The main objective of this task is to analyze features and services of MOOC platforms that are used in ECO and, secondly, in other commonly used MOOC platforms. This task takes into account the functionality that is required by the different pilots from two viewpoints: technological and pedagogical aspects. Firstly, to ensure this objective, this task performed a state-of-the-art review, mainly research papers and all annotated scientific literature. Secondly, we elaborate a Competitive Analysis Checklist for MOOC platforms. An approach based on technological and pedagogical items is suggested to define specific dimensions for this task. This Checklist will be a useful tool for evaluating MOOC platforms. Thirdly, five of the ECO platforms have been evaluated by using the authoring and delivery environment to check for the availability of features that are essential for the implementation of the pedagogical model as described in D2.1. It became clear that these platforms are not very suitable for the pedagogical model. Finally, a Guide for the Effective Creation of MOOCs has been drawn up indicating to assist course designers to compare the functionality, features, pedagogical and instructional advantages so they can choose the most suitable one for their areas of interest and needs.
Disclaimer

This document has been produced in the context of the ECO Project, which has received funding from the European Community's CIP Programme under grant agreement n° 621127.

This document contains material, which is the copyright of certain ECO consortium parties, and may not be reproduced or copied without permission.

In case of Public (PU):

All ECO consortium parties have agreed to full publication of this document.

In case of Restricted to Programme (PP):

All ECO consortium parties have agreed to make this document available on request to other framework programme participants.

In case of Restricted to Group (RE):

All ECO consortium parties have agreed to full publication of this document. However this document is written for being used by <organisation / other project / company etc.> as <a contribution to standardisation / material for consideration in product development etc.>.

In case of Consortium confidential (CO):

The information contained in this document is the proprietary confidential information of the ECO consortium and may not be disclosed except in accordance with the consortium agreement.

The commercial use of any information contained in this document may require a license from the proprietor of that information.

Neither the ECO consortium as a whole, nor a certain party of the ECO consortium, warrant that the information contained in this document is capable of use, or that use of the information is free from risk, and accept no liability for loss or damage suffered by any person using this information.

The user thereof uses the information at its sole risk and liability. For the avoidance of all doubts, the European Commission has no liability in respect of this document, which is merely representing the authors view.
D 2.1 Analysis of existing MOOC platforms and services

Versioning and Contribution History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Main modification or revision</th>
<th>Contribution by</th>
</tr>
</thead>
<tbody>
<tr>
<td>v.0.1</td>
<td>20 June 2014</td>
<td>First outline</td>
<td>FEDRAVE, OUNL, UNIOVI, POLIMI, EADTU, UNIZAR, UVA</td>
</tr>
<tr>
<td>v.0.2</td>
<td>20 June 2014</td>
<td>Added missing sections</td>
<td>OUNL</td>
</tr>
<tr>
<td>v 0.3</td>
<td>23 June 2014</td>
<td>Added results</td>
<td>UNED, FEDRAVE, OUNL</td>
</tr>
<tr>
<td>V 0.4</td>
<td>23 June 2014</td>
<td>Minor corrections</td>
<td>OUNL</td>
</tr>
<tr>
<td>V 1.0</td>
<td>17 July 2014</td>
<td>Incorporated reviewers’ comments</td>
<td>OUNL</td>
</tr>
</tbody>
</table>

Main contributors to the document:

<table>
<thead>
<tr>
<th>Partner</th>
<th>Contributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUNL</td>
<td>Francis Brouns</td>
</tr>
<tr>
<td>FEDRAVE</td>
<td>Sergio Ortega; Nuno Carneiro; María Fátima Figueiredo</td>
</tr>
<tr>
<td>UNIOVI</td>
<td>Aquilina Fueyo Gutiérrez; Santiago Fano</td>
</tr>
<tr>
<td>UVA</td>
<td>Alfonso Gutiérrez, Jon Dornaletxte, José Mª Marbán</td>
</tr>
<tr>
<td>POLIMI</td>
<td>Alessandra Tomasini</td>
</tr>
<tr>
<td>UNIZAR</td>
<td>Alejandro Silva</td>
</tr>
<tr>
<td>UNED</td>
<td>Esther López, M Dolores Fernández Pérez, Ángel Barbas and Jose Manuel Saez.</td>
</tr>
<tr>
<td>UAB</td>
<td>Vítor Rocio</td>
</tr>
<tr>
<td>EADTU</td>
<td>Darco Jansen</td>
</tr>
</tbody>
</table>
D 2.1 Analysis of existing MOOC platforms and services
Table of contents

1 Introduction ........................................................................................................................................ 6
2 Literature review .................................................................................................................................. 6
  2.1 Background ....................................................................................................................................... 6
  2.2 Reference collection and analysis ................................................................................................. 7
3 Development of a checklist for evaluating MOOC platforms .................................................................. 8
  3.1 Definition and description of the checklist ................................................................................... 8
4 Implementation ....................................................................................................................................... 9
  4.1 Checklist distribution .................................................................................................................... 9
  4.2 Pedagogical evaluation .................................................................................................................. 9
5 Results .................................................................................................................................................. 12
  5.1 Collection of information and data analysis ............................................................................... 12
  5.2 General information ..................................................................................................................... 14
  5.3 Economic and structural factors ................................................................................................... 16
  5.4 Technology ....................................................................................................................................... 19
  5.5 Accessibility .................................................................................................................................... 21
  5.6 Communication and interaction .................................................................................................... 22
  5.7 Assignments .................................................................................................................................... 28
  5.8 Assessment ...................................................................................................................................... 30
  5.9 Pedagogical principles ................................................................................................................... 31
6 ECO tool guide ..................................................................................................................................... 32
7 Conclusions .......................................................................................................................................... 33
Annex 1. Bibliography, webliography and references .............................................................................. 34
Annex 2. Literature review report .......................................................................................................... 37
Annex 3. Checklist .................................................................................................................................... 48
Annex 4. Pedagogical evaluation of ECO sMOOC platforms ................................................................... 58
1 Introduction

The acronym MOOC stands for Massive Online Open Courses and it was first coined in 2008 by Dave Cormier and Brian Alexander at the CCK08 conference led by George Siemens and Stephen Downes. There are still some conceptual inquiries concerning MOOCs characteristics. Certain confusion it is been found regarding the definition of different types of MOOCs: xMOOCs, cMOOCs, sMOOCs, miniMOOCs, transferMOOCs, asynchMOOCs, etc. Besides the radical distinction between the “for-profit” xMOOC format, and the connectivity based cMOOC, one which emphasizes learning as a result of a network experience, there are other variables. Moreover, for some, sMOOCs represent the standard MOOCs whereas for others the s stands for sustainability and social. In ECO sMOOCs stand for social and seamless: putting the learner upfront who is learning through interaction with others, through learning activities that are situated in contextual, authentic tasks, transgressing pedagogical and technical borders, and accessible from multiple platforms and modes. There are different taxonomies associated with MOOCs which are not clarifying the different characteristics it may have depending on its structural economic, design and technology factors, its visual communication online interface, its content and resources and its assignments and assessments methods. The purpose of this research is to design a grid of variables to facilitate the analysis of current MOOCs, MOOC platforms and systems and future ones. To accomplish this, a literature review has been conducted. Next, a check list was drawn up to analyse and evaluate MOOC platforms for technical and pedagogical requirements. That checklist has been distributed to gather data on MOOC platforms. In addition, the ECO platforms have been looked at in more depth, with the pedagogical framework in mind that has been put forward in D2.2 Instructional design and scenarios for MOOCs. In addition, a tool guide has been drawn up to assist a MOOC designer in comparing and choosing features.

2 Literature review

Based on scientific literature searches, with additional information offered by the ECO partners, publications and opinions of relevant sources, we prepared a full review with the aim of summarizing the current state of the art of MOOC platforms studies.

2.1 Background

The massive open online course (MOOC), is a recent and sudden phenomenon, due to the success of courses in Artificial Intelligence, attracting over 150 thousand enrolments (Rodriguez, 2012). This is a form of distance learning, which is characterized by support for a massive volume of enrolments, and open to anyone who wishes to register, or even just to see the course.

There are mainly two types of MOOCs: cMOOCs and xMOOCs. cMOOCs (or connectivist MOOCs) began with the CCK8 course by Stephen Downes and George Siemens, and are focused on the learning community and connections between members of the community across the web. On the other hand, xMOOCs are based on scalability of provision, i.e., it’s about giving access to an online course to many learners within the same platform. The style of learning is also different: xMOOCs tend to privilege individual studying, while cMOOCs focus on networked learning across several web tools and services.

A MOOC platform is a web-based system that provides courses and associated services to learners and need to be prepared to receive massive amounts of enrolments. It can be based on a single site on the web (xMOOC) or be distributed among several sites/services (cMOOC).
A MOOC provider is an organization that accepts and selects contributions for open courses (e.g. from Universities) and makes them available for learner enrolment and participation. Often, providers develop their own platforms, emphasizing their features as a means to attract authors and learners. In addition to traditional learning management systems, MOOC platforms provide novel features, such as karma points, badges (certificates for completing certain learning modules), and communication tools. Most MOOCs offer additional, usually paid online and offline services, such as tutoring, course materials, and formal certification.

Before the MOOC movement, Europe developed Open Educational Resources (OER), pursuing innovation with funded research projects (MORIL, OER-HE), and developing platforms for OER organization and dissemination. This was a first manifestation of massively distributed contents, organized as autonomous learning material (as opposed to OpenCourseWare that was only about making contents from face-to-face courses available, without any pedagogical concern). This OER movement evolved into MOOCs.

MOOC courses have greatly grown in number, and there is a large supply involving several universities in USA-led projects (for example Coursera and https://www.coursera.org/ and EDX - https://www.edx.org/). This movement generated European responses, either isolated, or in coordinated initiatives, notably the recent release of a MOOC portal with a number of courses in involved (OpenupEd - http://www.openuped.eu/).

This growth has been accompanied with a growth in corresponding literature, both in scientific journals and conferences, as well as, less formally, in blogs and web pages.

2.2 Reference collection and analysis

Literature about MOOC is really extensive in the World Wide Web, according to the increasing presence and acceptance of this massive 'online' education model. A few years ago there were few universities who wrote articles and essays on MOOCs. Today, however, the opposite happens, not only related to universities, but enterprises and bloggers. Therefore, it has been necessary to filter search results on the Internet until we get a manageable and accurate selection of resources.

In the same way, nowadays it is not rare to find reports on this new scenario, although, because of the deciduous nature of reports, the 8 reports which have been included in this literature belong to 2013 and 2014. These reports cover MOOC reality in Europe (some of them focused mainly on United Kingdom, Spain, Netherlands) and in United States.

Proof of its increasing presence is the large number of present and future prospects in a same document, such as "The Invasion of the MOOCs - The Promise and perils of massive open online courses" (2014), of Steven D. Krause and Charles Lowe. Another representative example is "Open Education handbook", a collaboratively written document targeting web living educational practitioners and the education community at large. On one side, ECO Project has selected documents on MOOC closest to this time, in order to consider the last progresses. On the other hand, webliography contains some resources of last years which are still really valid, such as "Three generations of distance education pedagogy" (2011) and "The dance of technology and pedagogy in self-paced distance education" (2009), both of them written by Terry Anderson, Athabasca University (Canada). Between the resources which can be found in Annex 1 there are also pioneering researchers, as George Siemens, with "Massive open online courses: Innovation in Education ’ (2013), as well as documents relating to that first project called CCK08.

Bibliography and webliography can be found at Annex 1. A table related to Annex 1 contents can be found at Annex 2, detailed by Keywords, Tittle and Online reference, Tittle Study, Study Type and Aimed.
3 Development of a checklist for evaluating MOOC platforms

In the previous section a wide and deep description of the current “state of the art” of MOOCs and their associated technological platforms was presented. The general considerations outlined as a result of this search and study show us in a quite straightforward way the need to analyse this complex emerging field of online learning by means of a systematic procedure and suitable tools. With this purpose in mind we proceed now to introduce a checklist designed to capture the features, benefits and any possible deficiencies of MOOCs as well as to compare platforms and ease assessment of their educational scope and impact.

This checklist provides a set of standard questions to evaluate MOOC platforms and services. We try to find some dimensions that are relevant to us from technological and pedagogical aspects. The process for conducting the analysis of the MOOC platforms is based on the development of a list of checkpoints, arranged and classified into broad categories.

This criteria checklist can be used for several purposes:

- A teacher who is interested in using MOOCs because he wants to make his course material available to a wider public can use this list to check what MOOC platforms offer the features to accomplish this.
- A teacher who is interested in MOOCs because he or she sees this as an innovation of his education should look for MOOC platforms that promote cMOOCs and interactivity between learners.
- A university who want to set up their own MOOC platform can use the criteria checklist to help them set up the decision process and indicate what areas they need to consider.

