



Empowering public authorities and professionals
towards trauma-informed leaving care support

MOOC for professionals working with traumatized children

WP3 / A3.3 / D3.3.1



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1. Introduction

The CarePath MOOC report provides an overview of the online platform in terms of user requirements and systems specifications and features. The design and development of the platform along with online content are structured around 4 different sections.

Section 2 presents the adopted methodology focusing on instructional design aspects and the different phases of design and implementation. Section 3 provides the technical overview of the application: Architecture, open-source software, installation methods and the main system components. Section 4 lists the main features of the platform from a navigational point of view, the functionalities offered by the platform, the structure of the content and the different methods of delivery. Section 5 provides details on the features used for the online course management during the MOOC lifetime. The features are accessible by both LMS and CMS and they are targeting members of the CarePath Course Team (CCT).

The last section illustrates the CarePath MOOCs in numbers through the dedicated YouTube channel.

2. Methodology – how the course was developed

The CarePath online platform is based on the Open edX software¹. The Open edX software is an open-source technology focusing on learning easier and faster. It was created by MIT and Harvard university and was quickly supported by universities such as UC Berkeley, Georgetown and Stanford and companies such as Google and Microsoft.

This software platform is designed to engage students and teachers in an interactive and modular manner. It promotes active learning by using video snippets, interactive components, and game-like experiences.

Open edX powers edx.org MOOC portal with more than 6 million users, more than 500 available courses and around 50 involved international universities and business organizations and it is considered as a global success hosting blended and online courses all around the world.

The CarePath MOOC was designed and implemented in an iterative manner. In order to understand and agree on the delivery of the final product several main factors had to be taken into consideration including:

- The main content development team (Italian partners) consisted of 3 different groups with complementary areas of expertise that needed to be reflected in the content: Legal issues, Psychology and Active/Scientific Research.
- The final product targeted multi-country audience, thus localisation issues needed to be addressed. The CCT formulated by individuals inside the

¹ <https://www.edx.org/>



consortium covering all the participated countries. In addition, the English version was released as a universal MOOC – anyone on a global level could enrol in the course and perform the learning activities.

- The MOOC would be a completely 100% online learning experience. This affected the role of the instructor. The instructor should act more than a facilitator/mentor/moderator rather than a Professor lecturing on a campus class environment.
- All CarePath online resources were released under the Creative Commons Attribution-ShareAlike meaning that a user has to:
 - Give appropriate credit, provide a link to the license, and indicate if changes were made. The user may do so in any reasonable manner, but not in any way that suggests the licensor endorses the user or his use.
 - distribute his contributions under the same license as the original given any remix, transformation, or build upon the material.
- From a technical point of view, the platform should be up and running 24/7 for about one year. During this wide uptime service duration, updates and maintenance tasks should also take place so the “maintenance tasks” should be implemented during low traffic time zones.

It was clear from the very beginning that the realisation of such a complex process should be realised in different and concrete steps including small iterative cycles where it was feasible.

ReadLab, as coordinator of the development of the MOOC platform, adopted the main points of the ADDIE instructional design model, towards splitting the tasks between the different actors and facilitate parallel work for time effectiveness. The key phases of the ADDIE model are depicted in the following picture.

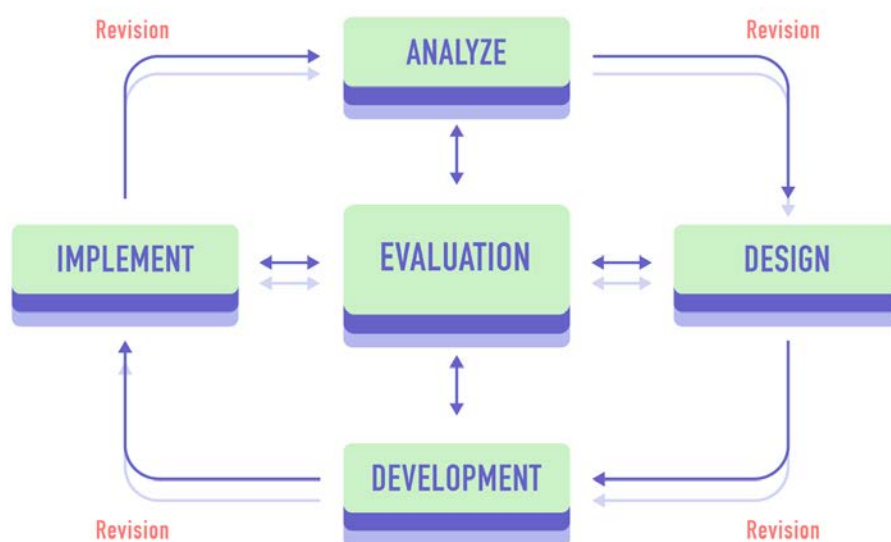


Figure 1 ADDIE instructional design model (Wikipedia)



Analysis:

During the analysis phase, the target audience and the overall objective of the course were set. The overall description of the CarePath course was mainly defined in this step and its contents are described in more detailed in Section 4.

Design:

During the design phase and based on a set of learning objectives the following key concepts were defined:

Instructional strategy. The main outcome was to combine various resources and tools for delivering the content and be able at the same to allow flexibility on module level. Thus, the first two modules were designed to include video lectures as the basic delivery method, while the rest of the modules were structured around a combination of text/pdf and short videos – including external sources. The instructional strategy was reflected in the Course Outline template where a clear learning sequence per lesson was defined.

Horizontal aspects. All modules included a set of assignments at the end. In addition, all video lectures included downloadable scripts and subtitles. All pdf files were downloadable.

User engagement. Engagement of learners strongly depends on the user experience of the online course. A user-friendly interface along with a clear learning sequence design ensured a smooth flow of topics and builds on learned concepts and ideas. Each lesson was unlocked upon successful completion of the previous one, in an effort to create “internal goals” during the participant’s learning path. Learners were encouraged to create their own material and content (Final assignment).

Moreover, the partnership decided to create an award (CarePath Certificate) for the successful learners (see section 4.6).

Acquire user feedback. To better analyse and evaluate the CarePath learning experience, a set of questionnaires were designed to be integrated in the online platform (Pre-course and Post-course survey).

Development

During the development phase the platform (OpenEdx) was installed and configured according to the design specifications. The developed content followed the micro-learning approach and was split in several learning components (see section 4.3). The next step was to define the CCT. Each partner provided at least on Instructor who onboarded on the online platform in order to review the content in the online version and be in charge of the delivery. The authoring tool was managed by ReadLab while all Instructors were able to review and provide feedback on the online content before its final release.

A major part of the work was devoted to creating the subtitles of all video lectures in the 5 language versions.



Define roll-out timeline. The final dates of each MOOC were depending on the progress of the two major tasks:

- Installation, user acceptance testing and configuration of the learning platform
- Development of the content and integration into the platform.

The first, stand-alone, task was finalised before the actual learning material was developed. ReadLab created a testing environment for deploying and testing the needed features of the application. Internal testing and manual QA tasks were performed in order to ensure stability and smooth operation of the application. The next step was to deploy the application to an identical environment - “production environment” – where the learning material would be hosted.

The second task was implemented in short iteration cycles. The work was organised around the “first come – first served” concept. Each individual piece of learning material was created by the content developers (CCT), uploaded in the platform and tested online. Upon reaching an 80% readiness of the online course (features, content, testing), the CCT was able to provide accurate opening dates for each MOOC.

An important factor was to define the opening of enrolments some days before the starting date – this setting allowed prospective users to see the courses in the CarePath course catalogue, view the description of each course and enrol. During the “enrolment window”, the project partners had the chance to disseminate and communicate the announcement of the CarePath MOOC through the well-established CarePath network mechanisms.

Implementation

After the pilot testing (see report D.3.4.1) the CarePath MOOCs were released early in 2020. The first version of the content was developed in parallel in the Italian and English languages, thus these versions were released earlier. The following table lists the released dates per MOOC. The CarePath MOOCs ended on first of November, 2020.

MOOC version	Released date	Opening of Enrolments
English	16 Jan, 2020	20 Dec, 2019
Italian	16 Jan, 2020	20 Dec, 2019
Greek	23 Jan, 2020	20 Dec, 2019
French	3 Feb, 2020	20 Dec, 2019
Hungarian	27 Feb, 2020	20 Dec, 2019

Table 1 Release dates of the CarePath MOOCs



3. Technical Overview

The CarePath learning platform is a web-based implementation for creating, delivering, and analyzing online courses. The platform has been installed on a dedicated server supported by ReadLab.

