



Europeana DSI 2– Access to Digital Resources of European Heritage

DELIVERABLE

D3.4: Pilot validation report on use of Europeana for teaching and learning

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1 Summary

The main purpose of this deliverable is to provide policymakers with an insight into how Europeana can support innovative pedagogical practice, as well as to enable a wider community of teachers to integrate Europeana resources in their classroom practice by providing guidelines and exemplar learning activities. These results are based on the outcomes of a validation pilot, which European Schoolnet coordinated in the framework of the DSI-2 project.

This deliverable is structured in two parts: a presentation of the pilot and teacher activities, and the pilot evaluation.

The first section starts with an overview of the pilot and its main activities with the participating teachers. This section presents how they were selected, the pedagogical training and support they received, and details their activity throughout the school year. Finally, this section presents two additional outcomes (teacher videos and a brochure), and how these will increase the impact and usefulness of Europeana content for pedagogical activity.

In the second section, the deliverable describes the evaluation methodology and its aims and methods, and presents the evaluation findings. The section concludes with a summary of all findings, and a set of recommendations providing insight into how a further uptake of Europeana by teachers, can be achieved.

2 Pilot

2.1 Introduction

In the Europeana DSI-1 project (April 2015 - June 2016) European Schoolnet provided one of the physical ‘incubator’ Labs (its Future Classroom Lab¹ in Brussels) to assist with the promotion and mainstreaming of project results in the school educator sector. It also worked with a focus group of teachers to identify subsets of Europeana data that were aligned with the publication policy of the European Schoolnet Learning Resource Exchange (LRE) service for schools (<http://lreforschools.eun.org>), mapped and enriched data provided by the Europeana API and worked on the automation of these processes.

In the Europeana DSI-2 project (July 2016 - August 2017) EUN built on the largely technical DSI-1 work by carrying out a validation pilot involving 20 teachers from 10 countries (Austria, Czech Republic, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, and Portugal). The aim was to: develop and test pedagogical scenarios and learning activities that incorporate Europeana content; assess the pedagogical added value of using Europeana content in real classroom contexts; provide evaluation data and recommendations to help Europeana mainstream re-use of digital cultural content in primary and secondary schools.

2.2 Pilot Methodology

The Europeana DSI-2 pilot involved two phases (November 2016 - February 2017 and February 2017 - June 2017) where data was gathered on how the selected teachers used the Europeana digital cultural heritage platform, tools and resources. The aim was particularly to use the evaluation data: to provide policy makers with insights on ‘HOW’ Europeana resources can support innovative pedagogical practice and also to provide **guidelines and exemplar learning activities** to enable a wider community of teachers to integrate Europeana resources in their classroom practice.

During each phase of the pilot, the 20 teachers received training during a two-day EUN workshop in the Future Classroom Lab in Brussels on how to develop pedagogical and learning activities using the EUN Future Classroom Toolkit² and were also introduced to other elements of the toolkit such as a school ematurity model, along with the project validation methodology and instruments. Following each training, the two pilot phases took place and were evaluated separately via an online questionnaire distributed to the participating teachers. During the pilot phases, the teachers also had regular contact and online meetings (webinars) with an EUN pedagogical coordinator.

After the first workshop, the teachers returned to their classrooms to further develop and pilot the initial scenarios and learning activities, as well as communicate about Europeana in their schools and integrate in a classroom activity what they had learned. They also completed a questionnaire aimed at gathering information on: their teaching background and experience in using ICT; the school context in which they were implementing the pilot (innovation and ICT context); how they introduced the Europeana pilot and resources at their school; and their first experience in searching and using the Europeana website, tools and resources. The questionnaire also gathered teachers’ ideas about how they planned to implement the project in phase 2.

After the second workshop and during the second pilot phase, teachers were requested to fully develop or update their original scenarios and learning activities, or to pilot new learning activities that they produced during the second workshop. In line with this, they were asked to complete a second questionnaire that gathered feedback about the whole pilot implementation, including: the results of implementing the scenarios developed at the end of phase one; challenges and successes in the implementation; conditions for success and overall feedback on the Europeana website and resources after almost one complete school year of use.