3.1 Definition and description of the checklist

The checklist has been structured by ten main categories in which we aim to get specific information about the current features, attributes and characteristics of the platforms which are the following:

1. **Introduction to evaluation.** This section was designed to get the proper information about the person filling in the survey. It is important to know what the position is and the implication of the person in charge of completing the data about the platform.

2. **General information.** In this category we got insight about the information the user of the platform sees at first sight. Is the basic information of the platform placed properly? Is it clear and organized? Is it integrated with the various social networks? Are the courses well explained and specified? Is the contact information clearly available?

3. **Economic structural factors.** In this category we asked for information about the platform’s economic model. Is it based upon a non-profit model or is it settled for profit? Who is in charge of the platform? What are their objectives? Is it open source?

4. **Technology.** This section has been conceived to know about the technological features supported by the platform. The platform’s technological attributes have deep implications in the learning-teaching process. Does the platform supports mobile applications? How does the platform technology enable certain learning methodologies? Is the platform based on an already existing virtual learning system?

5. **Accessibility.** In this category we ask about the way the platform cares about people with watching and hearing disabilities. Do deaf or blind people have the possibility to follow any of their courses? Does the platform provide a proper treatment to disable people?
ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning

D 2.1 Analysis of existing MOOC platforms and services

6. **Communication and interaction.** This category aims to obtain information about platform’s teacher-learner & learner-learner interaction. How do learners and teachers communicate within the platform? What tools the platform offers teachers and learners to interact with each other?

7. **Goals, content and resources.** In this category we seek information about the learning materials and tool the platform provides teachers and learners to convey their tasks. What kind of contents does the platform offer?

8. **Assignments.** This category is about getting insight about the kind of tasks the platform provides their learners and teachers. Are there any assignments? How often? Are they individual? Are they lesson based?

9. **Assessments.** This section has been created to acquire information about the way learners are evaluated and in the platform. Are the teachers the only responsible for learners’ assessment? Is evaluation automatized?

10. **Pedagogical principles.** In this last section we aim to get feedback about the nature of the learning process offered by the platform. Is it lesson based? Is it grounded in a constructivist or connectivist philosophy?

Each category has its own indicators which are meant to provide us with detailed information about the nature of the platform. There are three different kinds of items. Some of them are “yes or no” indicators, some of them offer “multiple-choice” answers in which the user is allowed to check as many options as offered and a few of them are “fill the blank” type of questions. Check Annex 3 to get through all the items.

The checklist has been design aims to be a useful tool to identify suitable MOOCs and to choose efficient platforms in the sense of providing the information needed to decide whether the object being evaluated fits the educational requirements under consideration. It is time now to test our checklist, something that will be carried out in the next section over a selection of popular and worldwide used MOOCs platforms.

### 4 Implementation

#### 4.1 Checklist distribution

The checklist was provided online. The ECO partners that developed the ECO MOOC platforms (OpenMOOC, WeMOOC, ARLearn) or are using it (Open Edx Politecnico, iMOOC) have completed the checklist for the ECO platforms. Next partners involved in task 2.1 have completed the checklist for the other, external platforms (Coursera, Udacity, MiríadaX, OpenCourseWare-MIT, Futurelearn, Iversity).

#### 4.2 Pedagogical evaluation

The five platforms (OpenMOOC, WeMOOC, ARLearn, Logiassist, Open Edx Politecnico) that are used by ECO are investigated in the light of the pedagogical framework that is being presented for ECO. The characteristics of this pedagogical approach lies in the social, interactive, connectivist, constructivist and collaborative approach. Effectively, this means that learners are put central; that learners take on an active role in their own learning process, but also that participants have an active contribution in the learning process of others. Meaning, that participants take on the role of tutor, teacher, content creator or assessor in addition to their main role of learner. The ECO platforms need to provide the functions, features and tools to accomplish this social and interactive pedagogical model. Sole presence of a feature does not
necessarily imply that it can be used in the correct manner. For example, a platform might provide communication tools, like a forum. However, when that forum cannot be included inside learning activities, it is still not possible to implement the pedagogical model. Similarly, when a platform allows the use of multimedia, but makes that obligatory or only allows referencing to existing material outside the platform, the pedagogical model still cannot be implemented. So, in addition to the checklist, the ECO platforms were evaluated more in depth looking not only for availability of tools and features but with opportunities to combine those to implement the pedagogical model. To that end, a course has been created in each of the platforms. In the course all the features that are present in the system, were explored, from the perspective of the course designer as the learner. Ease of use both for course designer/teacher and learner has not been considered.

ECO sMOOCs are characterized by an interactive, collaborative and participative instructional design that promotes ubiquitous access and situated contextualised learning. ECO sMOOCs are enriched by the opportunities offered through mobile access and apps as well as games and scripted activities.

That means that the ECO platforms need to provide the features to support this pedagogical framework.

- Contextualising
- Community formation
- User profiles
- Integration of social network sites and web 2.0
- Web 2.0 tools such as blog, wiki
- Rating, sharing, annotating
- Individual learning
- Collaborative learning
- Sequenced activities
- Formative evaluation
- Assessment: self, peer, group
- Textual resources within and outside the platform
- Multimedia resources within and outside the platform
- Syllabus
- Assignments
- Gamification
- Recommender
- Reputation
- Mobile access on tablets and smartphones through browsers and apps
- Open access to course content (creative commons)
- Course content always available
- Accessibility
- Entry and evaluation surveys

To accomplish the above, the platforms need to offer

- User profiles
  - Integration of social network sites and web 2.0 profiles
- Information about teachers
- Course catalogue
ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning
D 2.1 Analysis of existing MOOC platforms and services

- Course description
- Course schedule
- Welcome page
- FAQ
- Syllabus
- Content: textual and multimedia resources, video lectures
- Learning activities/tasks that can be sequenced and completed
- Assignments, graded and non-graded
  - timed, deadlines
- Assessments, graded, self-assessment, peer-assessment, group assessment
  - timed, deadlines
- Communication tools:
  - Forum
  - Chat
- Collaboration tools
  - Blog
  - Wiki
  - Rating
  - Sharing
  - Annotating
- Performance monitor
- Progress monitor
- Announcements
- Group formation
- Gamification
- Recommender
- Reputation
- Create own artefacts in personal learning environment and include in MOOC
- Support for tablets and smartphone
  - Browser
  - Apps
- E-portfolio
- Linking to existing social media
- Integrating profile information from existing social media
- AI engines are a must for the integration of massive qualitative assessment
- Open access to course content
- Accessibility
- Entry and evaluation surveys

The results are shown in Annex 4.
5 Results

5.1 Collection of information and data analysis

The information presented in this sections proceed on the evaluation of MOOC and External platforms. In both case, platforms were evaluated by the partners indicated as follow:

1) Platforms MOOC

- OpenMOOC (Yaco)
- weMOOC (TLS)
- ARLearn (OUNL)
- iMOOC (UAB)
- Open Edx Politecnico (POLIMI)

2) Platforms external

- Coursera (UNIOVI)
- Udacity (UNED)
- MiriadaX (UNIZAR)
- OpenCourseWare-MIT (UNED)
- Futurelearn (UVA)
- Iversity (POLIMI)

Figure 1, 2 and 3, show the mail characteristics of the subject that completed the check-list. Attending to the experience with the different platforms, 80% of the evaluators have experience with MOOC platforms (60% have an experience of 1 or 2 years and only 20% have an experience of more than 2 years). 20% of reviewers do not have any experience.

Experience of External platforms evaluators is lower than in the MOOC platforms case. 50% have an experience of 1-6 months and only 16.67% between 1 and 2 years. 33% do not have any experience with the evaluated platforms.
Attending to the courses that evaluators have followed in the evaluated platforms, 40% have followed more than 5 courses in the MOOC platforms, compared to 50% who have followed 1 or 2 courses in External platforms. From a general point of view, 53% of the evaluators have not followed any course in MOOC or External platforms.

20% of the evaluators have designed more than 5 courses in the MOOC platforms, in contrast to the External platforms where 16.67% have designed between 1 and 2 courses. None of the other reviewers have experience in the design of courses in the evaluated platforms.
5.2 General information

All the evaluated platforms have a website that summarizes the vision, strategy, features.

100% of the External platforms have instructions, online documentation or user support to understand and use the platform, in comparison with 80% of the MOOC platforms.

In 100% of the MOOC platforms, objectives are clearly identified and defined, in contrast to 83% of the External platforms.

80% of the MOOC platforms provide a subjects listing and the number of courses offered. These characteristics are only shared by 67% of External platforms evaluated.

Platform requirements are defined and clearly visible in 83% of the External platforms and 60% of the MOOC platforms.
All External and MOOC platforms evaluated provide contact information. At the same time, 100% of the External platforms include integration with the major social networks, the information updates (courses, events ...) are visible and the information is updated at least once a month. The percentage in this characteristic for MOOC platforms is 60%, 80% and 40%, respectively.

60% of the MOOC platforms allow users to sign up for free and create online courses, in comparison with 50% of the External platforms.

In general, External platforms meet more with the characteristics listed in Figure 5, and provide information about the general characteristics II.
5.3 Economic and structural factors

The owner, in most of the MOOC platforms, is an higher education institution (4 platforms) and there is only one case where the owner is a private institution/company or a private consortium. In the case of the External platform, the owner is a private institution/company or a private consortium (4 platforms) and a higher education institution (3 platforms).

![The platform owner is...](chart.png)

MOOC platforms are supported by owner capitals and by public capitals and/or donation (no refund needed) and, to a lesser extent, by private capitals (refund needed). External platforms are supported by private capitals (refund needed) and, to a lesser degree, by public capitals and/or donation (no refund needed).
Figure 7: Platform support

Note that 100% of the MOOC platforms are Open source and, by contrast, all the External platforms are not Open source.

80% of the MOOC platforms are owned by a non-profit institution/consortium and 83% of the External platforms are not owned by a non-profit institution/consortium.

67% of the External platforms have sponsors or allow sponsoring possibilities for financial support, in comparison with 60% of the MOOC platform.

Figure 8: Economic and structural factors I
All the MOOC platforms evaluated are based in a completely free MODEL: course contents, services and certification are offered for free and the courses contents of the platform are under open-license and can be reusable. In the case of the External platforms, only 50% and 67%, respectively, meet these features. The courses approach, in 83% of the External platforms and 80% of the MOOC platforms, follow the American style.

Five of the External platforms offer the possibility to use external OER resources in their own course. Moreover, 2 of them allow to create their own course and decide to monetize them or not. In the case of the MOOC platforms, values for the same features are 4 and 2, respectively.
The freemium model is offered in 66% of the External platforms, by contrast to 60% of the MOOC platforms.

External platforms offer for a fee these services: Licensing of course materials (3 of 6), exams for validated/real ECTS credits (2 of 6), certificate of completion (1 of 6), certificate of participation (1 of 6) and dedicated tutoring by academic staff (1 of 6). In the case of MOOC platforms are offered: Exams for validated real ECTS credits (2 of 5), certificate of completion (2 of 5) and participation to local meeting (1 of 5). As can be observed, External platforms offer more services for a fee than MOOC platforms.

**5.4 Technology**

Regarding the technological main features supported by the platform, we observe that 4 of the 5 MOOC platforms evaluated offer Multilanguage support, End-user multiple environments supported (OSX, Windows, Linux, ...), API or webservices defined for integration/interoperability with other systems, and. 2 of them provide are based on external MOOC platforms (Coursera, Udacity, Edx), are Ad hoc platform
ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning

D 2.1 Analysis of existing MOOC platforms and services

(mooc.org, wordpress.org, Google course builder), LTI (www.imsglobal.org/toolsinteroperability2.cfm) compliance, for interoperability with other learning tools, Content available online on all device types (desktop, tablet or smartphone), Integrated multiple platform solution or service-oriented architecture (SOA), Support for content-based and task-oriented MOOCs (xMOOCs, others). Finally, in rare cases the platforms are Based on existing VLS (Canvas, Moodle, Desire to learn, Blackboard, etc.), and have OAI-PMH (www.openarchives.org/pmh/) support for content metadata exchange, Mobile app(s) available (iOS, Android), or Support for connectivist MOOCs (cMOOCs).

On the other side, External platforms evaluated, mainly, use Content available online on all device types (desktop, tablet or smartphone) (5 of 6), and have End-user multiple environments supported (OSX, Windows, Linux, …), Mobile app(s) available (iOS, Android) (4 of 6). Half of these platforms have Multilanguage support and are based on external MOOC platforms (Coursera, Udacity, Edx). To a lesser extent, they offer API or webservices defined for integration/interoperability with other systems, Ad hoc platform (mooc.org, wordpress.org, Google course builder), Support for content-based and task-oriented MOOCs (xMOOCs, others), Open software license, Integrated multiple platform solution or service-oriented architecture (SOA) and Support for connectivist MOOCs (cMOOCs). Finally, it is remarkable that none of these platforms present LTI (www.imsglobal.org/toolsinteroperability2.cfm) compliance, for interoperability with other learning tools), are Based on existing VLS (Canvas, Moodle, Desire to learn, Blackboard, etc.), or provide OAI-PMH (www.openarchives.org/pmh/) support for content metadata exchange.