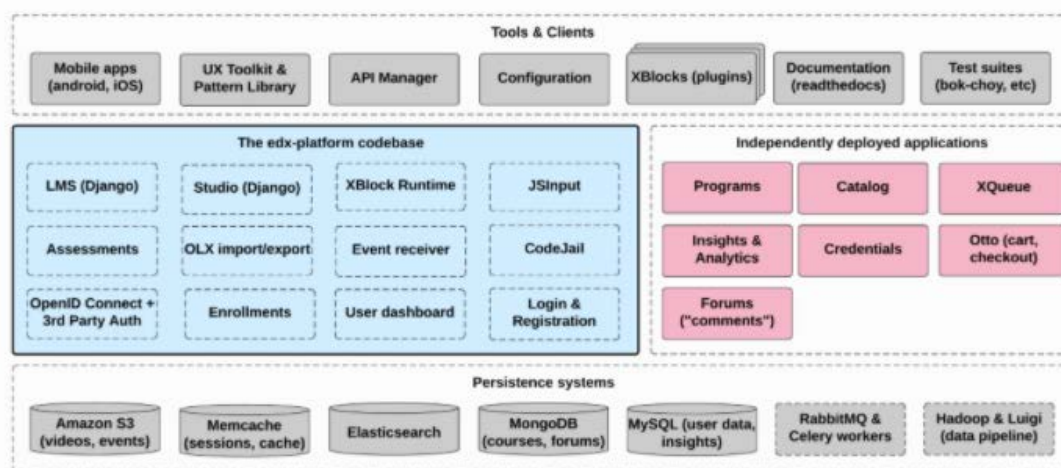


Figure 2 Open Edx reference Architecture

The platform is supported by a collection of autonomous web services called independently deployed applications (IDAs) in order to address scaling and expandability needs. The vast majority of the back end or server side services are implemented in python, the front-end is based on the Django web application framework, while the browser-side code is written primarily in Javascript supported by SaaS², Backbone.js³ and Bourbon⁴ frameworks. At the centerpiece there are the two key components: the CarePath Learning Management System (LMS) and the CarePath Content Management System (CMS). The CMS or Studio, is the authoring tool where the CCT creates, updates and manages the course. A number of several heavy tasks are performed by separate background workers rather than in the web applications themselves. These tasks are queued and distributed using Celery⁵ and RabbitMQ⁶.

Examples of such tasks, that were performed in the CarePath platform are:

- Sending bulk emails to enrolled users
- Generating distribution reports related to learner progress
- Producing end-of-course certificates

The CarePath learning platform supports the latest versions of the most common browsers. For best performance Chrome and Firefox were recommended. The application also supports the latest versions of Microsoft Edge, Microsoft Internet Explorer and Opera.

² <https://sass-lang.com/>

³ <https://backbonejs.org/>

⁴ <https://www.bourbon.io/>

⁵ <http://www.celeryproject.org/>

⁶ <https://www.rabbitmq.com/>



3.1. LMS

The LMS is the most visible part of the platform where learners are interacting during the online course lifetime. In addition to the learners view, the LMS provides an instructor dashboard where users with Admin or Staff roles can access with enhanced functionalities. As depicted in Figure 2, LMS uses several data storages of different technologies. Information relevant to the course organization and structure are stored in MongoDB while user data is stored in MySQL. All CarePath video lectures were served through a dedicated YouTube channel.

The structure of the courses consists of units called XBlocks. The Xblock specification is a key component architecture designed to facilitate the creation of new online education experiences. In educational applications, Xblocks are employed to represent custom features like individual problems, web-formatted text and videos, interactive simulations and so on. The CarePath Xblock suite currently implemented is described in detail in section 4.3 considering the two basic designing criteria:

- All Xblocks are independent of other Xblocks.
- All Xblocks should be able to work together with other Xblocks and be combined in flexible ways.

3.2. CMS

Content Management System or Studio is the course authoring environment. The CarePath course team uses this application to create and update any course material as well as to manage course schedule and grading policy. Studio utilizes documented and open XML standards (OLX) to import/export created courses and provides access to rich 3rd party tools or additional building blocks (YouTube, Google shared documents, webinar tools, etc). The data created here is stored to the same Mongo database that the LMS uses.

3.3. Installation

The CarePath online platform was developed by ReadLab in June 2019 and it was publicly accessed through the link: <https://mooc.CarePath-project.eu>.

Installation and technologies used. The main application was installed in a dedicated server hosted by ReadLab and it was based on the open edX Ironwood release ⁷. The tutor distribution was employed to simplify the process of deployment and facilitating future updates and debugging.⁸. In general, the Tutor distribution separates the configuration logic from the deployment platforms, allows for running application

⁷https://edx.readthedocs.io/projects/edx-installing-configuring-and-running/en/latest/platform_releases/ironwood.html

⁸ <https://docs.tutor.overhang.io>



processes in cleanly separated docker containers and provides user-friendly commands for common administrative tasks and monitoring.

Maintenance tasks, debugging and updates were performed during low traffic time zones i.e. weekdays after 23.00 CET.



4. The CarePath Learning environment

4.1. Getting started

The CarePath platform can be accessed through the link: <https://mooc.CarePath-project.eu>. Users have direct access to the available course descriptions and can retrieve information related to information management regarding the platform and the CarePath project.

ReadLab has designed and deployed a custom theme following the visual identity of the CarePath project ensuring responsiveness. The CarePath platform design is perfectly inline with the CarePath website taking into consideration the main visual elements such as project logo, colors, fonts, sizes, buttons, labels, etc.

The landing page of the CarePath MOOC is depicted in the following picture. The platform provides an initial set information to the user without registering in the platform including:

- A Welcome message
- A course information page (detailed description is following)
- Footer links describing the Terms of Use, the Privacy Policy and the Honor Code governing the use of the platform
- Footer links to external content such the project website and the partners of the CarePath consortium
- The EU emblem with the accompanying text « The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein» being in line with the Erasmus+ visual identity and logos⁹.
- Search functionality for finding courses provided by the CarePath platform. The search functionality has been enhanced with language filtering since it the online course was delivered in 5 different languages i.e. EN, IT, GR, FR and HU.

⁹ https://eacea.ec.europa.eu/about-eacea/visual-identity-and-logos-eacea/erasmus-visual-identity-and-logos_en

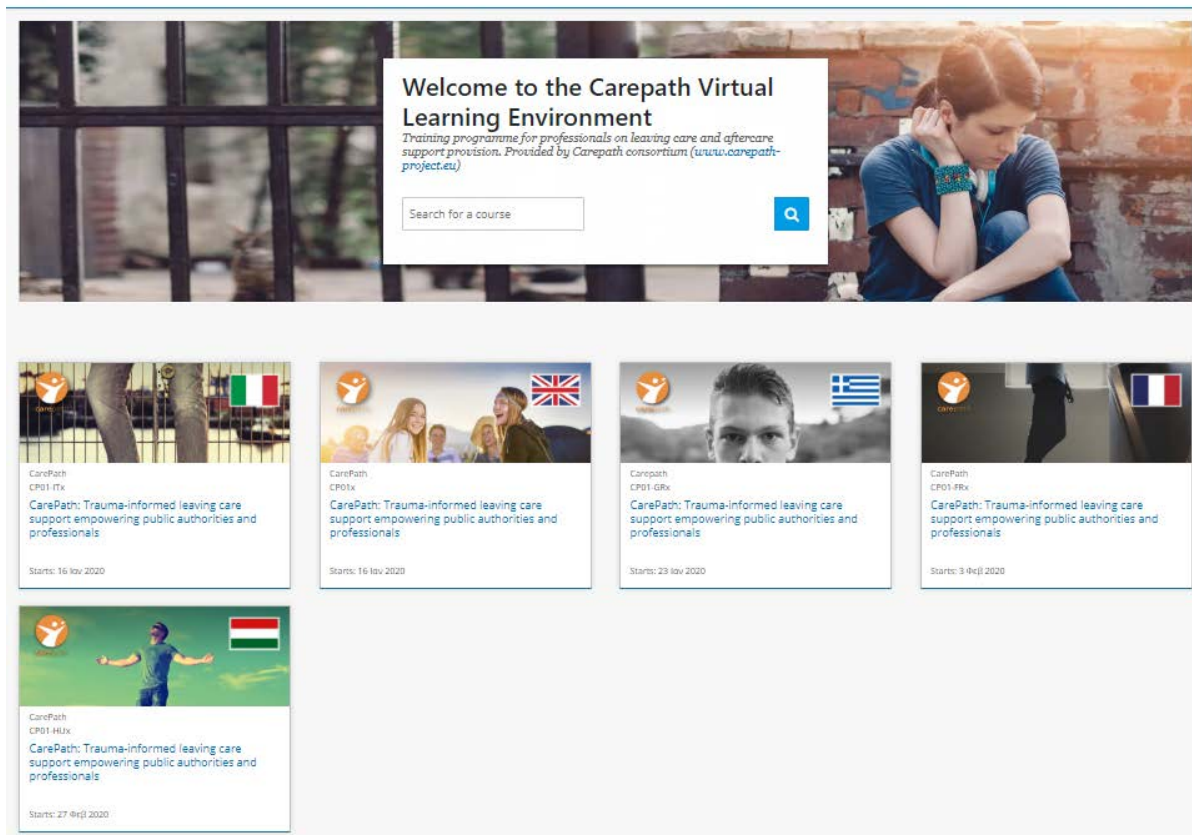


Figure 3 CarePath MOOC – Course catalogue

Course description

The course description page includes the following information:

- A general description of the online course including pre-requisite information and target groups
- Main learning objectives and outcomes
- An overview of the course syllabus and the structure of the modules
- General information about the course including estimated effort, delivery language, course type, i.e. self-paced vs instructor paced, prerequisites and social media sharing.

The course description page is handled (edit, update) through the CarePath CMS.



CarePath: Trauma-informed leaving care support empowering public authorities and professionals

CarePath

Enrollment is Closed



Before you start

Prerequisites

The course is addressed to people who are interested in deepening in the issues related to good practices of trauma-informed intervention dedicated to traumatised children

Course opens: January 2020

About This Course

The MOOC focuses on the psychological, juridical/legal and scientific research dimensions. The modules are dedicated to an in-depth analysis of TIC; they are divided into sections organized in line with a multi-dimensional perspective with a focus on the political and organizational components involved in the TIC model. It is free to all participants around the world

What you will learn

The MOOC offers participants support, knowledge and access to: scientifically based information, theoretical and application materials, case studies, research, examples of trauma-informed practices and networking opportunities. The primary objective is to give access to knowledge on good trauma-informed practices, on how to prevent retraumatization and offer effective service to traumatized children and how to prevent burn-out and vicarious trauma of staff.

[View Course Syllabus](#)



Course Number	CP01x
Classes Start	Jan 16, 2020
Classes End	Nov 1, 2020

Figure 4 Course description web page

Useful Information

Apart from the course catalogue, the landing page contained links related to information regarding the project results and partners.

- **Project.** This is an external link to the project website
- **Contact.** A list of emails related to course management and technical support
- **Privacy Policy.** This page informs the user about the description of the service and provides detailed information related to personal data storage and processing. More specifically, it lists the data stored during the registration process and the data processed during the interaction with the platform. The latter is used for assessing user participation, engagement, and performance.
- **Terms of Use.** Users are informed of the Terms of Service that govern the CarePath learning platform and are owned and operated by the members of the CarePath consortium. It consists, among others, of information related to platform accessibility, security rules, License agreements, use of personal information, etc.
- **Honor Code.** Users are informed about user posting rules and their responsibilities regarding the proper use of the CarePath platform. A list of strictly prohibited items is included at the end of the document.



Privacy Policy

Name of the service	Carepath Online Course
Description of the service	The CarePath Online Course service is both a Content and a Learning Management System, based on the open courseware development platform Open edX (openedx.org), delivered in the context of the European-Commission-funded project Carepath (Grant Agreement no. 785698, www.carepath-project.eu). It offers free web-based courses for professionals working with traumatised children in care.
Data controller	CarePath consortium
Personal data processed	<ul style="list-style-type: none"> • Full name • Email address • Country or region of residence • Year of birth • Level of education completed • Public username • User password
How your information is used	<p>CarePath Partners use information, including Personal Information, to carry out the following purposes:</p> <ul style="list-style-type: none"> • Operate and improve the CarePath VLE - This includes creating and improving features that support the CarePath community and enable CarePath VLE usage at scale. This also includes personalizing the CarePath VLE, so your learning experience is tailored to your interests and needs. • Create, administer, provide, and teach courses - This includes creating and improving the delivery of massive open online courses and programs on CarePath VLE. This also includes personalizing courses, so your learning experience is tailored to your interests and needs and assessing your performance and awarding certificates. • Offer and improve products and services - This includes enabling you to navigate the CarePath VLE, to enroll and participate in courses and programs on the CarePath VLE and to learn effectively in such courses and programs. • Develop and maintain the security and performance of the CarePath VLE - This includes tracking CarePath VLE outages and creating software solutions, detecting violations of the Honor Code and Terms of Service, and monitoring uses, misuses, and potential misuses of the CarePath VLE. • Communicate with you - This includes answering your course and platform questions, notifying you of course and CarePath VLE maintenance and updates, marketing to you about course offerings, programs, news, and related products and services of CarePath project, and as permitted under applicable law, sending you communications about news and events of the CarePath project that may be of interest to you. • Support scientific research including, for example, in the areas of cognitive science and education - This includes collaborating to enable and conduct research about how learners access and master course materials online, with the goal of improving course outcomes. • Track CarePath VLE usage against goals and mission - This includes performing analytics to evaluate access to and performance in courses and course-related products and services and to report aggregate usage information (not Personal Information) to CarePartners and the European Commission. • Exercise, enforce, and comply with legal rights and obligations - This includes responding to subpoenas, court orders, or other legal process; and investigating, preventing, or taking action regarding illegal activities, suspected fraud, security or technical issues, or to protect the rights, property, or safety of CarePath VLE, or others, and as otherwise required by applicable law.
Third parties to whom personal data is disclosed	None
How to access, rectify and delete the personal data	Contact the support at team@read-lab.eu. To rectify the data released by your Home Organisation, contact your Home Organisation's IT helpdesk

Figure 5 MOOC Privacy Policy

Finally, the footer includes the EU emblem as well as the social media links of projects as they are depicted in the following picture.



 <p>Co-funded by the European Union's Rights, Equality and Citizenship Programme (2014-2020)</p> <p>This website was funded by the European Union's Rights, Equality and Citizenship Programme (2014-2020). The content of this website represents the views of the author only and is his/her sole responsibility. The European Commission does not accept any responsibility for use that may be made of the information it contains.</p>	<p>Carepath</p> <p>Project VLE</p>	<p>Legal</p> <p>Privacy Policy Terms of Service Honor Code</p>	<p>Connect</p> <p>Contact Us</p> <p>  </p> <p>© All Rights Reserved, Carepath Project.</p>
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Figure 6 Landing Page- Footer information

Registration

To get started the user needs to create or register an account to the CarePath platform. Upon creating a CarePath account, the user has then the possibility to access/enroll in all CarePath available courses.



The registration functionality is a two-steps process. The user creates the account by filling in Email, Full Name, Public Username and Password. The second step is to activate his/her account through an activation link sent to his/her registration email. The registration process is performed only once. Having the account activated, the user can login/log out or change the password.

A screenshot of the 'Create an Account' form. It includes a link for existing users to 'Sign in.', a title 'Create an Account', and four input fields: 'Email', 'Full Name', 'Public Username', and 'Password'. Below the fields is a paragraph of terms and conditions, a checkbox for 'Support education research by providing additional information', and a blue 'Create Account' button.

Already have an Carepath MOOC account? [Sign in.](#)

Create an Account

By creating an account with Carepath MOOC, you agree to abide by our Carepath MOOC [Terms of Service and Honor Code](#) and agree to our [Privacy Policy](#).

 Support education research by providing additional information

Create Account

Figure 7 Registration form

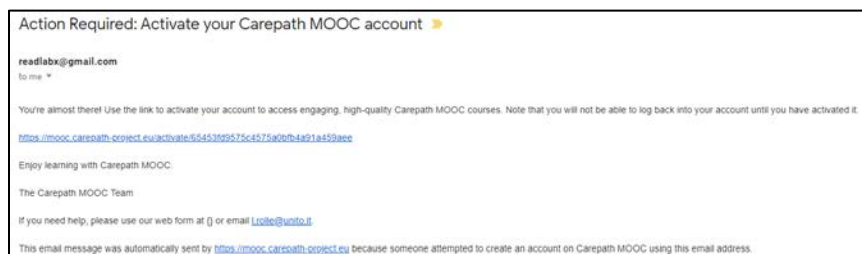


Figure 8 Account activation

The CarePath online course was open to all users around the world. The users upon registration had the chance to enrol and attend the CarePath online course. However, there were a few cases where the instructors had to register learners upon request. This functionality was supported by the Manual Enrolment feature where the CCT manually enrolled the learners. In the case of unregistered learners, they were asked to first register in the CarePath platform through an automatic email. This functionality was mainly used for inviting specific users-experts to pilot the CarePath platform. In total 178 users were manually enrolled out of which 137 were invited to the Pilot phase.



