How to learn with our Mooc

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An important core of the DCbox project is represented by the online learning modules, which can be accessed through the DCbox website, allowing users to start with the learning experiences. This is structured by the partners in the previous project phases.



Figure 1_DCbox website homepage

Website

The course can be accessed either via the link directly from the project's webpage www.DCbox .eu or at: <u>https://moodle.DCbox .eu/.</u> The modules_are divided into four main areas and a VR Module (which will be discussed in VR Module paragraph of this chapter).

Areas and VR Modules

Available courses



Figure 2_DCbox Moodle homepage

The four areas are designed to be completed sequentially by the learners. Once the first area is completed, an access key is given to the next one, until the entire course is completed.



Figure 3_The consequential steps to be followed in the DCbox MOOC

Account Creation

Two learners' profiles enable to access the content, in particular the students who participated in the piloting phase of the project, were defined as "**Qualified**" students, while all other students who participated in the course externally, were defined as "**Self-Enrolled**". Qualified users, have access to the **Activities**, and practical tasks planned to test the concepts explained during the lessons. The activities are only proposed to the learners but are set as notmandatory activities. However the activities are still present in the Learning Management System as possible didactic contents and can be reactivated, as possible outlook, if in the future the DCbox partnership can afford to launch another tutored edition of the course.

Course Enrollment

Starting from the previous distinction, the course enrolment is possible in three ways:

- Via back-office through the data provided to the DCbox managers;
- Via Moodle website, for self-enrolled students, in the "log in" section;
- Via Moodle website, for **guests**, in the "log in" section. The Guest access allows users to view the contents of a course but not to participate in any learning tasks.

	Login
Supporting the Digital Transformation of Museums	1 🛛
The DCBox approach	
The Digital Curator is an emerging professional profile: Its relevance has been emphasised by the CoVid-19 pandemic and the conse need to rely on digital, smart and connected museums. Nevertheless, up to date there's no single, unanimously agreed reference framework to empower learners with skills, competences and exper should provide, that is a synthesis of technical knowhow and humanistic background.	quent Itse a DC
It is for this reason that 6 different partners (4 Universities, 1 research centre, 1 academic network, and 1 IT private enterprise) from Mediterroman countries	Log in to DCBOX LMS
(Italy, Spain, Portugal, Serbia and Cyprus) have decided to join their forces and create the project.	Username or email
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The course consists of four areas divided into eight modules that integrate to offer general training on the topic of Digital Cultural t By following all modules in sequence, you will have a complete overview to interact with other professionals and experts in this interdiscip	Log in
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	Create new account
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Figure 4_DCbox LMS account creation

Once completed the registration, the users can start with the course. To enroll on the first area, the learner hase to click on "AREA A: Digital Transformation of Cultural Heritage", All Areas enrolled are then displayed in the section "*My courses*" in the up right corner of the page.



Area Structure

Each area follows the same structure, visible in the figure.

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✓ Forum (teachers <-> students)	communicate
✓ Tutors	Support
✓ Video	Educato
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✓ Support material	Support
✓ Activity	Evoluato
✓ Quiz	Evaluale

Figure 6_Sub-sections of each single area, with their main objective

In the "*General*" section, the user can find an overview of the Area and some useful information. The "*Announcements*" and the "*Forum*" are available per each area to communicate with the students, to share common questions and avoid repetitive need for information.

First area: Pre assessment quiz

Before starting the course, learners have to complete a "*Pre-Assessment Questionnaire*", in order to assess their knowledge and skills before the course. Simple questions are posed about their competencies in the field related to the DCbox learning course. At the end of the course a "*Post-Assessment Questionnaire*" is submitted to track their progress. This contains also additional questions, more specifically regarding the acquired competencies.

Teachers

Each area has assigned different teachers and responsible tutors: their profiles can be found in the related section called "Teachers". Here the learners can consult a brief Bio of each person and contact them directly via personal chat to ask for help if needed.



