

What can Europeana bring to Open Education?

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Abstract

Europeana is Europe's main culture portal, with now about 50 million objects of Cultural Heritage, including documents, images, videos and audio recordings. It is well known by Libraries, Museums and Archives as well as scholars for its trusted content. However, it is still underused in Education. Several factors make it an ideal tool for higher education. First of all, there is the quality: the cultural heritage objects described in Europeana come directly from the source, from the current holder, and have been digitized to high standards. Second, an ever growing part of it is available for public reuse, and openly licensed, as the European Commission pushes Cultural Heritage institutions to open up their collections. Thirdly, and this might be of growing interest, it shows Europe to its full diversity, in contrast to many current educational resources such as schoolbooks. It holds records from Central and Eastern Europe as well as those of Western Europe. Last, Europeana is transforming from a portal into a platform for reuse, educational as well as commercial. It wants to offer higher quality primary source material in a way that it can be integrated in educational apps, but also in an interactive way in online learning such as MOOCs. In this talk, we will discuss two examples from Europeana Space: creative reuse of Europeana content and the Europeana Space MOOC.

Keywords: Europeana, MOOC, Open Education, OER

1. Introduction

In this paper we want to show how large open resources of cultural heritage such as Europeana can contribute to open learning. We will shortly introduce Europeana, Europe's Cultural Heritage portal, and the focus on the activities in the EC-funded project Europeana Space, which aimed at exploring possible use cases of reuse of Europeana contents. We will then give examples of educational use, by highlighting the Europeana Space MOOC, a self-paced open online course which is open for registration now.

2. Europeana

Europeana¹⁸⁹ is the portal to Europe's cultural heritage. Europeana holds now >50m records from >2,300 European galleries, museums, archives and libraries, including books, newspapers, journals, letters, diaries, archival papers, paintings, maps, drawings, photographs, music, spoken word, radio broadcasts, film, newsreels, television, curated exhibitions, in 31 languages, all provided with extensive descriptions and metadata. All the contents of Europeana have been provided by the museums and collection owners themselves, and often have been digitized to high standards. This allows for a different kind of reuse of this content. Today, Europeana wants to become a platform of this reuse, so that this cultural heritage can be remixed. This can be for new creative businesses that can exploit Europe's cultural riches as a source matter for new products, but of course also for recreation, tourism, education and research.

Europeana offers a search box to search for content, and supports multilingual searches. Besides this main interface, Europeana currently boasts thematic collections and exhibitions, which are curated and narrated collections of images that bring a coherent view. These are of course very suitable for an educational use. There are currently two collections, one on Music and one on Art History, offering a true portal to these domains. A collection has a specific search box, as well as pre-defined searches, which make it much easier to access the content for those who are less acquainted with the subject. Furthermore, the collections have curated exhibitions, where a story is told about the objects described. This material is very well suited for a lesson in a school context.

For example, the Art History collection has pre-defined queries such as "Art Nouveau Posters" or "Edvard Munch", as well as specific exhibitions, such as "Faces of Europe" or "Baroque and Enlightenment". A collection on Maps in the works, as well as one on photography, which will be provided by Photoconsortium¹⁹⁰. On top of this, Europeana has a wide range of exhibitions outside of these collections, such as "Faces of Europe", "The Men on the Memorial", "Photography on a Silver Plate" etc.

Specific projects have contributed large collections to Europeana, e.g. Europeana 1914-1918¹⁹¹ on the First World War, Europeana Fashion¹⁹² and Europeana Photography¹⁹³, which contributed over 450.000 images on early photography. This last collection, with contents of Europe's major photo archives selected from the first 100 years of photography 1839-1939, has contributions from 13 countries with metadata translated in 16 languages (including Chinese, Hebrew and Russian). With contributions from countries such as Bulgaria, Slovakia, Poland, Lithuania besides Western European countries a wealth of historic material becomes available that can complement history schoolbooks and allow for a richer narrative of Europe's history, based on source documents.

The Music collection on Europeana has about 180.000 images, 50.000 sound recordings, plus texts, videos and other objects. It features prepared searches to e.g. Chopin, Brahms together with exhibitions.