Membership
Batch Enrollment

Enter email addresses and/or usernames separated by new lines or commas.

Email Addresses/Usernames

Role of the users being enrolled.

Enter the reason why the students are to be manually enrolled or unenrolled.

Reason

Auto Enroll
 Notify users by email

Figure 9 Manual enrolment

Account features

Each registered user had access to specific course contents, profile and account settings.

Dashboard. The dashboard provides information of the status courses where the user is enrolled. It includes, Start/End date, email settings and acquired certificates. The user has also access to the content of archived courses with limited functionalities e.g. no certifications are generated after course completion.

Account settings. Includes registration information and additional optional fields such as Education Completed, Gender, Year of Birth, and preferred language. Finally, through this feature the user can link or unlink his/her social media accounts to the CarePath platform.

Profile Page. The profile page allows to share information with the CarePath community by defining a full profile. The learners' profile can be displayed through the discussion page upon selection of its username.

4.2. Course content and navigation

Each registered user has access to course contents upon enrollment and given that the course is released. All CarePath courses are open to registered users (Educators, students, professionals, self-learners).

The following section describes the structure of the CarePath courses along with the underlying instructional design methodology and the navigation al capabilities of the platform.



The microlearning approach

The CarePath user interface offers a brief course outline that help learners see the full scope of the course contents and facilitates the learners to return to the last content area they were viewing. In the following picture the outline of the “*CarePath: Trauma-informed leaving care support empowering public authorities and professionals*” course is presented. The course is structured in a modular manner and organized in sections (Weeks or Modules) and subsections (lessons). This is inline with the relatively new microlearning concept. With microlearning, the content is broken down into bite-sized pieces of learning material. This instructional approach is very efficient when incorporating various learning styles and the basic design elements adopted during the CarePath online courses were:

- Granularity, where the learning strategy focused on narrow concepts or topics taking into consideration the respective learning objectives. This allows learners to learn detailed concepts in the shortest amount of time.
- Briefness. Even though there is no strict limitation regarding the duration of each teaching unit, the components of the learning process were short. For example, the created video lectures were maximum 12 minutes of duration.
- Diversity. The CarePath learning material has the form of video presentation, online text, quiz and book chapters as supported material. In order to improve the microlearning impact the CarePath Staff team coupled visuals and audio. Combining visuals with audio, not only helps in better retention of the information or recalling it in the future but they are also powerful tools to engage learners and make learning a lot more comprehensive.

Modularity – navigational form

As a consequence of the micro-learning approach, the CarePath training material was built up of many bite-sized components including different learning components. This was a major challenge as the content developers needed to switch from the traditional campus classes which are structured around hour-long lectures.

The modular approach is more suitable for online settings and provides several benefits. Learners can more quickly find compactly organized reference information about a specific topic without having to scroll through a bunch of texts or scrub through an hour-long video to find the one piece of information they were looking for.

Learning modules are organized so that learning material (e.g. video modules/reading material/PowerPoint presentations) alternate with exercises. This structure facilitates any updates or re-organizations needed during the course lifetime since it minimizes the impact on adjacent material.

In this context, the architecture of the CarePath courses, included the following general building blocks:



- The course outline is the container for all the course content. The outline contains one or more sections.
- Course sections (Modules/Weeks) are at the top level of the course and typically represent a time period. A section contains one or more subsections.
 - Course subsections (Lessons) are parts of a section, and usually represent a topic or other organizing principle. Subsections are sometimes called “lessons” or “learning sequences”. A subsection contains one or more units.
 - Course units are lessons in a subsection that students view as single pages. A unit contains one or more components.
 - Course components are objects within units that contain the actual course content: Videos, reading material, problems/quizzes and discussion forums.

The CarePath course was organised in two levels of hierarchy. It consisted of 9 sections (modules) and several subsections (lessons) per module.

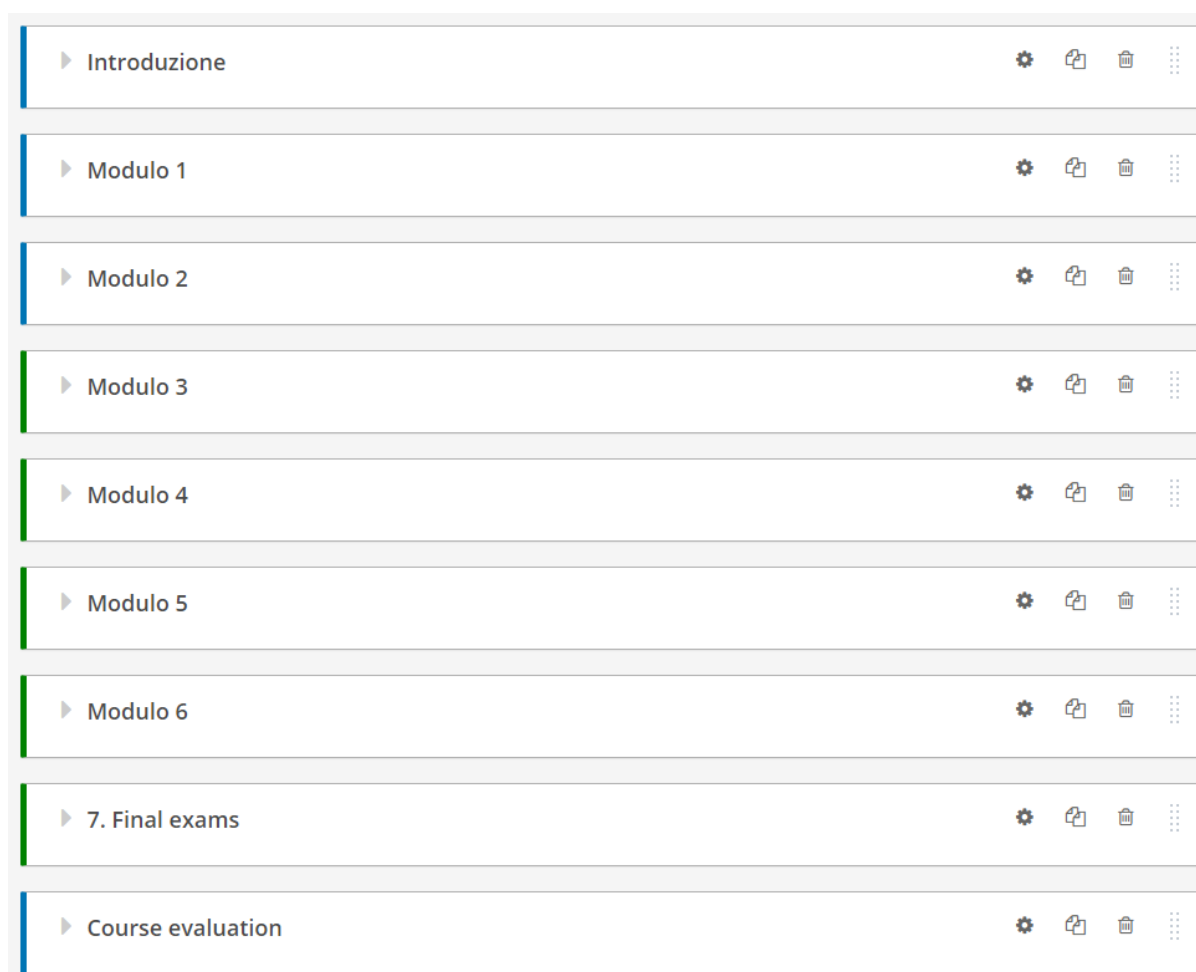


Figure 10 CarePath Course high-level structure

More specifically, the CarePath course was structured around the following online modules:



- Module 1 – Section 1: *The theoretical base* developed by IACP
- Module 1 – Section 2: *Protection and promotion of health and wellbeing and the rights of trauma survivors* developed by partner IACP
- Module 2 – Section 1: *TRAUMA: research, evaluation and outcomes* developed by partner UNITO Department of Psychology
- Module 2 – Section 2: *TRAUMA: good practices and policies* developed by partner UNITO Department of Psychology
- Module 3 – Section 1: *Legal framework and fundamental legal principles* developed by partner UNITO Department of Law
- Module 3 – Section 2: *Legal framework and fundamental legal principles* developed by partner UNITO Department of Law
- Module 4: *Final Assignment* developed by IACP, UNITO Department of Psychology and Department of Law

This structured approach helped to quickly switch between modules and lessons. Navigation between lessons during the learning process is intuitive and the learners could always see where they stand and how many lessons are left for the current lesson/subsection. In addition, it was easy to understand whether there were some assessments to complete. The following picture depicts a part of the course outline (Module 3) organised in three lessons. For each lesson there is a “tag” word notifying that the lesson includes a Quiz unit.