The web 2.0 features which mainly present the MOOC platforms are: Social networking (friends, likes, …) and User dashboard (4 of 5); and User Blogs, Wikis, Microblogging, Content syndication, newsfeeds (RSS, Atom), Annotating, Activity stream and Reputation system (karma) (3 of 4).

Considering the External platforms, they tend to include External platform, Social networking (friends, likes, …), and Content syndication, newsfeeds (RSS, Atom) (5 of 6). To a lesser degree, half of them offer Wikis, Microblogging, Reputation system (karma) and the Possibility to create groups by participants.
Figure 14: Web 2.0 features

5.5 Accessibility

None of the platforms allow creation or design of audio- or visual material, but provide accessibility features up to a certain extent. Figures 15 and 16 show that in 60% of the MOOC platforms support use of videos having subtitles (deaf and impaired hearing people) and images having an alternative text description (visually impaired people). Furthermore, in 40% of these the platforms support making transcripts available in downloadable Word (visually impaired people), Interface text contents can be processed by a text reader (visually impaired people), and Interface is navigable by keyboard (visually impaired and/or disabled people). Only in one of the five platforms evaluated, the platform allows video subtitles distinguish between vocal sounds and non-vocal sounds (deaf and hard-of-hearing people), Video contents have a secondary integrated screen with the same content in sign language (deaf and hard-of-hearing people), and Between platform services there is a Verification Service (feedback) to ensure that features work perfectly (people with special needs). None of the platforms offers users a kind of Technical Service Department for Accessibility, either via synchronous or asynchronous (people with special needs).

Concerning External platform evaluated, in 4 of them, Interface is navigable by keyboard (visually impaired and/or disabled people). In half of the platforms, the videos have subtitles (deaf and impaired hearing people) and Interface text contents can be processed by a text reader (visually impaired people). It must be noted that in none of these platforms Video contents have a secondary integrated screen with the same content in sign language (deaf and hard-of-hearing people).
5.6 Communication and interaction

In all platforms evaluated, although mainly in the External platforms, communication and interaction is both Synchronous (chat, forum, video conference) and Asynchronous (contact forms, e-mail, messaging platform). In none of the External platforms the communication and interaction is entirely synchronous.
The interaction between students, in the MOOC platform is carried out mainly through *Forums or Personal profiles*. In none case, it is based on *Group workspace or Group profiles*. *Forums*, along with the *Social media integration (likes, social media linking)* are two of the main ways of interaction between students in the External platforms, followed by the *Group workspace and Personal profiles*. External platforms do not tend to use the Collaborative real-time text editor.
The interaction between teacher and student in MOOC platforms is usually carried out through Discussion forums and Private messaging/mail. These two ways of communication, are also the most used within the External platforms.

Key features included in the user profile module of MOOC platforms include the Avatar/Profile picture, the Progress bar (or course progress visualization), the Gamification integration (visualization of badges, achievements, karma, etc.), and Contact info / Messaging. These utilities are included in more than half of the platforms evaluated. On the other hand, External platforms contain mostly Contact info / Messaging, Social media profiles integration, and CV / Professional profile / Interests information. Anyway, half of these platforms also includes Avatar/ Profile picture and Progress bar (or course progress visualization).
Regarding the teacher profile module, features which mainly include both types of platforms are the Avatar / Profile picture and Contact information, followed by the CV. In this sense, all the MOOC platforms allow including Avatar / Profile picture and all External platform offer Contact information in the teacher profile module.

Almost all platforms (MOOC and External) include in learning modules video lectures, video presentations/tutoring/instructions/wrap-ups, and text contents. In a lesser grade, other aspect including are archived or non-audited courses and that are Theme oriented.

In the case of MOOC platforms, more than half of them allow teacher creates his/her own course (teacher oriented). Meanwhile, a half of External platforms include Latest news, can integrate Social media and Facilitated, synchronic courses.
Sign up module

Figure 23: Sign up module

Sign up in MOOC platforms is, mainly via E-mail verification. Other routes that are included in more than half of the platforms are: Course syllabus, Video preview/presentation, and Teacher/Instructor CV/profiles. In the External platform, usually the registration is carried out from the Course syllabus, although it is also common other ways as Social media login integration, E-mail verification, and Video preview/presentation.

2.7. Goals, content and resources

Figure 24: Characteristics of goals, content and resources

In all evaluated platforms (MOOC and External) goals are clear and well designed and, except in one of the External platforms, The course has a qualitative goal (experience, interaction, learning from the process, etc.). Regarding the inclusion of a quantitative goal (certificate based on assessments), this aspect appears less frequently. Finally, it is important to note that only one MOOC platforms and one External platforms offer users customize their learning environment by adding content or resources to their course page.
With regard to the content included in the course, in both types of platforms, these are lesson based (designed by teachers). Only two of the MOOC platforms also allow including courses project based (designed by students and teachers).

All MOOC platforms include or allow to include **video lectures, original contents, and text and textual documents**. Most of them also offer the possibility of including **video instructions and video tutoring, hand on board videos, borrowed contents, and tools for collaborative work** and, to a lesser extent, **talking head lectures, external apps integration, discussion forums, and gamification**. Possibilities that these platforms are covered in lesser degree are: **Mobile app: Apps integration for mobile devices, tablets, smartphones and Geolocation tool**.

All external platforms contemplate **video lectures, original contents, video instructions and video tutoring** and, 5 of them, also **text and textual documents and discussion forums**. To a lesser extent, although with an important presence, these include **borrowed contents, mobile app: Apps integration for mobile devices, tablets, smartphones, tools for collaborative work, talking head lectures and external apps integration**. Resources included lesser extent are: **hand on board videos, gamification (achievements, badges, levels, points) and Geolocation tools**.
5.7 Assignments

In relation to the organizational aspects of the courses offered in MOOC platforms, they have **A clear course guide/syllabus is available**, **There is a course map/guide**, **The course guide/syllabus is clear and well designed**, **There are clear instructions for each task** and, except in one of these platforms, **there is a task map or guide**. Meanwhile, all the External platform include such organizational aspects.

It is noteworthy that, the possibility that the tasks organization allows the learner to follow multiple Learning Paths, is rarely covered by both types of platforms.

![Figure 27: Course organization](image)

In MOOC platforms, the scheduling of tasks tends to be carried out mainly observing a **logical content order**. In turn, the organization of tasks in the External platforms respond alike to a logical learning order and to a logical content order. In approximately half of the MOOC and External platforms this schedule is performed weekly.

![Figure 28: Tasks scheduling](image)
Regarding the type of tasks that are included in the courses developed on these platforms, in all courses MOOC many or all tasks are individual and, therefore, group tasks are not considered or introduced shortly. In the External platforms, individual tasks are also present in the courses (66% of the platforms include many or all individual tasks), and there are few or none group tasks. The presence of networked tasks is also reduced. In this respect, 80% of the MOOC platforms do not include or do little and, in the case of External platforms, this percentage reached values of 83%. By contrast, reproductive tasks are present to a greater degree. 60% of the MOOC platforms and 67% of the External platforms believe that many or all of their courses tasks are of this type. Finally, with respect to the critical-analysis tasks we find more differences between the MOOC platforms and External platforms, because if in the first case 60% of the platforms include many or all tasks of this type, in the second case only one platform introduces largely critical-analysis tasks.

Attending to the type of learning tasks and assignment results, in all the platforms this can be textual. In a lesser degree, task also can be Multi-format/Multimedia assignments (hypertext, video, etc.). In the case of MOOC platforms, frequently task can be Social Media (social media integration for assignments) or Collaborative environments (wikis, etc.).
5.8 Assessment

Types of assessment supported by the platform:

- Peer to peer (rubric-based)
- Group to group (collaborative peer to peer assessment)
- Learner self-assessment of progress
- Computer based assessment (quizzes and tests like)
- Content Pre-test (quizzes): Previous knowledge about the course/module’s content
- Learning Styles Pre-test: Allowing instructors and learners to know each student learning style
- Different solutions for the assessment of Multiple Learning Paths

Figure 31: Types of assessment

Regarding to types of assessment supported by the different platforms, in the most of them is allowed to perform Peer to peer (rubric-based), Learner self-assessment of progress and Computer based assessment (quizzes and tests like). Note that none of the MOOC platforms allow conducting out these type of assessment: Group to group (collaborative peer to peer assessment), Different solutions for the assessment of Multiple Learning Paths and Learning Styles Pre-test: Allowing instructors and learners to know each student learning style. None of the External platforms evaluated, takes into account this last type of evaluation.

The following assessment tools are available:

- Automated peer to peer assessment module / engine
- Computer based assessment (quizzes and tests like)
- Teacher based assessment
- Speedgrader annotations (teacher annotations in canvas)
- Notification integration of learning results
- Graphic analytics reporting engine (allowing instructors and learners to visualize their learning progress)
- Karma (karma based forums)
- Gamification of assessment (points, levels, badges)

Figure 32: Assessment tools

Among assessment tools that are available in the MOOC platforms highlight Computer based assessment (quizzes and tests like), Automated peer to peer assessment module / engine, and Teacher based assessment. These two last tools are also present in External platforms (4 of 6). A half of the External platforms also offer the possibility of carrying out Computer based assessment (quizzes and tests like) and Graphic analytics reporting engine (allowing instructors and learners to visualize their learning progress). None of the MOOC and External platforms evaluated include the Speedgrader annotations (teacher annotations in canvas).
5.9 Pedagogical principles

Attending to pedagogical principles in which are based the platforms, 80% of the MOOC platforms allow several pedagogical models to be used to design and deliver the MOOC, 60% of them are based on a teacher–lecture, knowledge transfer model and are based on a connectivist (social, interaction based) principles, and 40% are based on constructivist principles. On the other hand, all External platforms are based on a teacher–lecture, knowledge transfer model, 67% of them allow several pedagogical models to be used to design and deliver the MOOC, 50% are based on constructivist principles and, finally, 7% are based on a connectivist (social, interaction based) principles.
## 6 ECO tool guide

<table>
<thead>
<tr>
<th>ECO MOOC TOOL GUIDE FOR TEACHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transference of information</strong></td>
</tr>
<tr>
<td><strong>Communication &amp; interaction</strong></td>
</tr>
<tr>
<td><strong>Individual work</strong></td>
</tr>
<tr>
<td><strong>Collaborative work</strong></td>
</tr>
<tr>
<td><strong>Networked Learning</strong></td>
</tr>
<tr>
<td><strong>Assessment, feedback &amp; tutoring</strong></td>
</tr>
<tr>
<td><strong>Recommended task type</strong></td>
</tr>
</tbody>
</table>

### Messaging/email
- **Mass mailing:** Mass mailing of instructions and evaluation criteria. |
- **Individual message:** Individual messages for students. |

### Notes
- **Course content and notes:** Course content and notes. |

### Test/Context
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |
- **No:** No, not encouraged for individual work. |

### Video/Text content
- **Not encouraged:** Not encouraged for evaluation criteria. |
- **Encouraged:** Encouraged for evaluation criteria. |

### Flashcards/Discussion boards
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |
- **No:** No, not encouraged for individual work. |

### External Resources
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |
- **No:** No, not encouraged for individual work. |

### Blog
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Activity types
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Microblogging
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Chat/Videoconference
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Collaborative tools & Web 2.0
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Social Media Links
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Groupwork/Workspace
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Quizzes/Tests
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Rubrics
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Gamification
- **Yes:** Yes, appropriate for the transference of information and collaborative work. |

### Highlighed** |
- Highlighed Recommended: Highly recommended. |
- Not applicable: Not applicable. |
7 Conclusions

It has become clear that there are similarities between MOOC platforms, but also many differences. The results show that the selected ECO MOOC platforms differ in many respects from other MOOC platforms in particular in respect to the features that a user will have available in a course:

- Collaboration tools
- Lesson based contents
- Supporting of different content formats (video, text, images, etc...)
- Tracking system both for learners and teacher
- Integration of OER resources in courses

What emerged clearly (Fig. 15 and 16) is that accessibility issues are generally not completely covered by platform features. Video subtitles, downloadable texts are often available but the providers' investment on this aspect usually doesn’t pass these services.

Moreover, the analysed platforms are more focused on individual and one-to-one collaborative tasks more than group activities. In fact no automatized group formation system is offered nor areas for supporting group work.

These means that many elements of ECO MOOC platforms are in line with what the main international MOOC systems offer to their learners. In addition, ECO MOOC platforms are more structured than the external ones, on gamification, networking and critical-analysis tasks (Fig. 29 and 30).