¹⁸⁹ <http://www.europeana.eu>

¹⁹⁰ <http://www.photoconsortium.net>

¹⁹¹ <http://www.europeana1914-1918.eu/>

¹⁹² <http://www.europeanafashion.eu/portal/home.html>

¹⁹³ <http://www.europeanaphotography.eu>

Europeana Sounds¹⁹⁴ adds to this an enormous collection of a rich diversity of sound recordings, all open for reuse.

The exhibitions are narrated, which makes them a good starting point for an educational task. Students could read the Introduction, and then try to find specific materials by using precise keywords in queries, to go in a kind of curatorial dialogue on the content. At the moment the exhibitions are in English Language only.

Europeana is a freely accessible resource. Everything is free for personal use. Many of its contents also allow professional reuse. This is indicated in the search box under the heading “Can I use it?”, where one can choose for “Yes with Attribution” or “Yes with Restrictions” (The restrictions often being only non-commercial reuse). Some materials are to be used “only with permission”, these are works in copyright. Part of Europeana’s offerings are dedicated for reuse through Creative Commons licenses¹⁹⁵, while a growing part is in the Public Domain¹⁹⁶. This all makes Europeana an ideal instrument for educational use by teachers and students, as well as for course authors and MOOC builders who are looking for reuseable content.

3. Europeana Space

Europeana Space¹⁹⁷ is an EC (European Commission) funded best practice network aiming to foster reuse of the cultural heritage content in Europeana. Having contributed largely to the collections of Europeana, the partners in Europeana Space are working to make demonstrators and showcases of interesting reuse of this content creative industries. We did pilots on dance, TSV, photography, museums, open and hybrid publishing and games. For each pilot, a hackathon was organized where designers, creators, GLAM (Galleries, Libraries, Archives and Museums) professionals and students could come together to build mock ups of new applications, using the API’s (Application Programming Interface) and toolkits that were developed by Europeana Space. There are also 5 demonstrators: Archaeology in Cyprus, Irish Poetry and Folk Tales, Cavafy literature library, Photographic investigation of works of art and the Rode Altarpiece¹⁹⁸.

This way it covers a wide variety of cultural content, with all their specific problems regarding to media formats, required interaction, copyrights etc. The whole idea behind the pilots is that examples are given as to how the cultural heritage content in Europeana can be reused in new applications. This with the aim of feeding the hackathons, where developers and content providers were invited to come up with novel concepts that could generate new business models, all starting from the idea that Europeana could function as a kind of repository of “raw” cultural “material” that can be recombined and repurposed as to create new exchanges.

Europeana Space also developed an infrastructure, the “Technical Space”, where users can login and access the specific contents used in the pilots. This infrastructure allows the definition of collections and exhibitions, and it provides in API’s to access both the Europeana and Europeana Space contents¹⁹⁹.

¹⁹⁴ <http://www.europeanasonsounds.eu/>

¹⁹⁵ <http://creativecommons.org>

¹⁹⁶ <https://creativecommons.org/publicdomain/mark/1.0/>

¹⁹⁷ <http://www.europeana-space.eu>

¹⁹⁸ <http://www.europeana-space.eu/education/>

¹⁹⁹ <http://www.europeana-space.eu/with/>

Pilots

The **TV pilot** exploits the opportunities of re-using Europeana content in SmartTV applications to create new TV experiences. A technical framework provides an environment to analyse, personalize and present Europeana content. The pilot supports and evaluates two scenarios in which video material is brought out of the archive and onto the viewer's screen.

For the broadcast scenario, RBB developed an HbbTV application based on the Berlin Wall. The SmartTV application, targeting a social community, is based on archive videos about the building of the Berlin Wall in 1961 up to German re-unification in 1990. The local community scenario led by Sound and Vision focused on applications for an immersive user experience in the living or class room. It investigates use cases such as the elderly re-living personal memories through TV content or pupils learning about historic events.

The aim of the **Dance Pilot** is to create a general framework for working with dance content and the metadata accessible through Europeana and in so doing enable the production of two innovative models of content reuse, one for research purposes and one for leisure. As such two applications will be developed based on this framework: DanceSpaces and DancePro.

- DanceSpaces focuses on the needs of the general public, dance enthusiasts and pre-professionals, dance audiences/viewers and tourists, etc. who want to share and explore content about a particular dance aspect.
- DancePro focuses on the needs of researchers and dance experts (e.g. dance artists, choreographers) who need a set of much more powerful tools for accessing dance content and creating extensive metadata.

