedback and test their skills with fellow users of the course.
**Discussion forums**

One of the most common interaction channels is discussions forums. In figure 21, we can see a discussion forum from one of the courses provided on ed.ex.

![View of the section Discussion within some open forums and explanation about how to use edx discussions](image)

As we can see, it should be easy to find the forum, in this case called **Discussion**. When you enter the forum for the first time, you see an introductory page that shows **“How to use edx discussions.”** There are several opportunities for the user to search users or topics, to flag or report threads and more. What is important is that the user should be able to customize his/her own usage of the forum. This will provide a better experience.

There are some features of a discussion forum that can enhance the experience and success of a MOOC.

First of all, it is vital that you have a moderator. This moderator should focus on three different elements:

- Moderating the discussion, making sure that users do not break rules and harass others
- Starting new threads, making sure that the forums is active and interesting
- Making sure that users are directed to the correct channels and threads to get answers on their questions.

The forums should also act as a platform for the students to get answers from the lecturers. This means that the lecturer should have his/her own icon, and if possible the answers from the lecturer should be moved towards the top of each thread.

Liking or starring comments and/or threads is another way of creating more interaction in the discussion forums. This makes the students more active, and it is also a way of getting more students to take part in the discussion.
Text editing

Something that is central in language MOOCs is different ways for students to interact with texts. This means that every language MOOC needs opportunities for students to upload files, and receive feedback, either from lecturers or peers.

A nice way to create interaction between peers in writing exercises is by using text editing tools where all users can edit the same document. There are several examples of these kind of tools, like Google docs, Google Hangout or other integrated tools in the platform available. Below we see an example called Etherpad [3]:

![Etherpad, introductory page](image)

As we see, most of these tools have editing tools that are recognizable from popular programs like Word. It is important that the users recognize the tools and that each user is defined, either by name or colors, and that all comments are visible.

One problem with these tools could be that too many users are editing at the same time, making it less structured. A way to limit the problem could be to include a maximum of users for each document.

Teleconferencing

When it comes to language learning it is important to be able to talk and to use the language orally. MOOCs often include some sort of teleconferencing tool. If you do not have access to these tools, it is possible and useful to use platforms such as Skype or Facebook chat.

A useful add-on to a MOOC could be chat rooms. These can be used either between peers, or even as a live lecture/webinar, where students can also ask questions to the lecturer. In figure 23, there is an example from Big Blue Button [4]:

![Big Blue Button, start page and webinar](image)
If you are using these kind of rooms, it is important that it is easy for the students to find the rooms. They have to be moderated with the same rules as the discussion forums, and it is vital that the lecturer uses the room in the correct way.

If you want to run a webinar you need to pay attention to the questions from the students. The lecture should include written texts, speaking sections, and discussions. Otherwise the students will lose interest, and there is nothing gained from the lecture.

It is common and important that you limit the amount of users in each room. In language MOOCs it's also encouraged to include a native speaker in each session of each room.

**Peer assessment/peer learning**

Community also includes community assessments. This is handled in another chapter of the toolkit, but it is worth mentioning Coursera's way of using Calibrated Peer Review. Coursera uses a calibrated peer review, including students in the assessment of their peers. The students turn in their essays and get graded by their peers. The students are all trained in assessing essays, similar to the ones that they have delivered themselves. They use a multiple choice rubric, where the choose the alternatives corresponding to their opinion on that specific area of the essay. At the end, the teacher gets several assessments on the same essays, and the performances are sorted in categories of high to low.

**Tips based on the piloting experience**

In the pilots, the consortium chose different types of courses, which were connected to the level of assessment in the course. All courses contained a pre- and post test, and the certificate was issued based on the completion of the post test. This is easy to do with Moodle.

The courses tested different approaches of how many test and grades were given during the course. In some courses the whole lecture was based on an assessed test and questions related to the curriculum, in others there were only a few tests related to static and/or interactive materials. It is not easy to determine what the best approach is, because this depends on the learners attending the course and the teaching style of the lecturer. The recommendations based on the feedback given from students is be to implement several tests, while having options for additional resources connected to the test.