¹ <http://fcl.eun.org/>

² <http://fcl.eun.org/toolkit>

Additionally, four example case studies were developed by EUN, featuring the pilot work of teachers who implemented innovative pedagogical scenarios using Europeana resources, in order to supplement the online evaluation questionnaire results. The example cases describe in more detail the innovative practices and the contextual conditions needed to successfully integrate Europeana in teaching and learning.

The example cases are mainly informed by teachers' reports, presentations during webinars (one in each pilot phase), feedback of teachers on specific issues during working group discussion in the face-to-face workshops, and the analysis of the pedagogical scenarios developed by teachers.

The two questionnaires were launched in March and in June 2017 (see Annex 1 Evaluation Questionnaires).

2.3 Selection of teachers

The selection of teachers for the Europeana DSI-2 pilot took place between September-October 2017. During this period, EUN worked together with its Ministries of Education (MoEs) to identify 20 teachers from across 10 different European Countries (one primary and one secondary level teacher per country) who cover a range of disciplines and curriculum topics.

The first task was to develop the selection criteria for the pilot teachers. These were as follows:

- ✓ **Basic knowledge of English** (understanding, writing, reading): teachers should be in a position to understand and communicate in English in order to attend DSI-2 organized workshops, work on the learning scenarios, and collaborate online with the EUN trainer and teachers from the other pilot countries.
- ✓ **Interest in cultural content:** teachers will be asked through an application form to express their interest on how the Europeana content can be included in the curriculum plus what kind of skills and experience they wish to acquire during their involvement in DSI-2.
- ✓ **Interest in learning and sharing experiences and good practices:** teachers will also be asked to demonstrate their interest in collaborative activities and learning as well as using innovative pedagogical methods including any previous positive experience and lessons they have acquired by their involvement in other European projects.
- ✓ **Good internet connection at home** both in terms of stability and available bandwidth as well as frequent access to technical infrastructure (i.e., PC's) since teachers need to be able to regularly connect online and provide feedback.

In order to participate in the pilot, selected teachers, fitting the criteria above, would have to perform the following tasks:

1. Participate in two (2) two-day European Schoolnet (EUN) workshops in the FCL in Brussels, one planned to take place on 28–29 November 2016 and the second one on 27–28 February 2017.
2. Participate in Phase 1 Pilot (November 2016 - February 2017): test with their pupils the pedagogical scenarios and learning activities they developed using Europeana data.
3. Participate in Phase 2 Pilot (February 2017- June 2017): either fully develop/update versions of their original scenarios and learning activities or further develop new learning activities that they had produced during the second workshop.
4. Participate in regular online meetings/webinars with the EUN trainer as well as in a social media group discussion to exchange experiences and to find solutions to questions or challenges.
5. Provide feedback and evaluation data via blogs, online questionnaires and interviews.
6. Use the Europeana Collections platform to search for relevant materials.

The next step in the selection process consisted of involving all Ministries of Education by providing them with a detailed memo (Annex 2 Memo to Ministries of Education) of how to involve teachers from their region/country.

The memo was sent to all MoEs, which in turn had to express their interest to have teachers from their country joining the project. Interested MoEs were taken on board on a first come, first serve basis.

The memo gave an overview of the Europeana DSI-2 project, the validation pilot, the methodology of the selection procedure related to the pilot teachers, tasks that the selected pilot teachers would be asked to carry out as well as the 'ideal' profile of a pilot teacher.

The selection methodology for pilot teachers, in collaboration with MoEs, consisted of several steps:

- Step 1: interested MoEs to have teachers from their country joining the project:
 - Inform the Europeana DSI-2 coordinator for EUN by 20 September 2016
 - Inform EUN which option the MoEs would prefer: 1) to look for the two teachers themselves (one primary / one secondary school teacher) OR 2) EUN can launch a call for interested teachers from the respective countries, and the MoEs can choose from the list of applicants.
- Step 2: By 10 October: selection of the teachers to be completed.
- Step 3: By 15 October 2016: EUN to send the application form alongside the official invitation to the selected teachers.
- Step 4: By 10 November 2016: Agreement between the DSI-2 consortium and pilot teachers to be signed for the work to be carried out between November 2016 – June 2017.