The **Games pilot** is examining how the highly engaging principles of gaming can be applied to digital archives and their content in order to create new prototypes for future games applications. Drawing on the wealth of cultural material in Europeana, these games will target different sectors of the emerging games market and ask how this medium can bring new audiences to existing collections and content using various digital delivery platforms. Three demonstrators are created as part of this pilot:

The casual game focuses on restoration. It presents the player with a painting (from Europeana), covered in dust. The aim is to restore the painting as quickly and effectively as possible, challenging the speed and accuracy of the player. The casual game is based on the arcade game QIX from 1981. The objective of QIX is to claim rectangular shaped areas of territory on the games screen, in order to acquire over 50% of the space available. This casual and compelling model of gameplay has been adapted to reveal image content from Europeana as the player claims territory. A video mashup game aimed at the social gaming market, that deploys archive materials in new and unexpected ways.

The creative game allows the player to create collages from filmed footage (from Europeana), encouraging people to draw connections between content and generate their own remixes. The social game is themed around dance and the playful experience of mixing and matching archived videos of contemporary dance in order to create new 'mashups'. Players are presented with a library of dance clips video content that has been curated by the members of the Games and Dance Pilots which they are then able to sequence together on a timeline.

The educational game is themed around the format of the self-portrait, using a series of images already drawn from Europeana. Using the styles and themes of these images as a starting point, players can map photographs of themselves or their friends into the image and blend these together using a range of touch

screen based tools. The original images link back to their archive sources and also to open content on the artist, arts techniques and historical context for the image. The aim is to match the images as closely as possible, encouraging creativity and learning through emphasizing the form and composition of the painting.

An educational game designed for Art teachers and their students, that allows them to create and share new work based on inspirations from the archives.

The **Open and Hybrid Publishing pilot** explores this question by producing a creative multi-platform resource, called an 'open book', about the dynamic relationship between photography and other media. Titled *Photomediations: An Open Book*²⁰⁰, the resource uses open content, drawn from Europeana and other online repositories, and run on open software. The 'open book' includes several chapters – such as Photography and Time, Becoming Media or The Ecology of Images – containing visual and textual material on different aspects of photomedia. They are followed by two 'open' chapters: an online exhibition and a discussion forum.

The Pilot has two main goals:

- to popularize the availability of online image-based resources by making extensive use of material that uses CC-BY License or similar open licenses
- to devise an alternative business model for using 'open and hybrid publishing' with regard to digital image-based heritage and sharing it with others: educators, students, publishers, museums and galleries and digital heritage organizations.

The **Museums pilot** addresses challenges posed by a shifting paradigm: users engagement, edutainment, interaction, audience development, user generated contents, but also market competitiveness.... these are some key elements that recently entered the cultural heritage world. Also museums and memorials, especially the small and medium ones, had to update their strategies and structures according to this new cultural scenario, but keeping on facing the "old" challenges: such as optimization of decreasing financial resources, update of collections, design of new exhibition paths.

The pilot has been designed keeping in mind all these aspects with the aim of creating ready-to-use solutions for content and exhibition curators but also for end users, that maximize results leveraging on the archive of multimedia contents available in Europeana combined with web-based and mobile solutions. Two distinct products will be the result of this activity:

- The Toolbox, a web-based application designed for museum curators, that allows them to create always brand new educational videos and promotional worksheets melting the museums/memorials contents with the heritage of Europeana
- The Blinkster mobile app – that will enrich the exhibitions with Europeana contents by exploiting the mobile strength such as augmented reality, object recognition and geo-localization for education and entertainment experiences within hand's reach

The **photography pilot** features applications grouped around 3 ideas:

- Storytelling web applications and apps allowing for users to create new stories by mixing historical images from Europeana and other public sources with user-generated content;

²⁰⁰ <http://photomediationsopenbook.net/>

- Museum applications providing access to Europeana and similar resources can yield new types of visitor-experiences;
- Augmented reality applications enabling historical images to be layered with actual experiences and other material, such as maps and social user data.