1. Encourage the exchange amongst students of various to allow native speakers to interact with students across courses.
2. Allow teachers to use the platform to practice their teaching skills, as seen in the Italian course.
3. Implement teleconferencing with course instructors and tutors to help the users with the greatest learning vulnerabilities.
4. Encourage the use of platform’s sections for sharing and commenting additional contents directly added by the users (e.g. online games, YouTube channels and media websites) through a short tutorial guiding users through it.
Chapter 5: Technical Infrastructure

Objectives:

- Determine the technical infrastructure needed in creating a MOOC
- Understand the difficulties when working with an online course
- Compare the benefits of open source platforms vs. free MOOC platforms

Technical elements are essential for the development of all MOOCs. A MOOC is an online platform, dependent on both hardware and software, related to and designed for the specific course and the content needed to fulfill didactical purposes. It is important to keep in mind that the technical issues can never be separated from other aspects of the MOOC, especially the financial issues (see chapter 6) and pedagogy aspects (see chapter 2). In this chapter we will focus on two different types of platforms; 1) Open Source solutions and 2) free MOOC platforms. The platforms that are referred to in this chapter have been researched and explained by the LangMOOC consortium, and can be found in O2: MOILLE.... We will only refer to specific examples where it's necessary.

There are three vital issues when it comes to how a MOOC platform should operate.

1) Security

Generally, all online services should provide a minimal level of security by using HTTPS to protect the communications from malicious third parties. In the case of a MOOC it is even more important to provide a good level of security to protect the login process and also to protect the users’ privacy. In such a system there will be typical information about the users’ progress and performance related to the courses and other personal and private information. If the service is envisaged to hold any financial and billing information in the future, then information security is crucial.

To keep the service secured, it is required that the administrator applies patches for known vulnerabilities and updates and upgrades the software in a prompt manner.

Furthermore, to properly secure the service, it is required to also secure the host server and the network through best practices such as restricted remote access to the system, employing the least privileged principle, disabling any unnecessary application or service and generally minimizing the attach surface.

Another aspect that can improve security is the password policy. Users must be guided to select strong passwords which they will periodically change.

The service must ensure the integrity of the data preventing any unauthorized tampering.

The service requires constant monitoring and auditing to detect any intrusion attempts or attacks and secondly, to be able to trace back and potentially recover after an attack.

The security of the service has implications in both reliability and credibility facets.

2) Reliability

The provided service must provide predictable performance to the users. Also the service must be available to the authorized users allowing them to perform their desired tasks with minimal risks of data loss.

Considering the big number of users expected in a typical MOOC, the service should be backed by load balancing solutions and high availability hardware. The load balancing solutions typically involve several processing nodes to deal with the users’ requests, database nodes that deal with storing and retrieving the data in the system and load balancing nodes that distribute the work among the other nodes. The load is distributed by specialized nodes that tackle the initial requests and then forward them for processing to the appropriate processing node. The status of the nodes needs to be continually monitored in order to properly distribute the requests while maintaining fast response times and minimal error rates.
The hardware infrastructure needs to be geared towards high availability and reliability as well. This includes redundant storage, power supplies, network connections and processing units that can be serviced and replaced while online (hot-swappable), thus greatly reducing the need to bring the system down for maintenance.

The data must be protected by regular and frequent backups on and off-site that ensure that even in the unlikely event that the hosting facility gets destroyed, the service can be restored with minimal data loss.

3) Credibility

Stanford University developed ten guidelines for improving the credibility of a web site:
1. Make it easy to verify the accuracy of the information on your site.
2. Show that there is a real organization behind your site.
3. Highlight the expertise in your organization and in the products and services you provide.
4. Show that honest and trustworthy people stand behind your site.
5. Make it easy to contact you.
6. Design your site so it looks professional (or is appropriate for your purpose).
7. Make your site easy to use -- and useful.
8. Update your site's content often (at least show it's been reviewed recently).
9. Use restraint with any promotional content (e.g., ads, offers).
10. Avoid errors of all types, no matter how small they seem.

The service should follow these guidelines as closely as possible in order to increase its credibility.

Open source solutions

There are several advantages with using an open source platform. As a general rule the open source solutions are free to use. The software components are normally free with some limitation.

