

CAPuS e-learning platform for the Conservation of Art in Public Spaces

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Abstract

CAPuS - Conservation of Art in Public Spaces is a three year project co-funded by the European Commission under the Erasmus+ Knowledge Alliances Programme (www.capusproject.eu) inspired by the lack of specific actions aimed at the conservation of street art/urban art and of dedicated academic teaching modules and training activities. The project delivered an educational platform aimed at filling this lack. An "alliance" of 17 partners has developed a research methodology and conservation guidelines, which have been the basis for the design and implementation of the teaching platform. Two online open courses are currently offered: the self-learning course is addressed to students in conservation and restoration of Cultural Heritage and to professionals and operators in the field; the other is addressed to lecturers and provides materials, resources and strategies to prepare engaging and innovative lessons on the themes of the project.

Keywords: Higher education; public art conservation education; Cognitive Activation; learning readiness; urban artworks; brain-based learning.

1. Introduction

The CAPuS partnership is composed of 14 full partners and 3 associated partners based in 5 European countries and includes universities, academies, companies and research centers. They worked to formalize the strategies for the conservation of art in public spaces by involving - in the partnership and during the project – a variety of stakeholders: HEIs, companies, museums, local administrations, heritage protection bodies, professional conservators, artists and local communities. The CAPuS project started from the evidence that, especially in Europe, the conservation of urban art lacked of specific education initiatives and it was not yet included in academic programmes. In this context, the CAPuS project wanted to effectively contribute to the dissemination of knowledge to both students in conservation courses and to professionals already working in this field. For the conservation of artworks exhibited outdoors, specific aspects shall be considered: they are continuously subjected to the action of degradation agents, both anthropogenic (i.e., atmospheric pollution, vandalism) and natural (i.e., solar light and atmospheric agents), which normally cause their rapid degradation. In fact, urban artworks are often considered ephemeral by their own authors. However, where the artwork has assumed a value for the community, both as a memory or as a particular feature of a specific urban area, the need to preserve and protect it clearly emerges, as well as the need for new skills and knowledge to plan and implement conservation projects respectful of both the artwork and its socio-cultural context. All these aspects have been considered throughout during the project. Then, the challenge was how to transform the guidelines and protocols developed within the project's work packages (WPs) into education and training opportunities, and the effort yielded the CAPuS e-learning platform.

1.1. Objectives of the project

The CAPuS' objectives for conservation of art in public spaces were achieved by developing a working methodology based on:

- the analysis of the socio-cultural and historical artistic context of the artworks;
- the analysis of the needs expressed by the communities, by funding bodies of public artworks and by those responsible for their maintenance;
- the attention to economic, environmental and social sustainability criteria;
- the use of innovative technologies (for the analysis of the state of conservation) and materials (for the conservation intervention).

First, almost one hundred of murals and metal sculptures were selected, and their socio-cultural context explored (WP2). The techniques, materials and condition of each artwork were then examined (WP3), and products for specific conservation treatments identified (WP4). A conservation methodology for public works of art was then defined (WP5). Key

work packages (WPs) and key milestones are reported in a dedicated section of the CAPuS website (<https://www.capusproject.eu/methodology>).

Models to transfer the knowledge and experience derived from the project's activities to students, teachers and professional conservators were devised within the activities of WP6, which main outcomes was the CAPuS e-learning platform presented in this paper.

2. CAPuS

2.1. Didactic theories

The approach we referred to for the preparation of the e-learning modules is brain-based learning, using the components of learning readiness to produce meaningful learning (Trinchero, 2015). With learning readiness, we mean "the condition of mastery of the cognitive resources necessary to be able to acquire new ones; previous cognitive resources, even when present, must be appropriately "activated" in order to participate profitably in the process of building new resources " (Trinchero, 2015). The model applied to all the learning units is the following: it starts with cognitive activation (Merrill, 2002) by asking for the keywords on the subject and continues with the use of useful contents to evaluate, for example, the causes of the deterioration of the artwork. This requires the activation of all previous knowledge, the identification of usable knowledge, the exploration of the tools made available, and their download, so that they can be used and customized in their contents. (Hattie, 2013) (Hattie, 2016). In each unit the "Activity workflow" (Merrill, 2002), (Trichero, 2015) guides the student through the main steps of the learning process. Below, as an example, the learning sequence of section 4 in the self-learning course is presented. The topic is "degradation causes":

- Include your keywords in the word cloud for "degradation causes"
- Select the suggested question and download the "tools" inside
- Read the e-book
- Interact with the video
- Train your new skills
- Write your own answer and read the conclusion from CAPuS

The constant reference to the case studies investigated during the CAPuS project allows not only to provide all the information and knowledge useful to students, but also helps to identify and select the activities by keeping in mind the definition of a conservation project. This allows the student to transfer this knowledge to different case studies (Kou,2010). For the self-assessment of the contents learned, it was decided to propose a reflection on the topic. Multiple-choice tests have been excluded, as the questions posed do not actually have one certain answer.