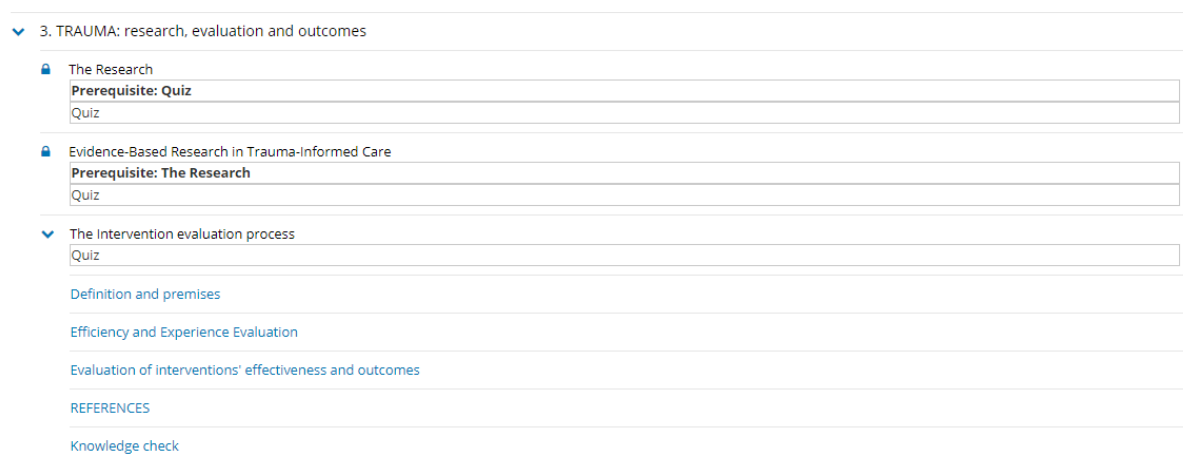


Figure 11 Example of course outline and navigation

It was also decided that each lesson should be “unlocked” and accessible by the users upon successful completion of the previous one.

The structure of the content and the navigational form are depicted in Figure 12. Each lesson was structured as a series of units forming the “learning sequence”. The learning sequence comprises a set of different learning experiences combining free text, pdfs, online videos lectures, different types of assessments, discussion spaces, etc. From a User eXperience (UX) perspective, the learner is constantly aware of his web path through an horizontal navigation toolbar as highlighted in the picture below. In addition, he is informed that he has already visited the respective unit through an automated green check box. The linear navigation form is clean, effective, engaging



and results in a great learning experience since the learner is focused on a specific learning objective and not distracted

In this example, (first lesson of Module 1), the learning material is built up in 9 different units i.e. single web pages. The user is aware from the very beginning that the content is delivered in 3 different methods: Video lectures, online text, and an assessment at the end of the learning sequence (Green boxes).

Figure 12 Learning sequence organisation – Module 3, lesson 1 example

4.3. Learning components in CarePath MOOC

The following methods of delivering the learning material (Xblocks) were employed.

Video component

All CarePath video lectures are hosted in a dedicated YouTube channel. They are integrated into the CarePath MOOC platform through a built-in YouTube player offering the following controls/functionality as depicted in Figure 13:

- **Play/pause.** Each user can play and/or pause the video by selecting this control
- **Time information.** The first number indicates the length of the video already played and the second the total duration.
- **Playback bar.** Offers the capability to go to a different point in the video by selecting and dragging or by using left and right arrow keys.
- **Speed.** The video can be played faster or slower.



- **Volume.** Adjust the volume of the video
- **HD.** By selecting this control the video can be played in HD mode. All CarePath videos created with a minimum of 720p resolution (HD ready) so users with fast internet connection had the opportunity to fully exploit this option.
- **Full screen.** Expand the video to fill the browser window. Selecting this control again or through the ESC button the screen is returned to default mode.
- **Show/hide subtitles.** The user is able to show or hide an overlaid transcript of the audio portion. The displayed captions can be moved to different areas on the video screen (drag & drop). Moreover, the user can select to switch between different languages. All CarePath videos included transcripts in all languages.
- **Download transcript.** This control allows users to download the subtitles in .srt or .txt format.
- **Transcript space.** On the right-hand side, an interactive space is displayed. The user can scroll through the transcript and select any line to that point in the video.



Figure 13 Video component

Html component

A significant part of the learning material was presented as text utilising HTML code that is formatted and presented by the supported browsers. The following picture displays an example of such a component. All relevant elements (headings, color, size, font family, etc) are handled through the CarePath Studio application and the built-in HTML editor.

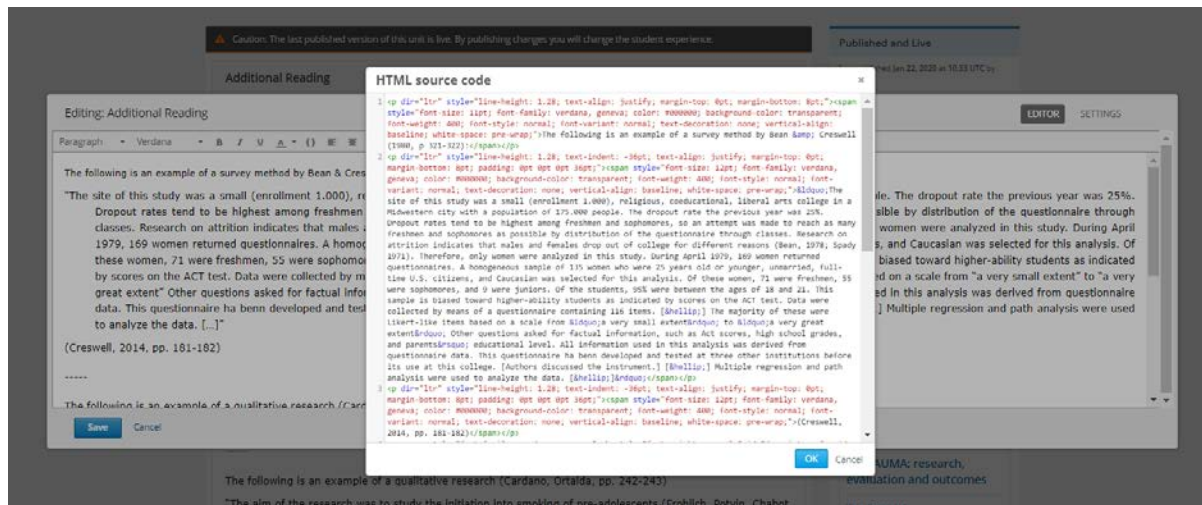


Figure 14 HTML component example

PDF component

PDF component allows to integrate PDFs files into the MOOC environment. Each pdf is hosted in the MOOC platform and it is presented inside a single unit. The file can be directly scrolled, printed or downloaded by selecting the appropriate control buttons.

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Figure 15 PDF component

Problem component

The assessment of the learners progress was realised through a set of problem components in the form of multiple choice questions. At the end of each lesson (learning sequence) the user had the chance perform this kind of activity and acquire



instant feedback. In addition, after the final submission the learner had the opportunity to see the correct answers.

The score obtained by the Quizzes contributed to 59% of the total grade (see section Grading Policy for more details).