More importantly, in this context, is that the open source solutions provides a wide range of opportunities. Open source solutions are flexible and easy to adapt and integrate with other components, either open source or commercial software components. This provides opportunities for designing the courses more or less exactly the way you want them. In the case of language cMOOCs this is important, since there are very few solutions available at the moment.

The open source community is a clear advantage. Normally technical support will be available, and most of the time for free. The core of an open source community is built around interaction, development of and sustaining the software in cooperation between users. This is helpful both for beginners and for advanced users of online sources.

In many ways, using open source solutions when building a MOOC would be the best solution. However, there are many disadvantages that may cause more problems, contrary to using a different approach. When considering a language MOOC the main disadvantage is that there are few MOOC platforms designed with the necessary extensions and functions needed to deliver a language course. Of course it is possible to include extensions that aid the problem, just as in a LMS or a free online solution. This kind of out-of-the-box functionality can be limited or dependent on open source and/or commercial software components.

Even though the open source community is based on interaction and a common development, you may often experience that support is not immediately available, because this is non-profit work. Often you will have to post on a blog or site and rely on other users to provide a solution or suggestion.
The biggest issue with the software when setting up an open source platform is the expertise needed to install, modify, adapt or expand the software platform. This requires insight in several different programming codes and programs. This kind of competence is rare to find in small businesses and companies, which is the target group for this toolkit. This means that the providers will most likely rely on hired help, or extensive education for internal personnel. Considering open source solutions will also require access to hardware. To run an open source, you will need servers, network and internet connection. If you do not have access to this, it is possible to rent, for example, VirtualPrivateServers in a data-center. This will affect the cost of the MOOC, and needs to be considered (see chapter 6).

Another financial issue is the cost of running the platform. The cost will always be relative to the capacity or features required. Even if most of the software components are free to use, there are costs involved regarding the hardware infrastructure, i.e. buying/renting, operating and maintaining the hardware.

Researching several open source platforms shows that running a MOOC aimed at language courses has several issues that need to be overcome to be successful. The main question will be if the provider has the resources, i.e. personnel with the knowledge needed to install and maintain the hardware and software operation of the platform and equipment involved. If this competence is present in the business/company an open source solution provides flexibility and low cost solutions, designed exactly for the desired course.

Free MOOC platforms

Another solution is to consider online platform provided for free. There are several examples of these platforms (see O2). When considering technical solutions, a couple of platforms seem to be better suited for language courses than others. We have looked at Udemy, Alison, Blackboard, Istraemia, CMU OLI and Federica/EMMA. The results presented are based on these six, but are seemingly applicable for other providers, independently of the courses offered.

There are three main aspects of the platforms that need to be considered. Security is always an aspect when working with online solutions. When considering online platforms, it is important to check if they support HTTPS or not. Sites that support HTTPS are considered more secure than those that do not. Several of the platforms analyzed do not support HTTPS, which indicates a security problem. It is possible to buy a security code from other places, but this means that you will need access to embed this in the platform. Secondly, it is important to consider flexibility in the platform and the opportunity of adding additional programs and extensions.

Thirdly, it is important to identify the number of users the platforms can handle. Looking at the biggest platforms, like Blackboard and Udemy, they can handle several million users (Blackboard app. 20 million). The smaller platforms often have a limitation, and become unreliable when serving more than a 1000 users at the same time. Depending on the target for the course, this is a limitation that needs to be considered.

LMS

Another possibility for handling a course is using some kind of Learning Management System, or another content system manager. Two flexible and cost efficient examples are Moodle and Wordpress. Using a LMS means that you need add-ons, especially to fulfill the community aspects of MOOC. Most systems are made for online courses, i.e. making static materials and assessments. To fulfill the needs of peer learning and community, one should add programs or apps that enhance these parts. Examples can be found in the part on community in this toolkit. These include, for example, Skype, Big Blue Button and discussion forums.

In the consortium’s pilots, Moodle was the best choice because it is an Open Source platform so it is free to use. It allows the creators to use a variation of exercise types along with different interaction tools to easily create a MOOC. Moodle is user-friendly and has online videos and tools to guide you.
The LangMOOC project courses were therefore designed on a Moodle platform from where it is also possible to access the Apple Store and Google play to download the Mobile app. Other links to social networks like Facebook, Twitter and YouTube also allow to follow the project pages, show and share progress and interact with other users. As an example, the Italian course was first developed using a word processor, and the contents were then adapted to the Moodle platform features. The activities were rebuilt on the Moodle platform in order to ensure the best level of interactivity.