Anyway, we have to consider that this analysis has been conducted on a restricted number of existing platform, even if they are the “under the spot” environments. Furthermore, the survey has been done through “user eye”, that means that it hasn’t been possible to reach detailed information on back office aspects and to experiment all approaches proposed by each single teacher in his course. This “human” element is very important as it could have a strong impact on learner engagement and on the final level of success of the course.

Results of this phase could support teachers in selecting the most suitable platform for achieving their objectives, both technical than pedagogical, but how to proceed after this choice? The “ECO tool guide”, together with the “ECO Instructional design and scenarios for MOOCs”, has been created for this purpose. It offers practical suggestions on how to use specific content typology and MOOC platforms’ tools for designing a course. This guide puts in evidence that the forums (discussion board), gamification, videoconference or chat are important elements for building an effective MOOC. They are versatile and adaptable to be used for different purposes. Anyway they cannot play all roles but it is necessary to integrate more tools focused on specific learning objectives in order to give a multifaceted experience to learners.
Annex 1. Bibliography, webliography and references


Conole, G. (2013), MOOCs as disruptive technologies: strategies for enhancing the learner experience and quality of MOOCs. Available from: https://docs.google.com/a/csev.org/document/d/1B6QAx6OiwK3VW16idU7mnHDuZljyy6r7gLXhTzUa5co/edit?pli=1 [accessed 19 February 2014].


SURF (2014), *2014 Open Education Trend Report*. Compiled by the Open Education Special Interest Group, edited by Nicolai van der Woert (Radboud University Nijmegen Medical Centre), Ria Jacobi (Amsterdam University of Applied Sciences/Hogeschool van Amsterdam) and Hester Jelgerhuis (SURF). Available from: http://www.surf.nl/binaries/content/assets/surf/en/2014/trendrapport-open-education-2014-eng.pdf [Accessed 9 June 2014]


<table>
<thead>
<tr>
<th>KEY WORDS</th>
<th>TITLE and ONLINE REFERENCE</th>
<th>STUDY TITLE</th>
<th>STUDY TYPE</th>
<th>AIMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>The latest development and/or fad in higher education</td>
<td>Anderson, T. (2013). <a href="http://www.com.org/SiteCollectionDocuments/MOOCsPromisePeril_Anderson.pdf">http://www.com.org/SiteCollectionDocuments/MOOCsPromisePeril_Anderson.pdf</a> [Accessed 8 March 2014]</td>
<td>Promise and/or peril: MOOCs and open and distance learning</td>
<td>Paper</td>
<td>Attempt to update the map of the terrain and provide a lens through the 2003 Interaction Equivalency Theorem (Anderson, 2003) to help the understanding and explaining this latest development and/or fad in higher education. It began with a short description of the characteristic of the four words included in the MOOC acronym and try to show how each contributes to the complexity of this education phenomena.</td>
</tr>
<tr>
<td>Distance education theory</td>
<td>Anderson, T &amp; Dron, J. (2011). Available from <a href="http://www.irrodl.org/index.php/irrodl/article/view/890/1826">http://www.irrodl.org/index.php/irrodl/article/view/890/1826</a> [accessed 22 February 2014]</td>
<td>Three generations of distance education pedagogy.</td>
<td>Article - International Review of Research in Open and Distance Learning 12(3).</td>
<td>This paper defines and examines three generations of distance education pedagogy. The three generations of cognitive-behaviorist, social constructivist, and connectivist pedagogy are examined, using the familiar community of inquiry model (Garrison, Anderson, &amp; Archer, 2000) with its focus on social, cognitive, and teaching presences. Although this typology of pedagogies could also be usefully applied to campus-based education, the need for and practice of openness and explicitness in distance education content and process makes the work especially relevant to distance education designers, teachers, and developers. The article concludes that high-quality...</td>
</tr>
</tbody>
</table>
### Pedagogy

| Pedagogy | Anderson, T. (2009). [https://docs.google.com/document/d/1tSqwyeFrEC4wK9Z-6rdMSlhNOp8pM5E7DeIrBdIEk/edit?pli=1](https://docs.google.com/document/d/1tSqwyeFrEC4wK9Z-6rdMSlhNOp8pM5E7DeIrBdIEk/edit?pli=1) [accessed 9 June 2014] | The dance of technology and pedagogy in self-paced distance education. | Paper presented at the 17th ICDE World Congress, Maastricht. | This paper describes the dance like relationship between pedagogy and technologies that creates distance education programming. Using a dance metaphor, the paper describes earlier generation of distance education and notes the evolving role of the self-paced learner as a focus of distance education. The paper argues that control of the learning sequence is an important pedagogical issue and that new tools of networked learning can afford opportunities for social interaction, while retaining self-paced programming control. |

### Report Of The Cornell Distance Learning Committee

| Report Of The Cornell Distance Learning Committee | Bron, L., Burns, J., et al. (2014 ) [http://philosophy.cornell.edu/ep/upload/CornellDistanceLearning.pdf](http://philosophy.cornell.edu/ep/upload/CornellDistanceLearning.pdf) [Accessed 9 June 2014] | REPORT OF THE CORNELL DISTANCE LEARNING COMMITTEE | Report: Cornell University, February 3, 2014 | In this document we conclude that we live in an exciting because MOOCs, if uncertain, time. We do not know the future of distance learning, but see that it holds much promise. Thus we recommend a broad approach: Cornell should pursue a diverse portfolio of distance learning avenues, continually rebalancing it as evidence emerges. |

### xMOOCs; cMOOCs; 7Cs of Learning Design framework

| xMOOCs; cMOOCs; 7Cs of Learning Design framework | Conole, G. (2013). [Document on Google Docs], Available from: [https://docs.google.com/a/csev.org/document/d/1B6Qax6OiwK3VW16idU7mnHDuZljy6r7gLXhTzu5co/edit?pli=1](https://docs.google.com/a/csev.org/document/d/1B6Qax6OiwK3VW16idU7mnHDuZljy6r7gLXhTzu5co/edit?pli=1) [Accessed 19 February 2014] | MOOCs as disruptive technologies: strategies for enhancing the learner experience and quality of MOOCs | Chapter | This chapter considers the pedagogies associated with different types of Massive Open Online Courses (MOOCs). It argues that the current discourse around the concept of xMOOCs (primarily based around interaction with content and essentially adopting a behaviorist learning approach), and cMOOCs (which focus on harnessing the power of social media and interaction with peers, adopting a connectivist learning approach), is an inadequate way of describing the variety of MOOCs and the ways in which learners engage with them. It will provide a brief history of the emergence of MOOCs and the key stakeholders. It will introduce an alternative means of |
| History of MOOCs; Evolution of education technology; Open/distance learning | Daniel, J.S. (2012) Available from http://www-jime.open.ac.uk/article/2012-18/pdf [Accessed 4 March 2014] | Making sense of MOOCs: Musing in a maze of myth, paradox and possibility | Article - Journal of Interactive Media in Education. | The paper describes the short history of MOOCs and sets them in the wider context of the evolution of educational technology and open/distance learning. While the hype about MOOCs presaging a revolution in higher education has focused on their scale, the real revolution is that universities with scarcity at the heart of their business models are embracing openness. They had explore the paradoxes that permeate the MOOCs movement and explode some myths enlisted in its support. The competition inherent in the rush to offer MOOCs will create a sea change by obliging participating institutions to revisit their missions and focus on teaching quality and learners as never before. It could also create a welcome deflationary trend in the costs of higher education. |
| | | | | - Conflicting perspectives on MOOCs divide education communities |
| | | | | - Learning Practitioners disagree about the value of MOOCs |
| | | | | - Formal comprehensive analyses of MOOCs mostly concur that they are disruptive and possibly threatening to current HE models |
| | | | | - Reporting of MOOC learner experiences is positive |
| | | | | - The MOOC is maturing - and engaging with its business and accreditation issues |
## 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Personal knowledge management; usability</th>
<th>The technological dimension of a Massive Open Online Course: The case of the CCK08 course tools</th>
<th>Article - International Review of Research in Open and Distance Learning, vol 10, no.5.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fini, A. (2009) Available from: <a href="http://www.irrodl.org/index.php/irrodl/article/view/643">http://www.irrodl.org/index.php/irrodl/article/view/643</a> [Accessed 22 February 2014]</td>
<td>This paper focuses on the technological aspects of one MOOC, the Connectivism and Connective Knowledge (CCK08) course, in order to investigate lifelong learners’ attitudes towards learning network technologies. The research framework is represented by three perspectives: (a) lifelong learning in relation to open education, with a focus on the effective use of learning tools; (b) the more recent personal knowledge management (PKM) skills approach; and (c) the usability of web-based learning tools.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recent developments in OER (Open Educational Resources) and MOOCs (Massive Open Online Courses); PLAR (Prior Learning Assessment and Recognition)</th>
<th>OER to PLAR: Credentialing for open education.</th>
<th>Article - Open Praxis, vol. 5 issue 1, January-March 2013, pp. 49-58 Special theme: Openness in higher education.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friesen, N &amp; Christine Wihak (2013). <a href="http://www.openpraxis.org/~openpraxis/index.php/OpenPraxis/article/view/22/pdf">http://www.openpraxis.org/~openpraxis/index.php/OpenPraxis/article/view/22/pdf</a> [Accessed 9 June 2014]</td>
<td>Recent developments in OER and MOOCs (Open Educational Resources and Massive Open Online Courses) have raised questions as to how learners engaging with these courses and components might be assessed or credentialed. This descriptive and exploratory paper examines PLAR (Prior Learning Assessment and Recognition) as a possible answer to these questions. It highlights three possible connections between PLAR and open education which hold the greatest promise for credentialing open learning experiences: 1) PLAR may be used to assess and credential open educational activities through the use of exam banks such as CLEP (College Level Examination Program); 2) Learning occurring in xMOOCs (MOOCs based on already credentialed courses) and in other open contexts resembling “courses” may be assessed in PLAR through course-based portfolios; and 3) PLAR may also be enabled through the specification of “gap learning” facilitated through OER of many different kinds.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Update on the developments on MOOCs particularly as they</th>
<th>European University Association: Second Occasional Paper on the topic of Massive Open Online Courses</th>
<th>Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaebel, M. (2014) <a href="http://www.eua.be/Libraries/Publication/MOOCs_Update_January_2014.sflb.ashx">http://www.eua.be/Libraries/Publication/MOOCs_Update_January_2014.sflb.ashx</a></td>
<td>The present paper aims to provide an update on the developments on MOOCs for discussion at the EUA Council, and for information for EUA membership, particularly as</td>
<td></td>
</tr>
</tbody>
</table>

---

**www.ecolearning.eu**
### Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Survey of MOOC and ODL literature</th>
<th>Haggard, Stephen (2013)</th>
<th>The Maturing of the MOOC, Literature Review Of Massive Open Online Courses And Other Forms Of Online Distance Learning</th>
<th>Research paper: Bis Research Paper Number 130, [September 2013]</th>
</tr>
</thead>
</table>

**Concerns**

- European higher education

**Survey**

- International MOOCs facilitators
- European reactions to MOOCs
- A European dimension
- Around the globe
- Business models
- Learning and teaching
- Impact at higher education institutions

**Survey of MOOC and ODL literature**

Haggard, Stephen (2013)
[Accessed 22 February 2014]

This survey of MOOC and ODL literature aims to capture the state of knowledge and opinion about MOOCs and ODL, how they are evolving, and to identify issues that are important, whether consensual or controversial.

**Essay collection**

[Accessed 9 June 2014]

**Essay Collection**

Hopefully, you will find these essays as interesting and informative as I did, and I am thankful to the contributors of this collection for that experience. Most important, I hope you will see these essays as posing additional important questions about MOOCs, continuing the experiment started by CCK08. For whether or not the MOOC has a place as a credit bearing course in college, I have no doubt that there is much education can learn from the continued offering and exploration of MOOCs.