Knowledge check

[Bookmark this page](#)

Quiz 3.2

2/3 points (graded)

1. A study by Ruzek and Rosen (2009) has shown that in the international context of trauma-related treatments:

- The treatments were applied uniformly throughout various countries, highlighting the effectiveness of the approaches used ✘
- The needs of specific sub-groups were adequately addressed
- The same treatments were equally effective in adults and children
- The training programs were implemented in different ways, highlighting the need for the definition of core competencies

2. Trauma-Informed Care...

- Aims to transform the care system, focusing on the ability of staff to participate in a vision of taking care of the traumatized patient ✔
- Aims to reduce only the symptoms related to trauma, focusing on intervention techniques
- Implements techniques such as restraint and isolation
- Is used exclusively with minors

3. One of the advantages of scientific dissemination in trauma-related organizations is:

- The possibility of expressing exclusive interest in issues related to working groups
- The implementation of evidence as a top-down decision by the leadership
- The possibility of starting a process of implementation of the most recent evidence-based practices, aimed at improving the well-being of staff and patients ✔
- The transition to generic treatments that work for all patients

Submit

Show Answer

Open Response Assessment Component

The Open Response Assessment component was employed to support the final exams procedure. Each learner in order to successfully finish the CarePath MOOC should prepare an essay on 3 given scenarios. The participants were asked to analyse one case of their interest from a legal, psychological and/or scientific research point of view.



Instructions for peer assessment

[Bookmark this page](#)

During this activity you are requested to analyze the case (Choosing the Scenario you prefer) from a legal, psychological and/or scientific research point of view. Your answer should contain your reflections in the light of fundamental principles of Trauma Informed Care.

1. You can prepare your contribution in

- text (simply enter your answer in the respective area) OR
- you can upload a file containing your contributions. **Important note - the file should be in pdf format up to 5mb.**

In case you have prepared a video you can simply enter the link of your published video so it can be accessed for evaluation.

2. Each learner upon submission of his own contribution has to assess at least 1 contribution from other learners. This is a necessary step, in order to finish the activity.

Figure 16 ORA instructions

The following pictures highlight the different steps:

- Submit own response
- Assess the response of at least one learner (peer) and submit the peer assessment
- Be assessed by the instructor (Staff Grade)

Open Response Assessment

[Bookmark this page](#)

FINAL EXAMS

This assignment has several steps. In the first step, you'll provide a response to the prompt. The other steps appear below the Your Response field.

1	Your Response	IN PROGRESS
2	Assess Peers	NOT AVAILABLE
3	Staff Grade	NOT AVAILABLE
Your Grade: Not Started		

[MANAGE INDIVIDUAL LEARNERS](#)

[VIEW ASSIGNMENT STATISTICS](#)

[GRADE AVAILABLE RESPONSES](#)

Figure 17 ORA component

4.4. Progress page

A dedicated web page was configured to display the progress of each learner. A column-based graph was automatically updated based on the results of the problems. The participant had the opportunity to check real-time his progress per specific



problem and understand the level of progress achieved. The “passing” threshold was set to 60% of the total grade. Scoring above this threshold, the participant was able to claim his online certificate of course completion through the progress page. A total of 11 quizzes plus one Open Response Assessment are displayed in the progress page highlighting the individual and total scores achieved.

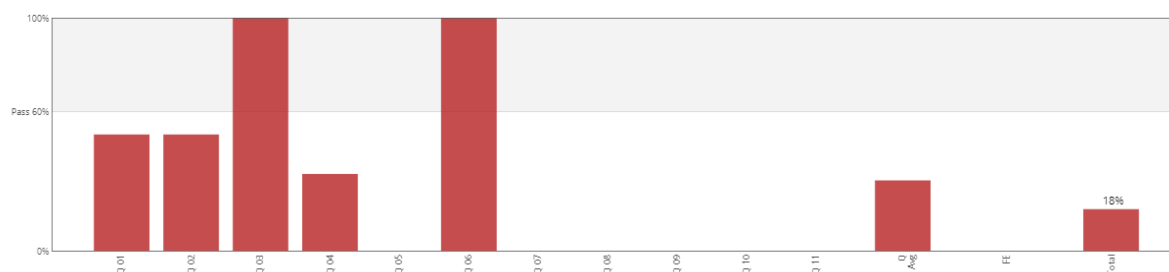


Figure 18 Learner Progress dashboard



5. CarePath Course Management

This section describes the built-in tools and features used throughout the CarePath MOOC duration. The features were available to all Course Team members and the main operations were performed both from the LMS and CMs applications.

5.1. Instructor dashboard

Course management was mainly performed through the Instructor Dashboard in the LMS. The following features were configured in order to be accessible by the CarePath Course Team.

Review Course information. This dashboard provided information regarding the current enrollments, the total number of sections, the grade cut-offs, Course start and end dates, etc. This feature was used by all instructors since they were able to have a quick overview on the basic figures of the MOOC.

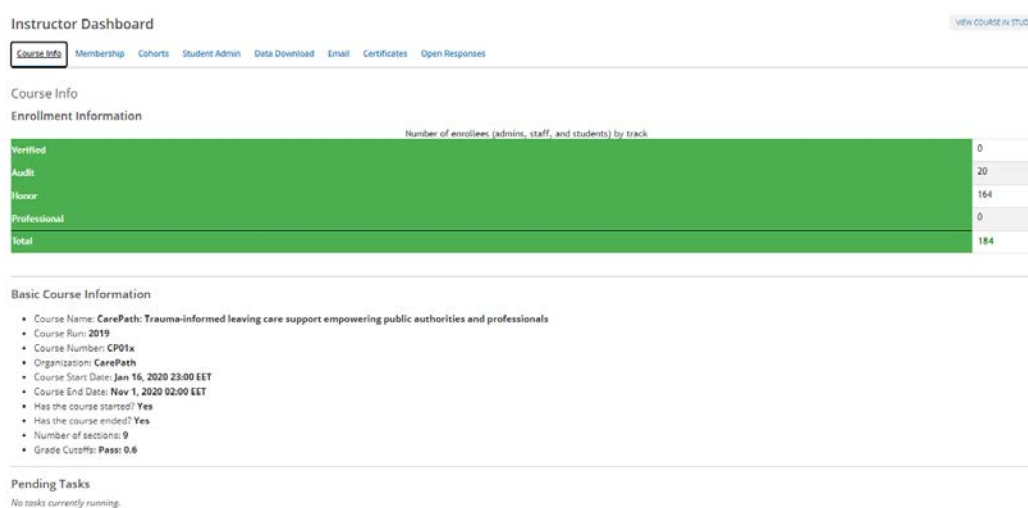


Figure 19 Course Overview dashboard

Manual enrolments. An important number of course participants were experts or professionals in trauma-care. This target group was mainly enrolled through in-platform invitations exploiting the network of consortium members. Each course instructor had the chance to auto-enrol learners, through the Membership page. All prospect participants were notified by a course invitation email automatically generated by the platform.

Grade reports. For each of the course, the instructor was able to generate grade reports. The reports are in csv format and downloadable and scores are presented by assignment for unique learner ID. To prevent the accidental distribution of learner data, the reports were downloadable by selecting the internal links generated by the platform as depicted in the picture below. These links were expiring within 5 minutes - copying and re-using them after this short period of time was not an option.



Reports Available for Download

The reports listed below are available for download. A link to every report remains available on this page, identified by the UTC date and time of generation. Reports are not deleted, so you will always be able to access previously generated reports from this page.

Note: To keep student data secure, you cannot save or email these links for direct access. Copies of links expire within 5 minutes.

File Name
CarePath_CP01x_2019_grade_report_2020-12-16-1555.csv
CarePath_CP01x_2019_student_oracle_info_2020-12-16-1554.csv
CarePath_CP01x_2019_student_oracle_info_2020-08-12-0923.csv
CarePath_CP01x_2019_student_oracle_info_2020-07-27-1431_Kd987H.csv
CarePath_CP01x_2019_student_oracle_info_2020-07-27-1431.csv
CarePath_CP01x_2019_grade_report_2020-01-23-1144.csv
CarePath_CP01x_2019_student_oracle_info_2020-01-14-0940.csv
CarePath_CP01x_2019_student_oracle_info_2020-01-14-0811.csv

Figure 20 Generated Graded reports

5.2. Grading Policy

The grading policy was agreed and configured after discussions with MOOC content developers. The main rules governing the grade configuration are:

- Two categories of Assignments were created consisting of 11 quizzes covering all lesson (Category **Quiz**) and 1 final assignment addressing the knowledge gained throughout the whole course (Category **Final Exam**).
- The overall grade was a Pass/Fail configuration. The level was set to 60% of the total grade.
- Both assignment categories are mandatory, i.e. no participant should be able to claim his certificate without going through the Quizzes AND the final assignment. Thus, the weights of the two assignment types of the total grade were set to 59% (Quiz) and 41% (Final Exam).
- No number of droppable assignments were defined. In other words, all assignments were contributed to the final grade and the learner was not given the opportunity to “drop” lower scoring problems.
- No restriction on dates or grace periods to deadlines were defined, given that the MOOC was configured as a self-paced learning experience.