2.2. CAPUs elearning platform

The CAPuS e-learning platform is a free moodle-based M.O.O.C. (Massive Open Online Course) that presents the research of the international Knowledge Alliance on Conservation of Art in Public Spaces (CAPuS) processed to be used by postgraduate students and lecturers in conservation and restoration of cultural heritage. By accessing the platform (registration required, <https://elearning.unito.it/mooc/> also accessible from the project website <http://www.capusproject.eu/capus-e-learning-platform/>) users find two courses addressed to two different audiences: students find a self-learning course, whereas lecturers find materials and resources for their lectures.

The first course: “Are you student?”. The self-learning course is intended for master's degree students in conservation and restoration of cultural heritage, but it can be of interest to professionals who wish to expand their knowledge in the conservation of art in public spaces. The course guides students to the know and understand the methodological approach. It starts from the understanding of the socio-cultural context of the artwork, the identification of stakeholders, the investigation of the constituent materials through scientific equipment, the assessment of the state of conservation of the artwork, the analysis of processes and causes of decay, the testing of materials and conservation treatments, the definition of the conservation intervention and of the maintenance plan.

The second course: “Are you lecturer?”. The course for lecturers consists of six teaching units and a focus module on street art, with practical suggestions and teaching materials and tools for preparing lectures on the various aspects of public art conservation.

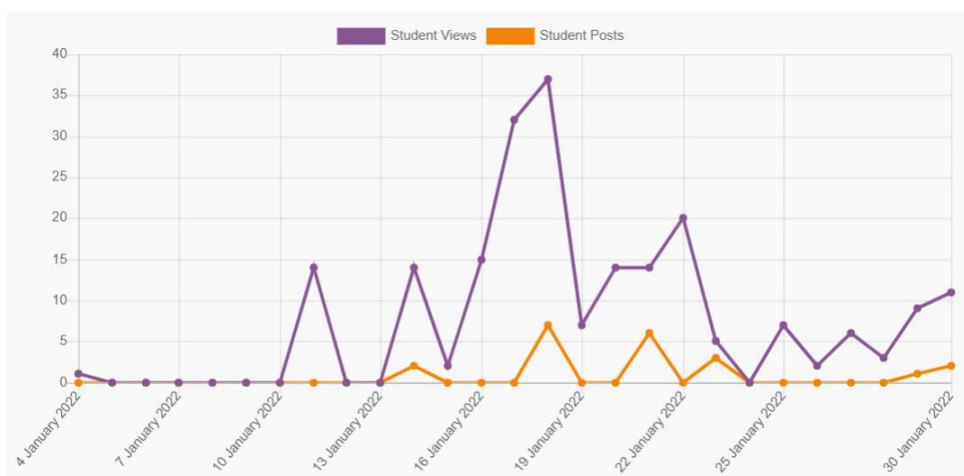


Figure 1. The graph of Self-learning course for student views (purple) and student posts (orange).

The project closed in June 2021, and we are now monitoring the data of registered users. In January 2022 the graph of student views and student posts of the self-learning course (fig.1) show a considerable increase. Overall, 64 users are currently enrolled in the course for students and 36 in the course for lecturers.

2.3. Key aspects in the design

The following key aspects in the design of the two courses offered in the CAPuS e-learning platform can be identified.

1. Development of a multidisciplinary approach for conservation of urban art. The field of conservation of cultural heritage is already multidisciplinary in itself, as it includes contents ranging from humanities to physics, chemistry, biology and engineering. The alliance among companies, professionals and universities made it possible to clearly identify the needs and expectations of stakeholders and to develop lectures and teaching materials useful for acquiring the skills required to future professionals in the conservation and management of public art heritage.
2. Identification and development of soft-skills, entrepreneurial skills, and digital skills. Pilot courses on different activities were designed and offered to HEI students during the project and feedbacks from teachers/researchers and students were collected in order to identify the most useful soft skills and entrepreneurial skills (i.e., flexibility, adaptability, communication, team working, business case and problem solving) and to assess how they were received by students. As regards digital skills, one of the teaching units in the CAPuS e-learning platform is about “Sharing of knowledge through digitalization and open-access of data”, that is how to make research data and conservation-restoration documentation more accessible, visible, and impactful through open sharing. In this sense, an example is the Digital Repository of the public works of art studied within the Conservation of Art in Public Spaces project and accessible at <https://www.capusrepository.unito.it/>.
3. Exchange of knowledge on entrepreneurial skills and on innovative approaches to teaching and learning. This took place in all phases of the project, including learning mobility activities, and resulted in the co-definition of the topics to be introduced in the courses and in the coproduction of teaching materials. The contribution of the business partners was fundamental above all in the design and implementation of the lectures about: Stakeholders and their role in the conservation of Art in Public Spaces, Use relations with / Obtain the approval of decision-making bodies, Local policies for conservation of Art in Public Spaces, Technical tests and design of experiments, Safety and environment, Decision-making.