The main difficulties met during the piloting phase concerned the clarity of weighted grades and the certificate issuing.
Chapter 6: Financial Issues

Objectives:

- Discuss the financial complications in creating a sustainable MOOC
- Determine the importance of the planning stage
- Discuss funding options from the public sector

The previous chapters have looked at the logistical approach and consideration in relation to preparation and delivery of MOOCs as a method of learning. Advances in technology create the potential for greater innovation in the field of learning, ensuring there is accessibility for students on how they learn, but most importantly when they learn. In recent years, there has been a global shift to a 24/7 working economy, which makes it difficult for some students to commit to and attend a class with a fixed date and time.

There are many advantages which are outlined above in more detail in the previous chapters. However, the achievement of these advantages is only possible if the creation and delivery of MOOCs come with financial viability. The awareness of financial considerations is the same for learning providers across all sectors of education; schools, colleges, universities, community based learners from NGOs or the private sector. The purpose of this chapter is to highlight the key financial issues for learning providers to be aware of and consider the approach most appropriate for their organization.

As with any new product there is the need for thorough initial planning to create a business case. At the planning stage there is the need to consider the current technology and the need to invest in new computers, new software etc. The existing teaching and administration staff need to fully understand and utilize the technology to ensure the maximum benefits are achieved by all stakeholders. This initial investment needs careful planning, to ensure that the technical and human resource expertise are available. Nothing is perfect at the beginning, though it is important to ensure that there is a positive experience for students upon registration. At the planning stage it is important to map needed expenditures to create and launch the MOOCs product sought by the organizations. On a financial level this investment is akin to any other product development or capital purchase, in that consideration of the timeline for return on investment. A long-term view is the most prudent, but for each organization the length will be different and the approach will be based on their wider planning.

The second financial consideration covers the running costs and the day-to-day delivery of the learning provision. There are a number of common components in the general financial planning; for example, the time requirements of teaching and admin staff, the costs of running an office, course promotion etc. However, there are variances to consider, for example with the structure of classes. The time the teacher will spend statically teaching is linked to the length of the course. In MOOCs there is the potential for class time to be more open-ended and self-paced rather than a set date and time. Time management is important to balance the quality of learning for students whilst at the same time ensuring the input is resource managed rather than resource intense. There will be a different solution for each organization based on size, expertise, availability of key players and the audience they are engaging through the learning materials. One difficulty that was seen by all partners during the pilot phase was the lack of sufficient promotion. That should remind organizations that if they wish to deliver an efficient MOOC, they have to invest more funds in the promotion of their course.

In the traditional learning environment there is a model for funding courses with the main contributors being public funds and learner fees. The level of public funds available will be determined by the sector and background of the learning provider along with their success in the award of funding.

Public sector funding is an option to support the development and delivery of MOOCs. For example, the UK Hertfordshire County Council has currently made funding available to community learning providers to develop the skills and expertise of their tutors and administration staff to operate Moodle. This is an important source
of funding to ensure investment in the personal development of staff resources. Public sector funding is also a potential source of funding for the delivery of MOOCs. However, those public sector funding sources, which have geographic criteria for beneficiaries, may not be willing to support initiatives that make open learning available to any learner across the world. The message of investing in excellence within their locality to enhance quality and reputation needs to be stressed to counter the importance of geographic location. In addition to public sector support, the traditional route has been learner fees. For all learning providers the scenario of paying tutors and technical staff to support MOOCs without an income stream is not sustainable. Therefore, there is the need to consider which parts of the course are open and to what extent these parts are open. The answer to this question will be different for each learning provider and needs to be carefully considered in terms of the utilization new technology and course sustainability.

One option is to consider what aspect is open to all learners. For example, is it possible to make the introductory session open to provide a taste of the learning and then to charge for access to subsequent levels? Equally the course could be open but include a fee for accreditation or extra online support by tutors. The set fee levels need careful consideration by the learning provider. Each provider should know the market in which they operate as well as the disposable income of learners, the rate charged by learning providers offering similar courses and the costs incurred in developing and supporting the course.