Figure 7_The MOOC section about teachers

Module introduction

Diving into the course, students will find the modules in which the area is divided. The first section of the module is the "introduction" which contains an overview of the topics and a brief syllabus of the contents, competencies and learning objectives of the current one.

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Course Materials

Each module has a variable number of lessons, regarding specific topics, which are structured with a video lesson and a support file containing the slides used by the teachers.

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Video Lessons

Each video has been uploaded to YouTube and then embedded into the platform. This was made mainly for two main reasons: to not overload the platform server with lots of gigabytes of files and to allow better accessibility via subtitles. Opening the video in the YouTube external player allows learners to activate subtitles and even select a different language. At the moment, the only verified language is English but some lessons have been translated into Spanish by our partners from the University of Cordoba and more languages can be easily set up via YouTube without entering the Moodle Back Office, which requires specific competencies



Figure10_Visualization of a DCbox video-lesson in Youtube, with the possibility to activate subtitling.

Useful links and resources to expand the knowledge

After the list of lessons, each module concludes with a specific section containing all the bibliographic references and other relevant material, useful to expand the knowledge and give an in-depth study about the module's topics.

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Figure 11_The section bibliography and relevant material, available for each module

Qualified Users: Activities

As mentioned above, in some modules, *qualified users* will find practical activities designed to learn new skills with simple assignments. Those activities are not mandatory, and their submissions were supported and reviewed by "*Tutors*" who are DCbox team members specialized in the topics of the exercise. The activity is generally structured with a main PDF file, containing the tutorial and some extra files to complete the task. Once submitted, the tutor corrects the activity and gives feedback on the outcome, regarding the competence of the student or the matter to improve.

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Figure 12_The section activity, available for some module and when the course is tutored.

Quizzes: Module Quizzes and Area Quizzes

To proceed with the following areas, each learner needs to complete a resume quiz. The quizzes are different in the case of qualified students or self-enrolled; in particular, qualified students have to complete one quiz per each module (eight in total), while self-enrolled students will find just one quiz at the end of each area with a selection of questions regarding the covered topics. Quiz completion is mandatory for each student in order to proceed with the course, as the area-key will be unlocked only if all mandatory tasks are completed. This is the only way that users can continue with their learning path.



Figure 13_The section of the quizzes and the interface of each question

Certification of accomplishment

In Area D, learners unlock also a "Certificate of Accomplishment", one of the documents that states the completion of the course with a 2 ECTS value, a more robust certification can be obtained at the same stage with the Open Badge System (*see chapter 4.4*).

VR Module

The last section of the DCbox Learning platform is represented by the VR Module. This section can only be modified by specific users who requested access or were enrolled by the managers. Through the VR Module, students can create their own **virtual experiences** within a **collaborative and easy-to-use platform** within the online DCbox platform.

They can work together in the same environment to build their **personal tours** without the need for specific programming skills.

Some of the possible actions are:

- ✓ Add 360° scenes
- ✓ Navigate between scenes
- ✓ Connect scenes
- ✓ Add interactions
- ✓ Text about the scene,
 - ✓ Video,
 - ✓ Image of the details.



Figure 14_The MOOC home page with the possibility to access to the VR module

The VR Experiences are displayed with the 'H5P' icon and can be accessed by clicking on the name. Modifying permission and visibilities can be set up for each working group and account.

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Figure 15_The VR Module section

The Viewer section

In the tab '**Interactive Content**', users can navigate through the experience, moving between scenes and interacting with the content. Here it is possible to explore the tour and view the final version of the experience.





The Settings Section

In the '**Settings**' tab, users can modify the content of the experience, adding descriptions and other content, and directly managing scenes and media embedded into the final product.

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Figure 17_The settings section of the VR module: some tabs for the virtual tour building up are shown.

All those tours can be easily exported in h5p format and embedded into external websites which support this data file format, to see the content without the need to enter the platform.