Overall Grade Range

Your overall grading scale for student final grades



Grading Rules & Policies

Deadlines, requirements, and logistics around grading student work

Grace Period on Deadline:

00:00

Leeway on due dates

Assignment Types

Categories and labels for any exercises that are gradable

Assignment Type Name <input type="text" value="Quiz"/> <small>The general category for this type of assignment, for example, Homework or Midterm Exam. This name is visible to learners.</small>	Abbreviation <input type="text" value="Q"/> <small>This short name for the assignment type (for example, HW or Midterm) appears next to assignments on a learner's Progress page.</small>	
Weight of Total Grade <input type="text" value="59"/> <small>The weight of all assignments of this type as a percentage of the total grade, for example, 40. Do not include the percent symbol.</small>	Total Number <input type="text" value="11"/> <small>The number of subsections in the course that contain problems of this assignment type.</small>	Number of Droppable <input type="text" value="0"/> <small>The number of assignments of this type that will be dropped. The lowest scoring assignments are dropped first.</small>
<input type="button" value="Delete"/>		

Assignment Type Name <input type="text" value="Final exam"/> <small>The general category for this type of assignment, for example, Homework or Midterm Exam. This name is visible to learners.</small>	Abbreviation <input type="text" value="FE"/> <small>This short name for the assignment type (for example, HW or Midterm) appears next to assignments on a learner's Progress page.</small>	
Weight of Total Grade <input type="text" value="41"/> <small>The weight of all assignments of this type as a percentage of the total grade, for example, 40. Do not include the percent symbol.</small>	Total Number <input type="text" value="1"/> <small>The number of subsections in the course that contain problems of this assignment type.</small>	Number of Droppable <input type="text" value="0"/> <small>The number of assignments of this type that will be dropped. The lowest scoring assignments are dropped first.</small>
<input type="button" value="Delete"/>		

Figure 21 MOOC grading policy

5.3. On-line Certificate



The MOOC platform was configured to allow learners to claim their online certificate upon successful completion of the course and not waiting the end of it. The view certificate functionality automatically appears in the progress page on each learner as depicted in the following figure.

Each certificate was accompanied with a unique ID that was generated from the system. This was a must-have functionality in order to secure uniqueness and verification procedures if needed by an official accreditation authority.

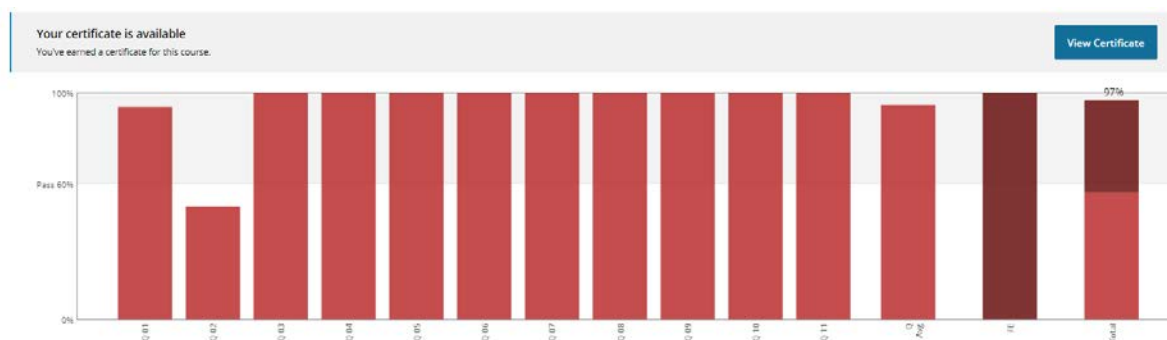


Figure 22 Claim online certificate

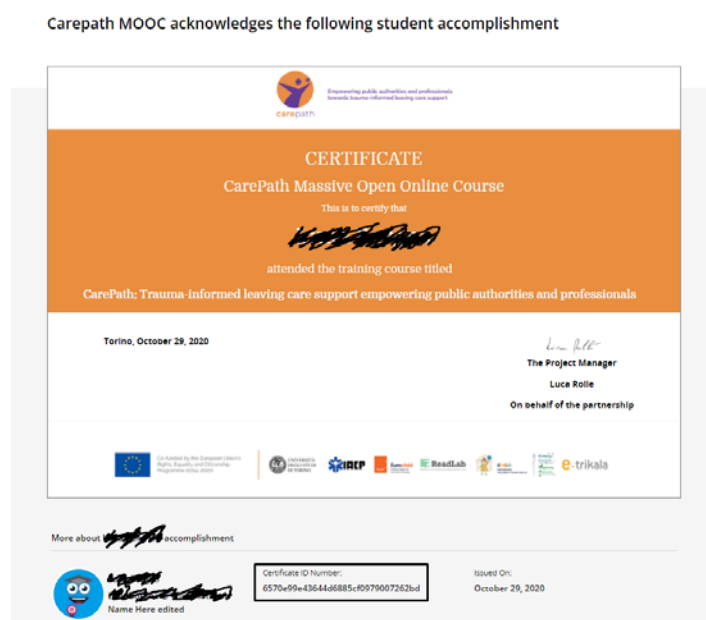


Figure 23 CarePath Certificate design

5.4. Course Team

The CarePath Course Team consisted of Instructors supported the online delivery of the course "Trauma-informed leaving care support empowering public authorities and professionals". The multidisciplinary nature of the subject was covered by employing consortium experts addressing legal and psychological areas as well as scientific/active research methodologies. At least one instructor was assigned to each of the five language versions of the MOOC (English, French, Greek, Hungarian and Italian).



Apart from scientific expertise, the Course Team was able to address technical support and answer queries regarding the functionality of the platform. An important requirement was to ensure uptime service

The CCT was responsible for:

- Supporting, mentoring and moderating issues coming from learners regarding the course content
- Communicating with the audience and keep them informed about important dates or deviations from the initial planned activities.
- Providing technical support and help learners tackle any difficulties posed by the online application.

5.5. Custom Dashboard

During the course lifetime a special requirement was raised. The instructors needed to have a complete overview of the learners who have submitted the final assignment. Since the standard implementation was not providing this information, ReadLab with close collaboration with the project Coordinator, decided to create a custom dashboard and deploy it as a web application on top of the standard Open Edx installation. Figure 24 displays the feature:

- The instructor, through a web application, was able to search per course and get the list of learners
- Upon successful submission of each assignment, each learner state was characterized by a status value:
 - Waiting: a peer-review was needed in order to proceed to the next step
 - Done: Staff grade has been provided.
 - Cancelled: The submission was cancelled by the admin upon request.
- For each learner, the peer assessment was also displayable through a drop-down menu while the instructor had the possibility to download the respective assignment for preview purposes.

This feature facilitated the whole process, since different instructors needed to provide their assessments depending on the scenario chosen. By previewing the status and the essay, each instructor was aware which IDs he was assigned in order to provide the final grade inside the platform by simply selecting the appropriate learner ID.