Financial sustainability is key to ensure the healthy development of MOOCs. In conclusion, every learning provider needs to have a good understanding of the full costs of providing each course to cover the expenditure through any public sector funding available or adding extra fees to the learners after the introduction phase of the course.
Conclusion

Thanks to the guidance of this toolkit, everything is now set for the creation of a Language MOOC. This toolkit provides the tools and good practices needed to develop a Language MOOC. First of all, proper content has to be provided, and it is of utmost importance to have a clear structure and to offer different type of activities. That way, the students will be able to monitor their progress and arrange their learning process in an individual way. Furthermore, since it is an online platform, it needs to be clear and simple, and a video tutorial can be used to provide a better understanding of the learning process. Difficulty levels have to be considered and determined to improve the effectiveness of the MOOC. In a more general way, the MOOC must be interactive and captivate the attention of its users, making them more involved in their learning process, and thus improving their results.

As for pedagogy, a MOOC needs to put communication at the center of the process. This will be possible by building an open community where students can compare what they have learned with other users, or they can discuss it with their teachers or tutors and ask for explanations. Additionally, it is important for teachers and tutors to give feedback on the student’s progress. This collaborative aspect is essential in the case of an online course, because there is no “physical” person to rely on. Forums and open discussions will be used to discuss the contents of the course, but also to provide other learning resources that can be added to the process. Through this, an immaterial learning community will more closely reflect an actual classroom of students and their teacher. This impression will be improved by the video tools that need to be provided in the MOOC. For example, the use of video lectures will foster the visibility and interactivity of the course, as well as the use of a discussion forum. Another feature is the text editing, through tools such as Google Docs, which will allow all the users to edit one document and comment on it altogether, and teleconferencing, which will allow the users to directly interact with each other.

Assessment is also a major point in the learning process within the Language MOOC. Peer assessment is the most relevant within a learning community. It will deepen the students’ understanding of their own learning and it will empower them to become actively engaged and self-directed in their learning process. Of course, that does not exclude assessment from the teachers’ part, but by getting several assessments of the same essay from different students, and judging their performances, the teachers will be able to evaluate the level of the students. The already existing tools, such as Pearson’s AES and UCLAs CPR are perfect for a MOOC, as they reduce the time an instructor spends reading the students’ writings, and thereby, improves their efficiency.

These aspects need to be supported by a strong technical infrastructure. The Language MOOC is an online platform, and it needs to be maintained and updated at all times. The three main points to take care of include security, reliability, and credibility. The platform has to keep the service secured and its data protected from third parties. It must be backed by load balancing and high availability hardware that will be protected by regular and frequent backups to ensure the integrity of the data even in the worst case scenario. As for the type of platform used for a Language MOOC, three options seem to be most relevant after analysis: Open Source Solutions, free MOOC platforms or Learning Management Systems (LMS). The selection will be made according to their performance in terms of security, flexibility and the quantity of users the platform can withstand.

In conclusion, all the crucial aspects are considered, and this toolkit has proven useful in the development of online languages lessons in in 5 languages (English, Greek, German, Norwegian, and Italian) through pilot language MOOCs to be used in non-academic institutions and to connect and support language teachers and education providers across the European Union.

This toolkit prepared the foundation to implement a Language MOOC within the LangMOOCs project, but it can also be used to design and deliver new MOOCs, especially in the field of language literacy and foreign languages. These MOOCs will contribute to the exploration of other languages and cultures and to enhance professional skills and provide accessibility to the labor market.
Toolkit References:

Chapter 1:


Example of listening exercise:

Chapter 2:


https://www.heacademy.ac.uk/resources/detail/elt/the_pedagogy_of_the_MOOC_UK_view

Chapter 3:


**Chapter 4:**
BigBlueButton: http://bigbluebutton.org/ Figure 16: (Source: op. cit., Figure 7)

**Chapter 5:**
Project Partners

Active Citizens Partnership, Greece (Project coordination)
www.activecitizens.eu

CESIE, Italy
www.cesie.org

Iberika, Germany
www.iberika.de

NTNU, Norway
www.ntnu.no

Community Action Dacorum, UK
www.communityactiondacorum.org

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