**Survey: Why a professor taught a MOOC?**

[Accessed 08 March 2014]

This article describes a survey, conducted by The Chronicle, attempted to reach every professor who has taught a MOOC. The online questionnaire was sent to 184 professors in late February, and 103 of them responded. The Chronicle survey considered courses open to anyone, enrolling hundreds or even thousands of users (the median number of learners per class was 33,000). About half of the professors who responded were still in the process of teaching their first MOOC, while the rest had led
<table>
<thead>
<tr>
<th>Connectivism; networked learning; learner autonomy; presence; critical literacies</th>
<th>The ideals and reality of participating in a MOOC. In: Proceedings of the 7th International Conference on Networked Learning 2010.</th>
<th>Article - International Review of Research in Open and Distance Learning. Vol. 12.3.</th>
<th>This paper raises questions on levels of learner autonomy, presence, and critical literacies required in active connectivist learning.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivism; CCK08; learner autonomy; diversity; MOOC; openness; connectedness; Interactivity, online learning; networked learning; Stephen Downes; George Siemens.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multicultural education and lifelong learning in Rwanda</td>
<td>Evaluation of Massive Open Online Courses (MOOCs) from the Learner’s Perspective.</td>
<td>Conference Paper: University of Leicester. The 12th European Conference on e-Learning ECEL-2013, 30-31 October 2013.</td>
<td>This paper discusses, from the learner’s perspective, the quality of MOOCs and their potential contribution to widening participation and improving quality in Rwandan higher education.</td>
</tr>
</tbody>
</table>

ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning

D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Connectivism; networked learning;</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>an open online course that had completed at least one full term.</td>
<td>Connectivi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sm; networked learning; learner autonomy; presence; critical literacies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D 2.1 Analysis of existing MOOC platforms and services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectivism; CCK08; learner autonomy; diversity; MOOC; openness; connectedness; Interactivity, online learning; networked learning; Stephen Downes; George Siemens.</td>
<td>The ideals and reality of participating in a MOOC. In: Proceedings of the 7th International Conference on Networked Learning 2010.</td>
<td>Article - International Review of Research in Open and Distance Learning. Vol. 12.3.</td>
<td>This paper raises questions on levels of learner autonomy, presence, and critical literacies required in active connectivist learning.</td>
</tr>
<tr>
<td>Multicultural education and lifelong learning in Rwanda</td>
<td>Evaluation of Massive Open Online Courses (MOOCs) from the Learner’s Perspective.</td>
<td>Conference Paper: University of Leicester. The 12th European Conference on e-Learning ECEL-2013, 30-31 October 2013.</td>
<td>This paper discusses, from the learner’s perspective, the quality of MOOCs and their potential contribution to widening participation and improving quality in Rwandan higher education.</td>
</tr>
</tbody>
</table>
ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning

D 2.1 Analysis of existing MOOC platforms and services

| Data of academic staff of University of South Africa (Unisa), Zimbabwe Open University (ZOU) and University of Botswana (UB) | Nyoni, J. (2013) Available from: http://www.mcsinter.org/journal/index.php/mjss/article/view/523 [Accessed 21 February 2014] | The Viral Nature of Massive Open Online Courses (MOOCs) in Open and Distance Learning: Discourses of Quality, Mediation and Control, Article: Mediterranean Journal Social Sciences, Vol 4(3). This study asynchronously collected data in form of electronic textual discourses from University of South Africa (Unisa), Zimbabwe Open University (ZOU) and University of Botswana (UB) academic staff through the use of the bulletin board system (BBS), and analyzed it using a qualitative deconstructive discourse analysis (QDDA) underpinned by a case study design. Trends from MOOC deconstructive discourse analysis (QDDA) indicate that MOOC virality is unstoppable, but there is need to understand how pedagogy and an organizational approach to online and offline learning will lead to improve the quality of mediation outcomes, control and experiences for both learners and lecturers. |
| MOOCs in Spain | Oliver, M.; Hernández-Leo, D.; Daza, V.; Martín, C.; Albó, L. (2014) Available from: http://www.catedratelefonica.upf.edu/wp-content/uploads/2014/02/MOOCs-en-Espa%C3%B1ol.pdf [Accessed 4 March 2014]. | MOOCs en España. Panorama actual de los Cursos Masivos Abiertos en Línea en las universidades españolas. Article: Social Innovation in Education Universitat - Cuaderno Red de Cátedras Telefónica - UPF, Pompeu Fabra, Barcelona | Spain has suddenly become a leader in Europe offering of massive open online courses, or MOOCs. Research is based on a preliminary phase sustained by hypotheses that need solid data to start. In 2013 we have worked intensively collecting information on massive open online courses in Spain as a first step to understand the role that MOOCs will play in our society. Thus, "MOOCs in Spain" is the first report by the Telefónica Chair of UPF devoted to Social Innovation in Education. |
| E-learning: blended | Paula Peres, P., L. Lima and V. | B-learning Quality: Dimensions, Article: European Journal of Open, | For this paper, six frameworks for quality assessment of |
### D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Learning; learning quality; quality models; e-learning dimension; b-learning criteria; pedagogical approach for learning.</th>
<th>Criteria and Pedagogical Approach.</th>
<th>Distance and E-learning</th>
<th>technological enhanced learning were examined and compared regarding similarities and differences. These frameworks aim at the same global objective: the quality of e-learning environment/products. In this work we collected and arrange all the quality criteria identified in order to get a more complete framework and determine if it fits our b-learning environment. We also included elements related to our own b-learning research and experience, acquired during more than 10 years of experience.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty development, instructional design, MOOC</td>
<td>Richter, S.L. &amp; Krishnamurthi, M. (2014) <a href="http://www.ijiet.org/papers/440-EI0016.pdf">http://www.ijiet.org/papers/440-EI0016.pdf</a> [Accessed 9 June 2014].</td>
<td>Preparing Faculty for Teaching a MOOC: Recommendations from Research and Experience</td>
<td>In this paper, a number of recommendations, based on research and experience, for faculty development staff to follow in helping faculty plan and design a MOOC, and organizational issues to consider are summarized.</td>
</tr>
<tr>
<td>Distance Education Pedagogy</td>
<td>Rodriguez, C. O. (2012) Available from <a href="http://www.eric.ed.gov/PDFS/EJ982976.pdf">http://www.eric.ed.gov/PDFS/EJ982976.pdf</a> [Accessed 22 February 2014].</td>
<td>MOOCs and the AI-Stanford like courses: Two successful and distinct course formats for Massive Open Online Courses</td>
<td>In this paper we study in detail representative courses from AI and c-MOOC formats. We establish that although they share the use of distributed networks the format associated with c-MOOCs, which are defined by a participative pedagogical model, are unique and different from AI. We further assign to the Artificial Intelligence to a cognitive-behaviorist (with some small contribution of social constructivist) and MOOCs to connectivist pedagogy.</td>
</tr>
</tbody>
</table>
**ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning**

**D 2.1 Analysis of existing MOOC platforms and services**

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith, M.L. and Katherine M. A. (2014). <a href="https://docs.google.com/file/d/0B0eDX6k2hsNeWUSUd1kyT05Lb0E/edit">Link</a> [Accessed 9 June 2014].</td>
<td>Open Development: Networked Innovations in International Development</td>
<td>Extensive document about the openness of online education. Firstly the authors explain the current status of this issue. Then they develop different models of openness and causing friction (copyright, e.g.). Finally, the authors refer to specific cases.</td>
</tr>
<tr>
<td>Torres Mancera, D.; Gago Saldaña, D. (2014) Available from <a href="http://ried.utpl.edu.ec/?q=es/node/844">Link</a> [Accessed 19 February 2014].</td>
<td>Los MOOCs y su papel en la creación de comunidades de aprendizaje y participación</td>
<td>Despite its increasing popularity, the most promising value of MOOCs is not derived from what they are, but from what they may transform into, that is, the positive derivatives that have already started to flourish and are very much related to the open and flexible character of learning advocated by MOOCs (Yuan and Powell, 2013). These capabilities arise from its very nature, namely the modularity, scalability and (re) combinative nature, thus enabling the transition towards personalized learning pathways that are also more adjusted to individual competences and preferences.</td>
</tr>
</tbody>
</table>
This is the rationale underlying the concept of learning and participation communities highlighted in this article by CSEV and underpinned by the creation of a new “umbrella” platform that brings together initiatives already implemented (such as UnX) and new ones that are now being incorporated.

|--------------------------|---------------------------|---------------------------------------------------------------|--------------------------|


In this article the author argues that openness in education has been successful in establishing itself as an approach. However, this initial victory should be viewed as part of a larger battle around the nature of openness. Drawing lessons from history and the green movement, a number of challenges for the open education movement are identified as it enters this new stage. The value of openness to education is stressed in that
**ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning**

D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>This report sets out to help decision makers in higher education institutions gain a better understanding of the phenomenon of Massive Online Open Courses (MOOCs) and trends towards greater openness in higher education and to think about the implications for their institutions.</td>
<td></td>
</tr>
</tbody>
</table>
Annex 3. Checklist

1. **Introduction to evaluation.** Some quick question before beginning this evaluation.

1.a/ Platform name. Give the name of the MOOC platform that you are evaluating using this form.
- Fill the blank.

1.b/ Short description. If you want to tell something about the platform you are evaluation.
- Fill the blank.

1.c/ What is your name? We use your name only to check whether there are no duplicate or incomplete answers. Your name will be removed before we analyse the data.
- Fill the blank.

1.d/ What is your role in this MOOC platform?
- I am the MOOC platform owner.
- I am (one of) the MOOCs platform developers.
- I have design one or more MOOC on this platform.
- I have taught one or more MOOCs on this platform.
- I have been a learner in one or more MOOCs on this platforms.
- Others.

1.e/ How much experience do you have with this MOOC platform?
- 0 years.
- 1 - 6 months.
- 6 - 11 months.
- 1 - 2 years.
- More than 2 years.

1.f/ How many MOOCs did you follow on this MOOC platform?
- 0.
- 1 - 2.
- 3 - 5.
- Más de 5.

1.g/ How many MOOCs have you design or taught on this platform? (Amount of experience with the platform).
- 0.
- 1 - 2.
- 3 - 5.
- Más de 5.

2. **General Information**
2.a/ The platform has a website that summarizes the vision, strategy, features...
   - Yes.
   - No.

2.b/ There are instructions, online documentation or user support to understand and use the platform.
   - Yes.
   - No.

2.c/ The objectives of the platform are clearly identified and defined.
   - Yes.
   - No.

2.d/ It provides a subjects listing and the number of courses offered.
   - Yes.
   - No.

2.e/ Platform requirements are defined and clearly visible.
   - Yes.
   - No.

2.f/ It provides contact information.
   - Yes.
   - No.

2.g/ The platform includes integration with the major social networks (can the user easily share the platform information via Facebook, Twitter, Google +, etc.?).
   - Yes.
   - No.

2.h/ The platform allows users to sign up for free and create online courses. (Is the user allowed to participate in free courses and to create them?).
   - Yes.
   - No.

2.i/ The platform information updates (courses, events...) are visible. (Is course’s information updated?).
   - Yes.
   - No.

3. Economic Structural factors

3.a/ The platform is owned by a profit institution/consortium (Is the platform made for bussiness?).
   - Yes.
   - No.

3.b/ The platform is open source (Is the technology used to build the platform open source?).
   - Yes.
3. c/ The platform owner is (multiple-choice answer).
- Government based (public) institution or public consortium.
- A private institution/company or a private consortium.
- A higher education institution
- An European institution/consortium (Country/ies)

3. d/ The platform's creation and/or running is supported...
- Just by its owners' capitals (e.g., learner's taxes, etc.).
- By public capital or donation (no refund needed).
- By private capitals (refund needed).

3. e/ MOOC platform has sponsors or allow sponsoring possibilities for financial support (is there any brand involved in the platform?).
- Yes.
- No.

3. f/ The platform course approach follow American style (lesson based and task oriented model such as Coursera).
- Yes.
- No.

3. g/ The platform is based on a completely free (without any cost) MODEL: course contents, services and certification are offered for free? (Is it really free?).
- Yes.
- No.

3. h/ The course's contents of the platform are under open-licence and can be reusable? (Are the contents copy-left?).
- Yes.
- No.

3. i/ The platform offers to users...
- The possibility to create their own course and monetize them or not (the teacher may decide whether to monetize the course or not).
- The possibility to use external OER resources in their own course (the teacher can decide whether to use open educational resources or not).

3. j/ The platform offers a freemium model (means that part of the course contents and/or services are offered for a fee). (After the freemium service the platform offers the user a premium service).
- Yes.
- No.

3. k/ Which services are offered for a fee? (in the case the platform offers paying services...).
- Reduction on commercial textbook (discount in buying a textbook).
- Dedicating tutoring by academic staff (extra attention by experts).
- Exam for validated real ECTS credits (university credits).
- Certificate of completion (titles).
- Licensing of course materials (access to extra information, lessons, etc.)
- Participation to local meetings (access to course encounters).

4. Technology
4.a/ Technological main features supported by the platform (multiple-choice answers)
- Based on existing VLS (Canvas, Moodle, Desire to learn, Blackboard, etc.). (Is the course using an already existing technology?)
- Based on external MOOC platforms (Coursera, Udacity, Edx). (Is the course integrated in one main platform?)
- Ad hoc platform (mooc.org, wordpress.org, Google course builder).
- Multilanguage support
- End-user multiple environments supported (OSX, Windows, Linux, ...)
- API or web services defined for integration/interoperability with other systems
- OAI-PMH (www.openarchives.org/pmh/) support for content metadata exchange
- LTI (www.imsglobal.org/toolsinteroperability2.cfm) compliance, for interoperability with other learning tools
- Content available online on all device types (desktop, tablet or smartphone)
- Mobile app(s) available (iOS, Android)
- Open software license
- Integrated multiple platform solution or service-oriented architecture (SOA)
- Support for connectivist MOOCs (cMOOCs)
- Support for content-based and task-oriented MOOCs (xMOOCs, others)
4.b/ Web 2.0 features
- Social networking (friends, likes, ...)
- User Blogs
- Wikis
- Microblogging
- Content syndication, newsfeeds (RSS, Atom)
- Annotating
- Activity stream
- User dashboard
- Possibility to create groups by participants
- Karma reputation based system
5. Accessibility

5.a/ The videos have subtitles (deaf and impaired hearing people)
- Yes.
- No.