VR Experiences showcase

Here are some examples of students' work done using the VR Module on the platform: in this case it was exploited in a learning experience in which learners collaborated to join their own drawing with the rest of team members' work.



Guest access

The section students' works is the only section that can be viewed by a guest visitor.



Figure 19_The visualization of the VR module by a guest visitor

4.4 Monitoring & awarding - Open Badge System

Olesya Ivanova

One of the issues with the default Moodle certification is that the effective value cannot be validated through an external system and could easily be faked with some image editing software. That's the reason why the DCbox team has opted also for an alternative "Open Badge" attribution system.

Besides the standard certificate, the platform has an **automatic system** able to create **traceable documents** assigned to students after completing certain achievements.

Open Badges are a type of **digital accreditation**, often displayed as badges, containing **metadata** about the achievement or competence that the badge represents, making the achievements easily visible to potential employers and colleagues, and by collecting them in a 'Backpack', a digital storage bag with all the certificates obtained.

There are three actors in the Open Badge environment:

- The **issuer**: This is the entity that defines what you must do to earn that badge (DCbox)
- The **earner**: This is the person that needs to attend the training pass the test, then go through the simulator training and line training, and finally pass the check ride (**students**)
- The **displayer**: This is not a real person, but a computer (cloud-based or workstation) program that will display the page in the desired places such as the Learning Management System (**Moodle**).



Figure 19_The main actors in the Open Badge environment

The **two main badges** are included in the Platform:

- A Standard Badge (on the left below), assigned to students (qualified and self-enrolled) when completing all the lectures and the quizzes of each area.
- A Full Badge (on the right below), assigned only to qualified students who completed all the previous requirements and also all the activities of the four areas.



Figure 20_The 2 images prepared to be linked to the Open Badge for Standard and Full Badge

Open Badges is not a specific product or platform, but a type of digital badge that is verifiable, portable, and packed with information about skills and achievements. This kind of certification has a higher value and allows students to embed it with other certifications obtained with the same Open Badge system.

As an **earner**, it is possible

As an **issuer**, it is possible

- Demonstrate skills and accomplishments, often by submitting evidence, by earning Open Badges.
- Claim Open Badges when issued to you.
- Collect your Open Badges in a portfolio or backpack to tell your story.
- Share your Open Badges on social media and with your community.

- Break learning down into small chunks.
- Recognise learning based on proficiency.
- Award Open Badges for completion of micro-credentials

OB Structure and achievement

The structure of DCbox's Open Badge system is as follows: for each completed Area, the student earns the Standard Badge; in the event that the student has also completed the activities (exercises more complex than quizzes), they also receive the Full Badge.



Figure 21_The structure of Open Badges (Standard and Full Badge)

For every badge obtained, the learner receives an email notification. They can also find their earned badges in their personal area.

Email notification

Students' personal area



Figure 22_The badge is released via email to the learner and available also in the personal area Students can see the criteria of the badge release when they achieve badges:



Path: A. DIGITAL TRANSFORMATION OF CULTURAL HERITAGE /

More details

Figure 23_The badge allows to certify the obtained compentences

OB redeem on external platforms

The Badges obtained can be **transferred to external platforms** such as Badger (https://badgr.com/), to manage the certificates and to link them to other websites (e.g. Linkedin).

When achieved, there are two ways to add a badge to the backpack:

• Connect the backpack to Moodle;

• Download the badge (from Moodle or email notification) and add it to the backpack.



In the BackPack the learners can do multiple actions with their certificates, such as sharing the badge, download the badge, print as a certificate, remove the badge from backpack, view the public page of the badge, and view the badge's JSON file.

For enhanced security, the learner is identified by the backpack through his/her email. To receive the badge in their backpack, it is mandatory to create a backpack account using the same email as the Moodle profile. In case the two emails do not match, the backpack generates an error as shown below.

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This does not affect sharing the badges on social media. In fact, it is possible to share the badge, for example, on LinkedIn even if the student registered on LinkedIn with a different email from both Moodle and the backpack.

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