In the photography pilot, we developed an environment “tell your photo story”²⁰¹ where teachers can build their own stories using images coming from Europeana, Flickr Commons²⁰² and other similar sources. The pilot continued work by Photoconsortium members on EuropeanaPhotography²⁰³. You can search images in these sources at the same time, select the images you want to use and make a story with them that you can save and share with others. Not only can teachers prepare a class for their students, they could also give an assignment to those students to build their own stories. Besides using the images that you find in the catalogues, you can also upload your own. Mixing cultural heritage with user-generated content allows for a real interaction by communities with their heritage, and also for a re-appropriation of heritage. It can lead to new interpretations where meanings are given to heritage that today’s communities can relate to. For Europeana Space, we uploaded collections that we gathered in Pisa, in an event where we asked people to bring their own vintage photos that we then digitized, from the Leuven City archive collection and from a “bring your own photos” event in Leuven, where we did high-quality digitization of photos brought by members of the public. All these photos are in the EuropeanaSpace technical platform and are in the process of being uploaded to Europeana under CC-BY-NC licenses.

For the museum applications, the pilot used the Blinkster application applied to a photography exhibition, “All our Yesterdays”²⁰⁴. With this app, visitors can get extra information about the pictures displayed, and save their visit to their smartphone, so that after the visit they have the pictures of the photos they liked. This app could form the basis for more sophisticated educational scenarios for a museum visit.

The Augmented reality app targets tourism. It starts from a repository of vintage pictures of a City (in the demonstrator this is the city of Leuven in Belgium which was destroyed during the First World War). These are matched to reference images of today. For each reference image a multitude of similar images is taken from slightly different viewing angles. This allows the app to identify the place when someone points his smartphone camera in the right direction. When a match is found the vintage photos can be overlaid. This technology can form the basis for tourist quest applications, leading tourist around historical cities.

4. Europeana Space MOOC

The Europeana Space MOOC brings all this information together MOOC on the edX platform²⁰⁵, where interested students not only learn about the rich cultural heritage content available in Europeana, but also do hands-on assignments actually learning how they can become active users and contributors rather than simply consumers of heritage. The MOOC contains a learning module on five of the pilots (Photography, TV, Dance, Open & Hybrid Publishing and Museums) and an important module on managing Intellectual property rights “IP for the Cultural Entrepreneur”, and a module on Creative Marketing. The IPR module

²⁰¹ <http://www.tellyourphotostory.be>

²⁰² <https://www.flickr.com/commons>

²⁰³ <http://www.europeana-photography.eu>

²⁰⁴ <http://www.earlyphotography.eu>

²⁰⁵ <https://www.edx.org/course/europeana-space-creative-digital-kuleuvenx-eurospacex>

highlights possibilities of reuse through Creative Commons licenses and addresses issues such as Orphan Works and the balance between cultural rights to open access and intellectual property rights.

The MOOC targets three levels of users: a general audience of people interested in cultural heritage that want to learn how they can do more with the available online content – with a special focus on teachers and students, a public of GLAM professionals and lastly designers and developers. While the learning materials for the first group are the typical MOOC ingredients such as preparatory readings, video lectures, knowledge clips, quizzes, forum discussions and assignments, the materials for the professional groups are more documentation oriented and offer direct pointers to the relevant knowledge bases.

The assignments in the MOOC aim to really help learners to take the step to become active producers of remixed and repurposed content, according to the **4R principle: reuse, redistribute, revise, remix**²⁰⁶. In the assignments, learners actually use the toolkits and API's produced to build and share new narratives, stories, and applications. With the MOOC, launched on the KULeuvenX Open edX platform we want to reach out to large user communities of cultural heritage, making sure Europe's rich digitized cultural heritage is repurposed and re-appropriated by new applications, narratives and learning experiences. It is also a showcase of "MOOCs the other way around": rather than copying an existing university course into a MOOC, this MOOC is the result of practice-oriented research that leads to new academic contents and learning formats.

5. Conclusion

We hope to have brought to the attention that with Europeana users have access to a very rich wealth of online cultural heritage resources that can be used in Education. With the Europeana Space portal, we aim to show how useful reuse of these materials can be made by teachers, students, amateurs and GLAM professionals as well as developers in the creative industries. The Europeana Space MOOC helps to put interested users to get started.

²⁰⁶ Hilton, J., Wiley, D., Stein, J., & Johnson, A. (2010) "The four R's of openness and ALMS Analysis: Frameworks for Open Educational Resources." *Open Learning: The Journal of Open and Distance Learning*.