5.b/ The video subtitles distinguish between vocal sounds and non-vocal sounds (deaf and hard-of-hearing people) (An example is Standard UNE 153010:2012)
- Yes.
- No.

5.c/ Video contents have a secondary integrated screen with the same content in sign language (deaf and hard-of-hearing people).
- Yes.
- No.

5.d/ All texts are available in downloadable Word (visually impaired people)
- Yes.
- No.

5.e/ Interface text contents can be processed by a text reader (visually impaired people)
- Yes.
- No.

5.f/ Interface is navigable by keyboard (visually impaired and/or disabled people)
- Yes.
- No.

5.g/ The platform offers the user a kind of Technical Service Department for Accessibility, either via synchronous or asynchronous (people with special needs)
- Yes.
- No.

5.h/ Between platform services there is a Verification Service (feedback) to ensure that features work perfectly (people with special needs)
- Yes.
- No.

6. Communication and interaction

6.a/ Communications between teachers and learners are...
- Synchronous
- Asynchronous
- Synchronous and asynchronous

6.b/ Interaction between learners
- Forum
- Chats
D 2.1 Analysis of existing MOOC platforms and services

- Group workspace
- Videoconference
- Collaborative real time text editor
- Personal profiles
- Group profiles
- Social media integration

6.c/ Interaction between teacher and learner.
- Private message
- Forums
- Social media integration
- Other.

6.d/ The user profile module includes
- Avatar / Profile picture.
- Progress bar (or course progress visualization).
- Gamification integration (visualization of badges, achievements, karma, etc.).
- Social media profiles integration.
- Geolocation.
- CV / Professional profile / Interests information.
- Group membership.
- Contact info / Messaging.

6.e/ Teacher profile module
- Avatar / Profile picture
- Contact information.
- Messaging information.
- CV.

6.f/ Content deployment / Learning modules
- Latest news.
- Video lectures.
- Video presentations / video tutoring / video instructions / video wrap-ups
- Text contents.
- Social media integration (automatic syndication of relevant information on social media).
- Archived or non audited courses (stand alone courses, self-paced, self-enrolled, asynchronous).
- Facilitated, synchronic courses (continuous instructional assessment, real-time courses).
- Teacher oriented (create your own course) (in many sites they encourage you to create your own MOOCs).
D 2.1 Analysis of existing MOOC platforms and services

- Level oriented (K-12 oriented, undergraduate, postgraduate, professional development oriented, beginners, intermediate, advanced).
- Theme oriented (maths, programming, sciences, languages, marketing, etc.).

6.g/ Sign-up module
- Social media login integration.
- E-mail verification.
- Activation code.
- Syllabus / Content preview.
- Video preview / presentation.
- Teacher / instructor CV / profile.
- Number of learners revealed.

7. Goals, Content and resources

7.a/ The goals are clear and well designed
- Yes.
- No.

7.b/ The course has a qualitative goal (experience, interaction, learning from the process, etc.)
- Yes.
- No.

7.c/ The course has a quantitative goal (certificate based on assessments)
- Yes.
- No.

7.d/ The contents are
- Lesson based (designed by teachers).
- Project based (designed by learners and teachers).

7.e/ The platform includes (or allows) the following learning resources:
- Video instructions and video tutoring.
- Video lectures.
- Talking head lectures.
- Hand on boards videos.
- Original contents.
- Borrowed contents.
- Text and textual documents.
- Mobile apps: apps integration for mobile devices, tablets, smartphones.
- External apps integration (Learning technology interoperability).
- Geolocalization tools.
Discussion forums.
- Gamification (achievements, badges, level, points, etc).
- Tools for collaborative work (collaborative text editor, wiki chat, video conference).
- Other.

7.f/ Can users customize their learning environment by adding content or resources to their course page?
- Yes.
- No.

8. Assignments

8.a/ A clear course guide / syllabus is available
- Yes.
- No.

8.b/ There is a course map / guide
- Yes.
- No.

8.c/ There is a task map or guide
- Yes.
- No.

8.d/ Correctly scheduled and ordered tasks
- Weekly.
- Monthly.
- Logical content order.
- Logical learning order.

8.e/ The course guide / syllabus is clear and well designed
- Yes.
- No.

8.f/ There are clear instructions for each task
- Yes.
- No.

8.g/ Individual task
- None (no task are based on individual work).
- Few.
- Many.
- All (all task are based on individual work).

8.h/ Group tasks
- None (no task are based on collaborative work).
- Few.
- Many.
- All (all task are based on collaborative work).

8.i/ Networked tasks
- None (no task are based on networking).
- Few.
- Many.
- All (all task are based on networking).

8.j/ Reproductive task
- None (no task are reproductive).
- Few.
- Many.
- All (all task are reproductive).

8.k/ Critical-analysis tasks
- None (no task are oriented towards critical analysis).
- Few.
- Many.
- All (all task are oriented towards critical analysis).

8.l/ Task organization allows the learner to follow multiple Learning Paths

8.m/ Learning tasks and assignment results can be
- Textual.
- Multiformat / Multimedia assignments (hypertext, video, etc.)
- Based on (Karma) discussion forums
- Social Media (social media integration for assignments)
- Collaborative environments (wiki, etc.)
- Gamified (story mode, points, levels, badges, karma)
- Other.

9. Assessments

9.a/ Types of assessment supported by the platform
- Peer to peer (rubric based).
- Group to group (collaborative peer to peer assessment).
- Learner self assessment of progress.
- Computer based assessment (quizzes and test like).
- Content Pre-test (quizzes): Previous knowledge about the course/module’s content.
- Learning styles Pre-test: Allowing instructors and learners to know each learner learning style.

9.b. The following assessment tools are available:
- Automated peer to peer assessment module / engine.
- Computer based assessment (quizzes and tests like).
- Teacher based assessment.
- Speedgrader annotations (teacher annotations in canvas).
- Notification integration of learning results.
- Graphic analytics reporting engine (allowing instructors and learners to visualize their learning progress).
- Karma based forums
- Gamification of assessments (points, levels, badges).

10. Pedagogical principles

10.a. The platform is based on a teacher lecture, knowledge transfer model.
- Yes.
- No.

10.b. The platform is based on a connectivist (social interaction based) principles.
- Yes.
- No.

10.c. The platform is based on constructivist principles
- Yes.
- No.

10. d. The platform allows several pedagogical models to be used to design and deliver the MOOC
- Yes.
- No.
Annex 4. Pedagogical evaluation of ECO sMOOC platforms

WP2 has developed a pedagogical framework to support the innovative ECO sMOOCs. ECO sMOOCs are characterized by an interactive, collaborative and participative instructional design that promotes ubiquitous access and situated contextualised learning. ECO sMOOCs are enriched by the opportunities offered through mobile access and apps as well as games and scripted activities.

That means that the ECO platforms need to provide the features to support this pedagogical framework.

- Contextualising
- Community formation
  - User profiles
  - Integration of social network sites and web 2.0
  - Web 2.0 tools such as blog, wiki
  - Rating, sharing, annotating
- Individual learning
- Collaborative learning
- Sequenced activities
- Formative evaluation
- Assessment: self, peer, group
- Textual resources within and outside the platform
- Multimedia resources within and outside the platform
- Syllabus
- Assignments
- Gamification
- Recommender
- Reputation
- Mobile access on tablets and smartphones through browsers and apps
- Open access to course content (creative commons)
- Course content always available
- Accessibility
- Entry and evaluation surveys

To accomplish this, the platform needs to offer at least the following functions, features and tools.

- User profiles
  - Integration of social network sites and web 2.0 profiles
- Information about teachers
- Course catalogue
- Course description
- Course schedule
- Welcome page
- FAQ
- Syllabus
- Content: textual and multimedia resources, video lectures
- Learning activities/tasks that can be sequenced and completed
- Assignments, graded and non-graded
ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning

D 2.1 Analysis of existing MOOC platforms and services

- timed, deadlines
- Assessments, graded, self-assessment, peer-assessment, group assessment
- timed, deadlines
- Communication tools:
  - Forum
  - Chat
- Collaboration tools
  - Blog
  - Wiki
  - Rating
  - Sharing
  - Annotating
- Performance monitor
- Progress monitor
- Announcements
- Group formation
- Gamification
- Recommender
- Reputation
- Create own artefacts in personal learning environment and include in MOOC
- Support for tablets and smartphone
  - Browser
  - Apps
- E-portfolio
- Linking to existing social media
- Integrating profile information from existing social media
- AI engines are a must for the integration of massive qualitative assessment
- Open access to course content
- Accessibility
- Entry and evaluation surveys
WeMOOC
http://wemooc.com/en/zona-demo

Evaluation has been performed using the editor-teaching account and some features have been checked using the student account.

WeMOOC is based on Liferay. Unfortunately most of info is presented in Spanish and a manual is missing or available only in Spanish.

This demo site allows access for a teacher who can edit an existing course, or a student who can run the course. The teacher does not have the permissions to create a course, but can edit one of the two existing courses. There is no demo site for a course creator or any of the other roles. Unfortunately, there is only one student account, so the P2P module cannot be tested properly.

WeMOOC is based on Liferay and a course is using the default Liferay forum, blog, wiki site template. The home page is used to present the course structure. A course is divided into modules. A teacher can add modules and edit modules. A module consists of one or more ‘activity types’. There are 9 activity types, although strictly speaking these are not all activities, as the types include resources as well.

Activity types are:
- test: self-assessment test, can be graded, supports several question types
- external resource: link to other websites, option to embed Youtube video
- P2P: peer assessment.
- survey: ask students their opinion
- attended task: not clear how this works. It allows to grade and comment on tasks student do outside the platform.
- development activity: students have to submit a file or piece of text that will be graded by teacher (still buggy)
- media library resource: provide a hyperlink to certain types of resources that have been uploaded to the WeMOOC system. Teacher cannot upload these.
- Assessment: not clear how this works. Students do not submit anything, teacher can grade and comment.
- scorm resource

All activity types follow the same structure
- Choose the module
- Title
- Description
- Is it necessary option
- Restriction: Start and end date, adaptive depending on completion of other activities
- Categorisation: add tags, choose category from tematica and/or tipo (no option to set this vocabulary)
- Specific settings for the type of activity, e.g. grading

For several activity types there seem to be automated handling of the type that are outside the control of the teacher.

All activity types are rather cumbersome to edit. To the teacher it is not clear what process to follow to create or edit an activity, what steps are involved and how many.

Several of the activity types are still buggy and not working well.
In addition blogs, forum and wiki are available on separate pages but cannot be incorporated into the modules or mixed in between the activity types.

Teachers have a statistics module that provides teachers with an overview of progress. That module however is not very suitable for MOOCs with large number of students.

UI need improving. In edit mode the text fields use very tiny font sizes making it impossible to read what you type, while in delivery mode, font sizes are large, creating very long pages that need a lot of scrolling.