4. Researchers and lecturers from the academies consulted specialists in innovative teaching methodologies, and lectures were given to CAPuS partners at two project meetings. The idea behind these lectures was to involve all CAPuS partners in the preparation of the teaching modules from the very beginning of the project, showing some of the most innovative teaching techniques that would later be exploited in the preparation of the teaching modules. The aim was to encourage partners to produce - during their CAPuS activity - materials such as documents, photos, videos, interactive videos, web resources etc. suitable for later exploitation in the preparation of modules, and for exploring different teaching methods (i.e. lectures, demonstrations, group exercises, role-playing, group discussions) to optimize the combination of practice and theory according to a problem-based approach.

Here we will focus on the online course "Are you student?". The challenge for the design and implementation of the course addressed to students was to identify strategies and implement tools for:

- keep a modular approach in an inherently sequential process;
- guide the students along the path even without a reference teacher - according to a self-learning approach - by means of models and useful tools.

The first objective was addressed by adopting the workflow of a conservation intervention on works of art exhibited in public spaces as a methodological model of the course, as reported in section 1.1. A colour code has been set for the workflow: blue: knowledge; green: evaluation-research; orange: field activities, adding an introductory section, a tutorial section for navigation and a final one with additional resources that integrates the educational path. For each box associated with the methodological model, a "workflow" of self-learning activities opens up, which is however made modular through the proposition of single "stimulus-questions". These questions divide the path into units, each focussed on one of the many aspects that are treated within the steps provided by the methodological model. Each unit is self-consistent, and can also be exploited individually, based on personal interests and previous knowledge. This strategy also allows us to tackle the second part of the challenge, by motivating and guiding the student's path with activities aimed at stimulating reflection on the various steps of the teaching unit, starting from the recognition of the incoming knowledge to the autonomous elaboration of a "response" to various initial questions. The presence of teachers / avatars is used to present activities and to focus the attention on the specific aspects

The model was initially assessed within the partnership with 13 people involved, to whom we asked to respond to the following questions:

- Is the instructional design of the course clear and easy to use?
- Is orientation within the course straightforward?

The course was then adjusted following the indications that emerged in the preliminary test.

Now, more information is deriving from the present users. Data collected can help us to respond to the following questions: is cognitive activation with “word clouds” successful? Was the choice not to ask question /quizzes, but to pose open questions/feedback at the end of each module a proper strategy? Is the multimedia of the course clear and easy for do conservation intervention on works of art exhibited in public spaces?

From the data collected, reported in Figure 2, it is evident that the work clouds has been significantly employed and, by considering that most viewed contents (modules 1-3) users tend to go straight to the point, by accessing the contents that are related to specific open questions.

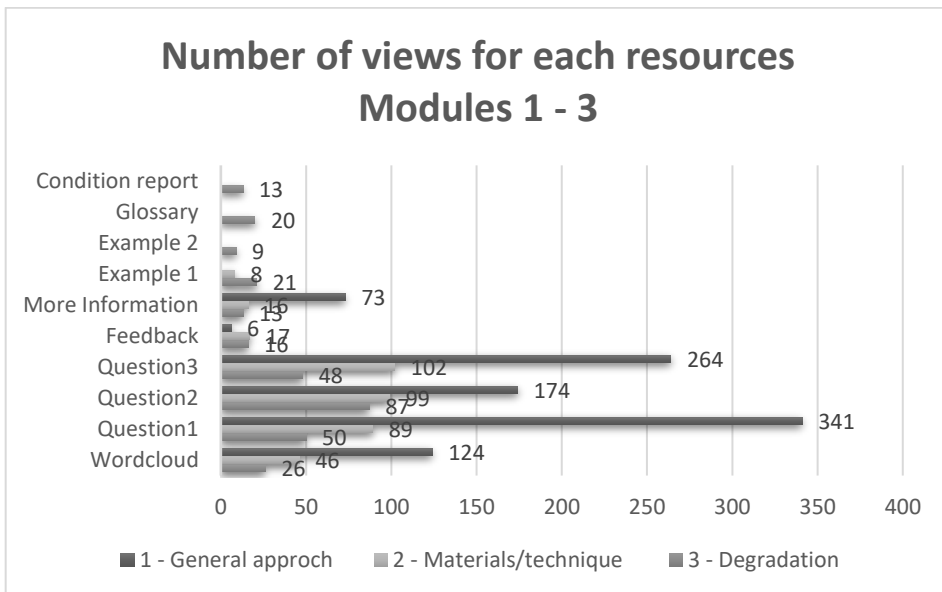


Figure 2. This is the number of views for each resources (module 1-3)

3. Conclusion

The CAPuS e-learning platform represents a unique experience, where the outcomes of a collaborative work carried out by a large and varied set of partners were then elaborated by a small operational core and offered to the public as e-learning courses. Through the e-learning platform, the CAPuS interdisciplinary and intersectoral Knowledge Alliance has

provided a free tool to transfer to a large audience the newly developed guidelines and protocols for the protection and conservation of contemporary art in public spaces.

Disclaimer



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