The final participating countries, based on the expressed interest of the Ministries of Education, were Czech Republic, Greece, Portugal, Austria, Ireland, Estonia, Italy, Finland, France and Hungary. In order to identify the most suitable teachers, regular contact with these MoEs took place during the selection period. Seven out of ten (Czech Republic, Greece, Portugal, Austria, Ireland, Estonia and Italy) preferred to identify the teachers themselves and send to EUN the final list whereas three MoEs (Finland, France and Hungary) chose the second option.

Taking into account their decision, an open call was launched for teachers in Finland, France and Hungary to join the Europeana DSI-2 pilot. The open call was published through the EUN website³, EUN social media, EUN Teachers' newsletter⁴, Scientix website⁵ (<http://www.scientix.eu/>), and the Future Classroom Lab (<http://fcl.eun.org/>) social media.

In order to apply, teachers had to fill in an application form⁶. The open call link was also shared with the MoEs in the corresponding countries for further dissemination to their network of teachers. In addition, the call for teachers was sent to the Europeana Coordinator in order to be included in the first Europeana DSI-2 newsletter.

The selected teachers received the official invitation (Annex 3 Official invitation) and, in order to officially start the activities in the project, they were asked via email to sign an Agreement (Annex 4 Teacher Agreement) for the work that would be carried out between November 2016 – June 2017.

The list of selected teachers, countries and subjects can be seen in Annex 5 Final list of pilot teachers.

2.4 First Teachers' Workshop

The pilot activities started with the first workshop on 28-29 November 2016 (Annex 6 Agenda for the first teacher workshop), in the European Schoolnet Future Classroom Lab in Brussels. Travel and accommodation arrangements were organized by EUN.

³ <http://bit.ly/2d91QzI>

⁴ <http://bit.ly/2fCCMhf>

⁵ <http://bit.ly/2xtJf69>

⁶ <http://tinyurl.com/gmhhwxj>

Prior to the workshop, EUN had configured a Learning Management System, using Schoology (Figure 1) aiming at connecting pilot teachers, and enabling them to share content. In addition, before attending, the 20 participants prepared a short, informal, 3-5 minute visual presentation (e.g. a set of pictures or a short video) of their school and classroom/learning spaces to share with the other participants at the start of workshop.

The screenshot shows the Schoology interface. At the top, there's a navigation bar with links for Home, Courses, Groups, and Resources. On the right, a user profile for 'Teodora Ioan' is visible. The main content area displays a course titled 'Europeana in the Classroom: validation course'. This course includes sections for 'LEARNING SPACES', 'PARTICIPANTS', 'MATERIALS WORKSHOP 1', 'MATERIALS WORKSHOP 2', and 'WEBINARS'. A sidebar on the left features the Europeana logo and links for Materials, Updates, and Members. On the right, there's a 'Upcoming' section indicating 'No upcoming assignments or events'.

Figure 1: Screenshot of the Schoology system

In order to prepare the agenda and align session objectives, regular online meetings took place with the Europeana coordinator, Nicole McNeilly.

During this first workshop (see Annex 6 for the full programme), participating teachers received an in-depth introduction to the Future Classroom Toolkit, a set of resources and tools that can help teachers innovate their classroom practices. The framework of the toolkit has been designed so that participants can feel empowered to act as pedagogical leaders for their school community so that they could share the experience of taking part in the project with their colleagues and via online networks in which they were active.

The first workshop focused on the initial steps of the toolkit i.e. to reflect on learning spaces and educational trends and to assess a school's maturity level of the schools regarding ICT use and the role different stakeholders play.

On the programme was also the introduction of the Europeana repository by the Europeana coordinator, Nicole McNeilly. She presented the Europeana platform and the different ways of searching for and crediting the resources. The participants learned about ways to curate resources and about different types of copyright including Creative Commons open licenses. Finally, the participants also experienced some of the apps that have been developed for use with Europeana content.

The first workshop announcement was disseminated online through the EUN Teachers' newsletter, November edition⁷. Screenshot of tweets posted during the first Europeana workshop, 28-29 November 2016 are shown in Figure 2.

⁷ <http://bit.ly/2wFCQre>

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Figure 2: Selection of tweets posted during the first Europeana workshop, 28-29 Nov 2016

An overview of the workshop can also be seen in a blog post⁸ written by the Europeana coordinator.