<p>| User profiles | No |
| Integration of social network sites and web 2.0 profiles | No |
| Information about teachers | No |
| Course catalogue | Not available in the demo site, but according to TLS website there should be a catalogue |
| Course description | Yes |
| Course schedule | No |
| Welcome page | No |
| FAQ | No |
| Syllabus | No |
| Content: textual and multimedia resources, video lectures | Yes, but limited, either textual shown on the web page, or hyperlinks to other websites, or links to limited type of documents within the server, Only support Youtube |
| Learning activities/tasks that can be sequenced and completed | No activities in the sense of instruction. 9 ‘activity types’ can be sequenced, can be made conditional upon completion of other activities, can set start and end time, Completion is either looking at page, or submitting file, submitting self-test |
| Assignments, graded and non-graded | Yes, graded by teacher, P2P assignment evaluated by students |</p>
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments timed, deadlines</td>
<td>Deadlines: start and end time</td>
</tr>
<tr>
<td>Assessments, graded, self-assessment, peer-assessment, group assessment</td>
<td>Test automatically graded P2P assignment, upload file, peer feedback</td>
</tr>
<tr>
<td>Assessment timed, deadlines</td>
<td>Start and end dates, Test can be timed</td>
</tr>
<tr>
<td>Communication tools:</td>
<td>On separate pages, not integrated into course content</td>
</tr>
<tr>
<td>Forum</td>
<td>On separate page, student cannot initiate a new thread, only reply to existing threads</td>
</tr>
<tr>
<td>Chat</td>
<td>No</td>
</tr>
<tr>
<td>Collaboration tools</td>
<td>On separate pages, not integrated into course content</td>
</tr>
<tr>
<td>Blog</td>
<td>There is a page called blog, but student cannot start a blog there</td>
</tr>
<tr>
<td>Wiki</td>
<td>Course wiki on separate page</td>
</tr>
<tr>
<td>Rating</td>
<td>No</td>
</tr>
<tr>
<td>Sharing</td>
<td>No</td>
</tr>
<tr>
<td>Annotating</td>
<td>No</td>
</tr>
<tr>
<td>Performance monitor</td>
<td>No, only for teacher, not for student</td>
</tr>
<tr>
<td>Progress monitor</td>
<td>Limited</td>
</tr>
<tr>
<td>Announcements</td>
<td>No</td>
</tr>
<tr>
<td>Group formation</td>
<td>No, maybe in P2P object</td>
</tr>
<tr>
<td>Gamification</td>
<td>No</td>
</tr>
<tr>
<td>Recommender system</td>
<td>No</td>
</tr>
<tr>
<td>Reputation</td>
<td>Not seen in the demo site, but according to website there is a karma system. This is a commercial add-on and cannot be</td>
</tr>
</tbody>
</table>
## D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Feature</th>
<th>(Configured)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create own artefacts in personal learning environment and include in MOOC</td>
<td>No</td>
</tr>
<tr>
<td>Mobile access through browsers on tablets and smartphone</td>
<td>No</td>
</tr>
<tr>
<td>Mobile apps for tablets and smartphones</td>
<td>No</td>
</tr>
<tr>
<td>Other</td>
<td>Badges seen in demo system, no info on how to configure and earn the badges. This is a commercial add-on that cannot be configured by teacher.</td>
</tr>
<tr>
<td>E-portfolio</td>
<td></td>
</tr>
<tr>
<td>Linking to existing social media</td>
<td></td>
</tr>
<tr>
<td>Integrating profile information from existing social media</td>
<td></td>
</tr>
<tr>
<td>AI engines for the integration of massive qualitative assessment</td>
<td></td>
</tr>
<tr>
<td>Open access to course content</td>
<td>No</td>
</tr>
<tr>
<td>Accessibility</td>
<td></td>
</tr>
<tr>
<td>Entry and evaluation surveys</td>
<td>Yes</td>
</tr>
</tbody>
</table>
ARLearn
Documentation: http://ou.nl/arlearn

Authoring environment: http://streetlearn.appspot.com

ARLearn is used to create mobile serious games, consisting of various types of messages, e.g. audio, video, text. The games run as a mobile app on a smartphone. Access to games can be private, by invitation or public. It is possible to define a complete MOOC in a ARLearn game or add an ARLearn as a situational contextualised learning activity to a MOOC running in one of the other platforms.

Type of messages
The author can create various types of messages: a textual description, a textual description supplemented with a hyperlink to an audio or video fragment stored elsewhere, a textual description supplemented with a Youtube video. Additionally learners can be instructed to scan a QR code. Next, a multiple choice or a multiple response question can be used. Each of these messages can be used to define learning activities and assignments that learners have to perform. Feedback can be provided through any of the textual, audio or video messages following an action by the learner.

Learners can respond by uploading audio or video fragments, pictures, numbers or text entries.

Order of messages can be specified, as triggers for showing or hiding messages, making them conditional on other messages or learner actions. Messages can be automatically launched.

The learner can easily see what messages are new and have not yet been read.

Badges can be earned by performing activities.

These messages are then displayed either in list view or on a Google map.

- Games that define messages in a list view. Here the player will not see a map on the android device, but only a list of visible messages.
- Map view games are centred around a map. When the game is played, the map is the most important view on the Android device. Players will content bound to GPS coordinate appearing on the map while the game is being played. From the map view, players can navigate to a list view, where they can see content that is not bound to a location.

Roles
A game can contain several roles can be defined. For instance: "student", "soldier", "game master", "staff welfare", etc. These roles can later be used to filter contents. Game content can be configured so that only certain roles can see it. In this manner, a player with role "game master" will be able to see messages that the other roles cannot access.
ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning

D 2.1 Analysis of existing MOOC platforms and services

**Teams and players**
A run enables playing a game with real participants. It also acts as a container for game results (e.g. pictures, text, answers, etc.). A game can in this way be played over and over again with various players.

Within a run, one can define teams (2) and players (1). Players are added from the contact list. Teams are an option. When defining a team, players can be assigned to teams. This is important when your game enables players to cooperate within one team.

<table>
<thead>
<tr>
<th>User profiles</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration of social network sites and web 2.0 profiles</td>
<td>No</td>
</tr>
<tr>
<td>Information about teachers</td>
<td>No</td>
</tr>
<tr>
<td>Course catalogue</td>
<td>No</td>
</tr>
<tr>
<td>Course description</td>
<td>Yes</td>
</tr>
<tr>
<td>Course schedule</td>
<td>No</td>
</tr>
<tr>
<td>Welcome page</td>
<td>Yes</td>
</tr>
<tr>
<td>FAQ</td>
<td>No</td>
</tr>
<tr>
<td>Syllabus</td>
<td>Possible</td>
</tr>
<tr>
<td>Content: textual and multimedia resources, video lectures</td>
<td>Yes, various types of textual messages, Youtube, hyperlinks to audio and video elsewhere</td>
</tr>
<tr>
<td>Learning activities/tasks that can be sequenced and completed</td>
<td>Yes, through the messages</td>
</tr>
<tr>
<td>Assignments, graded and non-graded</td>
<td>Yes, not graded by score but by completion</td>
</tr>
<tr>
<td>Assignments timed, deadlines</td>
<td>Timed activities are possible</td>
</tr>
<tr>
<td>Assessments, graded, self-assessment, peer-assessment, group assessment</td>
<td>No tests, but individual multiple choice and multiple response questions. These</td>
</tr>
</tbody>
</table>
**ECO: Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning**

**D 2.1 Analysis of existing MOOC platforms and services**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment timed, deadlines</td>
<td>Timed question is possible</td>
</tr>
<tr>
<td>Communication tools:</td>
<td>No</td>
</tr>
<tr>
<td>Forum</td>
<td>No, not in game, possible through hyperlink to existing forum</td>
</tr>
<tr>
<td>Chat</td>
<td>No, not in game, possible through hyperlink to existing forum</td>
</tr>
<tr>
<td>Chat function</td>
<td>Chat function under development</td>
</tr>
<tr>
<td>Collaboration tools</td>
<td>Collaboration through joint activities</td>
</tr>
<tr>
<td>Blog</td>
<td>No, not in game, possible through hyperlink to existing blog</td>
</tr>
<tr>
<td>Wiki</td>
<td>No, not in game, possible through hyperlink to existing wiki</td>
</tr>
<tr>
<td>Rating</td>
<td>No, not in game, possible through hyperlink to existing website</td>
</tr>
<tr>
<td>Sharing</td>
<td>Yes share a game</td>
</tr>
<tr>
<td>Annotating</td>
<td>No</td>
</tr>
<tr>
<td>Performance monitor</td>
<td>Through badge extension</td>
</tr>
<tr>
<td>Progress monitor</td>
<td>Realtime by teacher</td>
</tr>
<tr>
<td>Announcements</td>
<td>Through messages</td>
</tr>
<tr>
<td>Group formation</td>
<td>Teams defined in advance</td>
</tr>
<tr>
<td>Gamification</td>
<td>Yes</td>
</tr>
<tr>
<td>Recommender system</td>
<td>No</td>
</tr>
<tr>
<td>Reputation</td>
<td>No</td>
</tr>
<tr>
<td>Create own artefacts in personal learning environment and include in MOOC</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile access through browsers on tablets and smartphone</td>
<td>No</td>
</tr>
<tr>
<td>Mobile apps for tablets and smartphones</td>
<td>Yes, ARLearn is a mobile app for Androids</td>
</tr>
<tr>
<td>Other</td>
<td>Mozilla Badge extension, API, Conditional activities, Mobile app, Location based, Contextualised, Use of QR code</td>
</tr>
<tr>
<td>E-portfolio</td>
<td></td>
</tr>
<tr>
<td>Linking to existing social media</td>
<td></td>
</tr>
<tr>
<td>Integrating profile information from existing social media</td>
<td></td>
</tr>
<tr>
<td>AI engines for the integration of massive qualitative assessment</td>
<td></td>
</tr>
<tr>
<td>Open access to course content</td>
<td>Yes, creative commons</td>
</tr>
<tr>
<td>Course content always available</td>
<td>No</td>
</tr>
<tr>
<td>Accessibility</td>
<td></td>
</tr>
</tbody>
</table>
Logiassist
http://test.logiassist.de

The evaluation is performed on a test server that did not contain the full functionality at the time of the evaluation, and was performed with a user account with content creation privileges. Only the web client has been evaluated.

There is also a client for smart phones and for tablets.

Logiassist is based on the Liferay portal environment, but hides most of the regular Liferay site layout. Currently user interface is only available in German.

Courses are created through a rather fixed template that determines the type of objects that can be used.

A new course is created by entering id, title, abstract, description and indicating for what organisation (or all) the course is available. The course is created in unpublished mode. It then needs to be opened again to create the course content.

Course content is created by composing a course structure, by adding chapters or either of the components that can be added to the chapters. Chapters can be nested and can contain any of the following objects:

- Text is constructed by adding objects to the page, in any number and order: layout, plain text, video, image, list, table or slideshow. The text object provides only a plain text editor, no rich text or HTML is allowed. Consequently, no hyperlinks can be included.
- Video by uploading a MP4, OGG or WebM file. It is not possible to link to a video fragment, e.g. on Youtube.
- Test/assessment/quiz, graded, consisting of multiple-choice questions, multiple response questions, open question.
- PDF (upload a PDF, is currently not working)
- A rich text area, allowing basic formatting, hyperlinks and tables, but no audio/video objects, images, etc.
- Audio by uploading a MP3, OGG or WAV file. It is also possible to provide the transcript text
- Survey, consisting of multiple-choice questions, multiple response questions, open question

Objects have at least a title and specific additional fields.

It is possible to apply rules to the course, and order objects. Not sure what happens.

After a course has been created, it has to be made available for review. The review and publishing functions are currently not operational.

<table>
<thead>
<tr>
<th>User profiles</th>
<th>Yes, but too limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration of social network sites and web 2.0 profiles</td>
<td>No</td>
</tr>
<tr>
<td>Information about teachers</td>
<td>No</td>
</tr>
<tr>
<td>Course catalogue</td>
<td>Not clear</td>
</tr>
</tbody>
</table>
### D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course description</td>
<td>Should be, but not seen</td>
</tr>
<tr>
<td>Course schedule</td>
<td>No</td>
</tr>
<tr>
<td>Welcome page</td>
<td>No</td>
</tr>
<tr>
<td>FAQ</td>
<td>No</td>
</tr>
<tr>
<td>Syllabus</td>
<td>No</td>
</tr>
<tr>
<td>Content: textual and multimedia resources, video lectures</td>
<td>Limited, textual resources created in the platform, upload of specific types of video/audio, PDF</td>
</tr>
<tr>
<td>Learning activities/tasks that can be sequenced and completed</td>
<td>No</td>
</tr>
<tr>
<td>Assignments, graded and non-graded</td>
<td>No</td>
</tr>
<tr>
<td>Assignments timed, deadlines</td>
<td>No</td>
</tr>
<tr>
<td>Assessments, graded, self-assessment, peer-assessment, group assessment</td>
<td>Graded tests with three types of questions. Ungraded surveys No peer- or group assessment</td>
</tr>
<tr>
<td>Assessment timed, deadlines</td>
<td>No</td>
</tr>
<tr>
<td>Communication tools:</td>
<td>No</td>
</tr>
<tr>
<td>Forum</td>
<td>No</td>
</tr>
<tr>
<td>Chat</td>
<td>No</td>
</tr>
<tr>
<td>Collaboration tools</td>
<td>No</td>
</tr>
<tr>
<td>Blog</td>
<td>No</td>
</tr>
<tr>
<td>Wiki</td>
<td>No</td>
</tr>
<tr>
<td>Rating</td>
<td>No</td>
</tr>
<tr>
<td>Sharing</td>
<td>No</td>
</tr>
<tr>
<td>Annotating</td>
<td>No</td>
</tr>
<tr>
<td>Performance monitor</td>
<td>Yes</td>
</tr>
<tr>
<td>Progress monitor</td>
<td>Not sure</td>
</tr>
</tbody>
</table>
### D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Feature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcements</td>
<td>No</td>
</tr>
<tr>
<td>Group formation</td>
<td>No</td>
</tr>
<tr>
<td>Gamification</td>
<td>No</td>
</tr>
<tr>
<td>Recommender system</td>
<td>No</td>
</tr>
<tr>
<td>Reputation</td>
<td>No</td>
</tr>
<tr>
<td>Create own artefacts in personal learning environment and include in MOOC</td>
<td>No</td>
</tr>
<tr>
<td>Mobile access through browsers on tablets and smartphone</td>
<td>Should be, but not verified</td>
</tr>
<tr>
<td>Mobile apps for tablets and smartphones</td>
<td>Should be, but not verified</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>E-portfolio</td>
<td>No</td>
</tr>
<tr>
<td>Linking to existing social media</td>
<td>No</td>
</tr>
<tr>
<td>Integrating profile information from existing social media</td>
<td>No</td>
</tr>
<tr>
<td>AI engines for the integration of massive qualitative assessment</td>
<td>No</td>
</tr>
<tr>
<td>Open access to course content</td>
<td>No</td>
</tr>
<tr>
<td>Accessibility</td>
<td>No</td>
</tr>
<tr>
<td>Entry and evaluation surveys</td>
<td>No</td>
</tr>
</tbody>
</table>
OpenMOOC
http://demo.openmooc.org/

Evaluation of OpenMOOC is based on the demo server. This server contains two courses, but is otherwise completely empty, and contains fake texts. Furthermore the demo site was not fully functional at the time of the evaluation (11 April 2014).