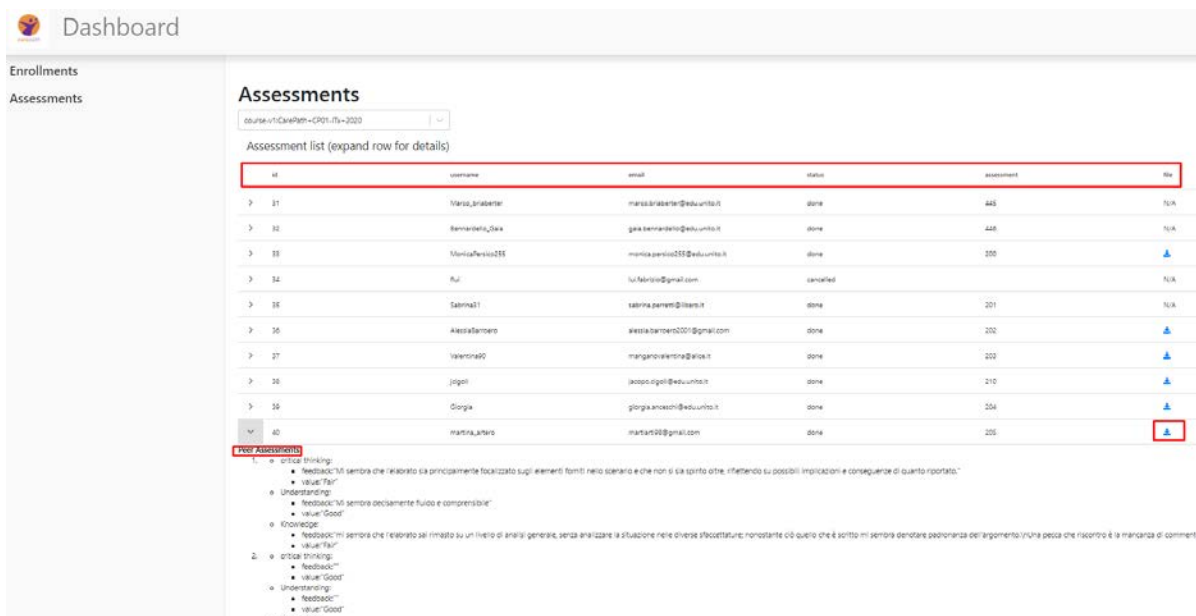


Figure 24 Custom dashboard for Final Assignment

In addition, the Dashboard provided timing information regarding the enrolment pace. Each instructor was aware of the enrolments performed per day and real-time. This information was very practical since the instructors and project partners were aware of the enrolment process in real time and were able to perform proactive dissemination activities in order to engage more participants. It was a successful feature towards achieving 1317 enrolments in total.

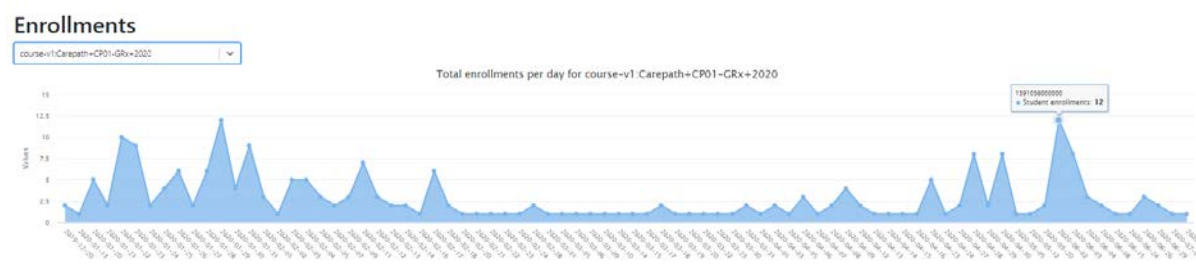


Figure 25 Enrolments per date

The React ¹⁰ library was used to create the custom Dashboard and support the interactive UI design. The Dashboard was also designed to render on mobile devices.

¹⁰ <https://reactjs.org/>



6. CarePath YouTube analytics

The video lectures reached 31.8K views while the total Watch time in hours was over 2.000 and the average view duration was approximately 4 minutes..

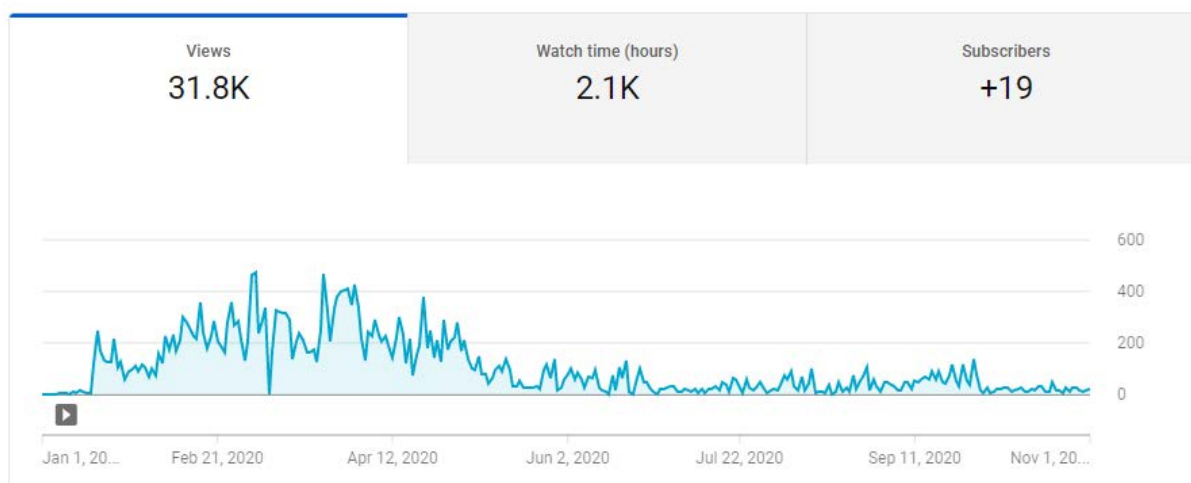


Figure 26 CarePath general numbers

The following figure depicts the traffic over time. The peak took place during the first 4 months of the MOOC offering. An important finding here is that the majority of the engaged users preferred to access the platform during evening hours while higher volumes of traffic were reached during weekends. However, the top day in traffic was on Monday, 2nd of March, 2020. A total of 463 views and 36.3 hours watch time were recorded in that single day! This was a serious technical challenge in terms of network conjunction and responsiveness of the platform which was successfully addressed since no technical support was needed.



Figure 27 Watch time per date

A substantial proportion of the participants (over 10%) were engaged through their mobile devices as depicted in the figure below. This actually reveals that the CarePath platform was able to cater for mobile users through the installation of responsive themes and templates.



Device type	+	Views	Watch time (hours) ↓
<input type="checkbox"/> Total		31,802	2,110.1
<input type="checkbox"/> Computer [?]		28,092 88.3%	1,896.9 89.9%
<input type="checkbox"/> Mobile phone		2,195 6.9%	112.9 5.4%
<input type="checkbox"/> Tablet		1,425 4.5%	93.8 4.4%

Figure 28 Access per device type

The CarePath platform could be accessed from different operating systems. Due to the non-technical nature of the course, as expected, most of the participants were using Windows while a substantial amount was on the Macintosh operating system.

Operating system	+	Views	Watch time (hours) ↓	Average view duration
<input type="checkbox"/> Total		31,802	2,110.1	3:58
<input type="checkbox"/> Windows		24,222 76.2%	1,653.1 78.3%	4:05
<input type="checkbox"/> Macintosh		3,748 11.8%	238.6 11.3%	3:49
<input type="checkbox"/> Android		3,090 9.7%	172.2 8.2%	3:20
<input type="checkbox"/> iOS		530 1.7%	34.5 1.6%	3:54
<input type="checkbox"/> Linux		122 0.4%	5.2 0.3%	2:33

Figure 29 Access per Operating system



7. Conclusions

Through the CarePath platform, instructors were able to create engaging learning sequences which promoted active participation as learners had the possibility to alternate between learning concepts and solving simple exercises to check their understanding and knowledge. As already mentioned, the course content was presented through learning sequences: a set of interwoven videos, reading material, exercises and material with automatic assessments and instant feedback, tailored discussion spaces and collaborative tools.

Participants could move at their own pace following a self-regulating learning process while they received instant feedback upon completion of different types of assessments providing superior pedagogy.

Concluding, the CarePath MOOCs were designed and developed adopting the following general best practices and features offered by the platform:

- Create a clear grading policy by setting a passing score and defining assignment types. All assignments add up to 100%.
- Design and enable course certificates – corrected text, uploaded signatures and activation of certification are the main steps
- Set important course dates including course and enrollments start and end dates. It is important to have these dates set once since constant updates on the course dates, especially the starting dates, are discouraging the learners.
- Take care of the video duration in case of video lectures. Learners engage best with short videos followed by opportunities to practice. As a rule of thumb, videos were no longer than 10 minutes.
- Build diverse learning sequences. Empirical studies and research show that a diverse content experience drives learner engagement ¹¹. Each CarePath MOOC included readings in text and pdf formats, discussion units and problems.
- Manage unit depth. Each CarePath unit should not contain many components. Breaking up course contents into manageable pieces promotes learner engagement. Thus, no more than 3 components per unit were used in the CarePath courses.
- Include time text captions in case of media based content. The CarePath media player displayed caption files in an interactive sidebar supporting hearing-impaired learners or learners whose native language is different than the primary language of the video. This universal built-in design mechanism enhanced the accessibility of the CarePath courses.
- Assign Staff and Admin roles. For each CarePath course at least one Staff member was assigned.

¹¹ <https://www.sciencedirect.com/science/article/pii/S0360131519301423>