A course is created according to a predefined template. The structure of this template cannot be changed. There is some flexibility as several of the sub sections are optional. It seems only Youtube, Vimeo, Scribd or Prezi content is allowed. The template consists of:

- Information
- Teachers
- Units (optional)
- Categories (currently not available)
- Assets (no assets available, no option to create assets)
- External applications (does not work, not clear what can apps this are. No help on how to fill this in)
- Extra
  - Statistics (seems to be teacher only. Nothing to configure)
  - Announcements
  - Send mail
- Information
  - Course metadata: title, content type (choice from youtube, vimeo, scribd, prezi) (it is not clear what content type refers to, whole course or just the information section), content id or url (no assistance on how to fill this in), start/end date, pass threshold, pending reservations, total reservations, enrolment method (one option only), completion badge
  - Certification: certification available, certification banner
  - Several text fields to fill in (limited formatting, insert links):
    - Description
    - Requirements
    - Intended audience
    - Estimated effort
    - Learning goals
    - Extra info
- Units
  - Metadata (4 required fields)
    - Status (published, listable, draft)
    - Title
    - Type (normal, homework, exam)
    - Weight (%)
  - Nuggets (optional)
    - Metadata (4 required fields)
      - Title
      - Content type (Youtube, Vimeo, Scribd, Prezi)
      - Content id or url (need to type in, no browse option)
      - Weight (%)
All units require content from Youtube, Vimeo, Prezi or Scribd, so content stored somewhere else. It is not possible to create a unit e.g. using only a textual description.

The profile page contains the bare minimum of username, surname and email.

I cannot access the syllabus without being enrolled for the course.

Badges require an active, existing Mozilla account based on the same email address as my user account in OpenMOOC. I was not advised about that when I created the account.

Although OpenMOOC displays error messages when not filling in required fields, stating that the object can’t be saved, the object is saved anyhow.

The teacher does not see his courses listed under My courses, but need to find the courses back on the homepage of the site.

The fields in the course administration are translated to blocks in the course. This is not transparent. E.g. what I filled in in the Information menu appears as separate blocks on the course page, and in various blocks at the right hand site.

The units are translated into a syllabus

<p>| User profiles | No |
| Integration of social network sites and web 2.0 profiles | No |</p>
<table>
<thead>
<tr>
<th>Information about teachers</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course catalogue</td>
<td>No, the home page contains a list of courses. No way to search or sort</td>
</tr>
<tr>
<td>Course description</td>
<td>Yes</td>
</tr>
<tr>
<td>Course schedule</td>
<td>No</td>
</tr>
<tr>
<td>Welcome page</td>
<td>No</td>
</tr>
<tr>
<td>FAQ</td>
<td>No</td>
</tr>
<tr>
<td>Syllabus</td>
<td>No, although it seems that the units are automatically listed in a block entitled Syllabus</td>
</tr>
<tr>
<td>Content: textual and multimedia resources, video lectures</td>
<td>The information field, all units and all nuggets have to be linked to either Youtube, Vimeo, Prezi or Scribd. It is not possible to create an unit using solely a textual page.</td>
</tr>
<tr>
<td>Learning activities/tasks that can be sequenced and completed</td>
<td>No</td>
</tr>
<tr>
<td>Assignments, graded and non-graded</td>
<td>A unit can be labelled normal, homework or exam. Homework and exam are timed. Each unit can contain nuggets to which either a single question, a peer assessment or an asset can be linked.</td>
</tr>
<tr>
<td>Assignments timed, deadlines</td>
<td>Homework unit</td>
</tr>
<tr>
<td>Assessments, graded, self-assessment, peer-assessment, group assessment</td>
<td>Peer assignments</td>
</tr>
<tr>
<td>Assessment timed, deadlines</td>
<td>Exam unit</td>
</tr>
<tr>
<td>Communication tools:</td>
<td>no</td>
</tr>
<tr>
<td>Forum</td>
<td>no</td>
</tr>
<tr>
<td>Feature</td>
<td>Availability</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Chat</td>
<td>no</td>
</tr>
<tr>
<td>Collaboration tools</td>
<td>No</td>
</tr>
<tr>
<td>Blog</td>
<td>No</td>
</tr>
<tr>
<td>Wiki</td>
<td>No</td>
</tr>
<tr>
<td>Rating</td>
<td>No</td>
</tr>
<tr>
<td>Sharing</td>
<td>Yes, can share a link to the course to twitter, facebook, google plus, linkedin, reddit or email</td>
</tr>
<tr>
<td>Annotating</td>
<td>no</td>
</tr>
<tr>
<td>Performance monitor</td>
<td>yes</td>
</tr>
<tr>
<td>Progress monitor</td>
<td>yes</td>
</tr>
<tr>
<td>Announcements</td>
<td>Yes</td>
</tr>
<tr>
<td>Group formation</td>
<td>No</td>
</tr>
<tr>
<td>Gamification</td>
<td>no</td>
</tr>
<tr>
<td>Recommender system</td>
<td>No</td>
</tr>
<tr>
<td>Reputation</td>
<td>No</td>
</tr>
<tr>
<td>Create own artefacts in personal learning environment and include in MOOC</td>
<td>No</td>
</tr>
<tr>
<td>Mobile access through browsers on tablets and smartphone</td>
<td>No</td>
</tr>
<tr>
<td>Mobile apps for tablets and smartphones</td>
<td>No</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>E-portfolio</td>
<td>No</td>
</tr>
<tr>
<td>Linking to existing social media</td>
<td>No</td>
</tr>
<tr>
<td>Integrating profile information from existing social media</td>
<td>No</td>
</tr>
<tr>
<td>AI engines for the integration of massive qualitative assessment</td>
<td>No</td>
</tr>
<tr>
<td>Open access to course content</td>
<td>No, need to be registered. Even then</td>
</tr>
<tr>
<td>Accessibility</td>
<td>cannot access when dates are set</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td>poor</td>
</tr>
</tbody>
</table>
OpenEdX
http://studio.sandbox.m.sandbox.edx.org/

Open edX is the open source Mooc platform (AGPL license) created by edx.org. The platform is in English and it is available manual for guiding user to build his own course (http://edx.readthedocs.org/projects/ca/en/latest/).

Open edX combines the use of video, discussion forums, wiki and a grading system based on different supported problem types. The courses consist of chapters built by a set of knowledge units. Each unit can be splitted in many elements like text, video, discussions or problems. Unit can be classified and associated with a grading policy defined by teacher and with different time scheduling and deadlines. Each course has associated an intelligent discussion forum where students and teachers can discuss and collaborate on a unit. Additional material can be added as static pages or uploaded files by teacher*.

Activities that can be done in the platform:

- Test: different typology of questions; it is also possible to add math function and create more complex questions using html editor. Quiz can be graded or not.
- external resource: link to other websites, embed online video, textbooks
- P2P: can be organized through forum
- survey: not specific tool but can be created using questions
- development activity: through forum. File upload is not allowed for students
- textbook: direct access to book/pdf file (still buggy)
- Assessment: automatic through questions

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User profiles</td>
<td>No</td>
</tr>
<tr>
<td>Integration of social network sites and web 2.0 profiles</td>
<td>No</td>
</tr>
<tr>
<td>Information about teachers</td>
<td>Yes</td>
</tr>
<tr>
<td>Course catalogue</td>
<td></td>
</tr>
<tr>
<td>Course description</td>
<td>Yes</td>
</tr>
<tr>
<td>Course schedule</td>
<td>Yes</td>
</tr>
<tr>
<td>Welcome page</td>
<td>Yes</td>
</tr>
<tr>
<td>FAQ</td>
<td>Not yet</td>
</tr>
<tr>
<td>Syllabus</td>
<td>Yes</td>
</tr>
<tr>
<td>Content: textual and multimedia resources, video lectures</td>
<td>possibility to embed questions (as self-assessment), videos, text (in html with also photos, etc...)</td>
</tr>
<tr>
<td>Learning activities/tasks that can be sequenced and completed</td>
<td>lessons, questions with automatic feedbacks, forum activity</td>
</tr>
<tr>
<td>Assignments, graded and non-graded</td>
<td>Yes, graded by teacher</td>
</tr>
<tr>
<td>Assignments timed, deadlines</td>
<td>Deadlines: start and end time</td>
</tr>
<tr>
<td>Assessments, graded, self-assessment, peer-assessment, group assessment</td>
<td>Test automatically graded</td>
</tr>
<tr>
<td>Assessment timed, deadlines</td>
<td>Start and end dates, Test can be timed</td>
</tr>
</tbody>
</table>
### D 2.1 Analysis of existing MOOC platforms and services

<table>
<thead>
<tr>
<th>Communication tools:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Start and end dates,</td>
<td>Test can be timed</td>
</tr>
<tr>
<td>Forum</td>
<td>Yes</td>
</tr>
<tr>
<td>Chat</td>
<td>No</td>
</tr>
<tr>
<td>Collaboration tools</td>
<td>Yes</td>
</tr>
<tr>
<td>Blog</td>
<td>No</td>
</tr>
<tr>
<td>Wiki</td>
<td>No</td>
</tr>
<tr>
<td>Rating</td>
<td>Yes, forum messages</td>
</tr>
<tr>
<td>Sharing</td>
<td>No</td>
</tr>
<tr>
<td>Annotating</td>
<td>No</td>
</tr>
<tr>
<td>Performance monitor</td>
<td>Yes</td>
</tr>
<tr>
<td>Progress monitor</td>
<td>Yes</td>
</tr>
<tr>
<td>Announcements</td>
<td>No</td>
</tr>
<tr>
<td>Group formation</td>
<td>No</td>
</tr>
<tr>
<td>Gamification</td>
<td>No</td>
</tr>
<tr>
<td>Recommender system</td>
<td></td>
</tr>
<tr>
<td>Reputation</td>
<td>Not really (can be schedule using rating of message forum)</td>
</tr>
<tr>
<td>Create own artefacts in</td>
<td>No</td>
</tr>
<tr>
<td>personal learning environment</td>
<td></td>
</tr>
<tr>
<td>and include in MOOC</td>
<td></td>
</tr>
<tr>
<td>Mobile access through</td>
<td>Yes</td>
</tr>
<tr>
<td>browsers on tablets and</td>
<td></td>
</tr>
<tr>
<td>smartphone</td>
<td></td>
</tr>
<tr>
<td>Mobile apps for tablets and</td>
<td>No</td>
</tr>
<tr>
<td>smartphones</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>No</td>
</tr>
<tr>
<td>E-portfolio</td>
<td>No</td>
</tr>
<tr>
<td>Linking to existing social</td>
<td>No</td>
</tr>
<tr>
<td>media</td>
<td></td>
</tr>
<tr>
<td>Integrating profile</td>
<td>No</td>
</tr>
<tr>
<td>information from existing</td>
<td></td>
</tr>
<tr>
<td>social media</td>
<td></td>
</tr>
<tr>
<td>AI engines are a must</td>
<td></td>
</tr>
<tr>
<td>for the integration of</td>
<td></td>
</tr>
<tr>
<td>massive qualitative</td>
<td></td>
</tr>
<tr>
<td>assessment</td>
<td></td>
</tr>
<tr>
<td>Open access to course content</td>
<td></td>
</tr>
<tr>
<td>(CC licence)</td>
<td></td>
</tr>
<tr>
<td>Course content always</td>
<td></td>
</tr>
<tr>
<td>available</td>
<td></td>
</tr>
<tr>
<td>Accessibilty</td>
<td></td>
</tr>
<tr>
<td>Entry and evaluation surveys</td>
<td></td>
</tr>
</tbody>
</table>

*Courses on EdX Polimi can be created by Politecnico staff only.*