Following the workshop, all participants received a thank you message email alongside a feedback form of the workshop and instructions for the first pilot phase (November 2016–February 2017).

2.5 First Pilot Phase (November 2016 – February 2017)

After the first workshop, the teachers returned to their schools to further develop the learning activities they had started during the first workshop, such as presenting Europeana at school, integrating Europeana data

⁸ <http://pro.europeana.eu/blogpost/europeana4education-europeana-taster-for-teachers>

in the classroom, and organizing a class activity. During this period, the EUN trainer supported teachers and they joined a dedicated social media group⁹ that allowed them to exchange experiences and ideas and ask questions.

In this context, the first pilot phase online meeting was organized with the 20 teachers at beginning of February 2017. As preparation for the meeting, each teacher had to compile a short report on how he/she had implemented Europeana over the months in between the workshops (an extract can be seen in Figure 3). The reports had to be sent in advance to EUN for review.

Europeana and Future Classroom Laboratory Workshop 2016

Mark Boggins

Ireland January 2017

The first item on my agenda upon my return to school was to explain how futuristic the Future Classroom Lab really was! This was received with plenty of enthusiasm as I'm sure I was quite animated recalling the robots, solar powered trees, Lego kits and of course everyone's favorite – the chairs! I explained how I had been lucky to collaborate with teachers from all over Europe and be taught about a tool which can be used for teaching and learning all over Europe – Europeana.eu. I explained that there are 53 million items available and over 40% are free to re-use in the classroom.

I invited my colleagues to a presentation in my room to explain what I had experienced in Brussels in November. I used my interactive whiteboard to show the various websites which I had visited. I told the teachers about the maturity test and we discussed ways to improve our ICT maturity. I explained the findings from my teacher maturity test and the suggestions given:

To attain the next level of maturity the teacher should consider varying classroom layout, introducing new tools and resources into the classroom including those suggested by students and colleagues. The teacher should not decide the format and approach for providing and presenting information, but instead help students incorporate multimedia production, web production and publishing technologies into their projects in ways that support their ongoing knowledge production and communication with other audiences.

I showed my colleagues more results from the Learner's role.

Figure 3: Extract from a teacher's report of Phase 1 activities

The entire collection of reports can be found at the following link: <http://bit.ly/2wnSxAR>.

During the online meeting, based on their reports, every single teacher had to summarise and share with their colleagues, in an allocated time slot, three main aspects of their work:

- How did they present the Future Classroom and the Europeana project at school?
 - How did they interact with colleagues about the topic of innovation?
 - How did they share or apply in the classroom what they learned during the first workshop in Brussels?

⁹ <https://www.facebook.com/groups/europeanaclassroom/>

2.6 Second Teachers' Workshop

The second workshop took place on 27-28 February 2017 (Annex 7 Agenda for the second teacher workshop), in the Future Classroom Lab at European Schoolnet offices in Brussels. Travel and accommodation arrangements were organized for the teachers by EUN. One teacher could not attend the second workshop due to personal issues.

As for the first workshop, the Europeana coordinator was involved in regular exchanges with EUN to discuss the agenda and align session objectives.

The focus of the second workshop was to develop pedagogical scenarios and learning activities that incorporate Europeana content as well as tools presented to the participants during the first workshop. The teachers continued to explore different elements of the Future Classroom Toolkit in order to develop innovative teaching practices that incorporated Europeana content.

The Europeana coordinator was present again to continue the training on Europeana and to speak about new developments. During this presentation, teachers explored in detail how to search the Europeana website (by topics, by time periods, by filtering), learned about the Europeana radio app, and the Transcribathon¹⁰, an engaging online tool to decipher, transcribe and annotate hand-written stories from the period of the First World War. Finally, teachers also had the chance to find out about new developments in the photography collection, and Europeana Education community¹¹.

The evaluation methodology and activities were also been part of the programme. The EUN evaluation coordinator discussed and presented the evaluation activities of the pilot (questionnaires, case studies, webinars, etc.) and described the future steps and necessary involvement of the pilot group.

A selection of tweets posted during the second Europeana workshop, 27-28 February 2017 are shown in Figure 4).

¹⁰ <https://transcribathon.com/en/>

¹¹ <http://pro.europeana.eu/use-our-data/education/europeana4education-community>

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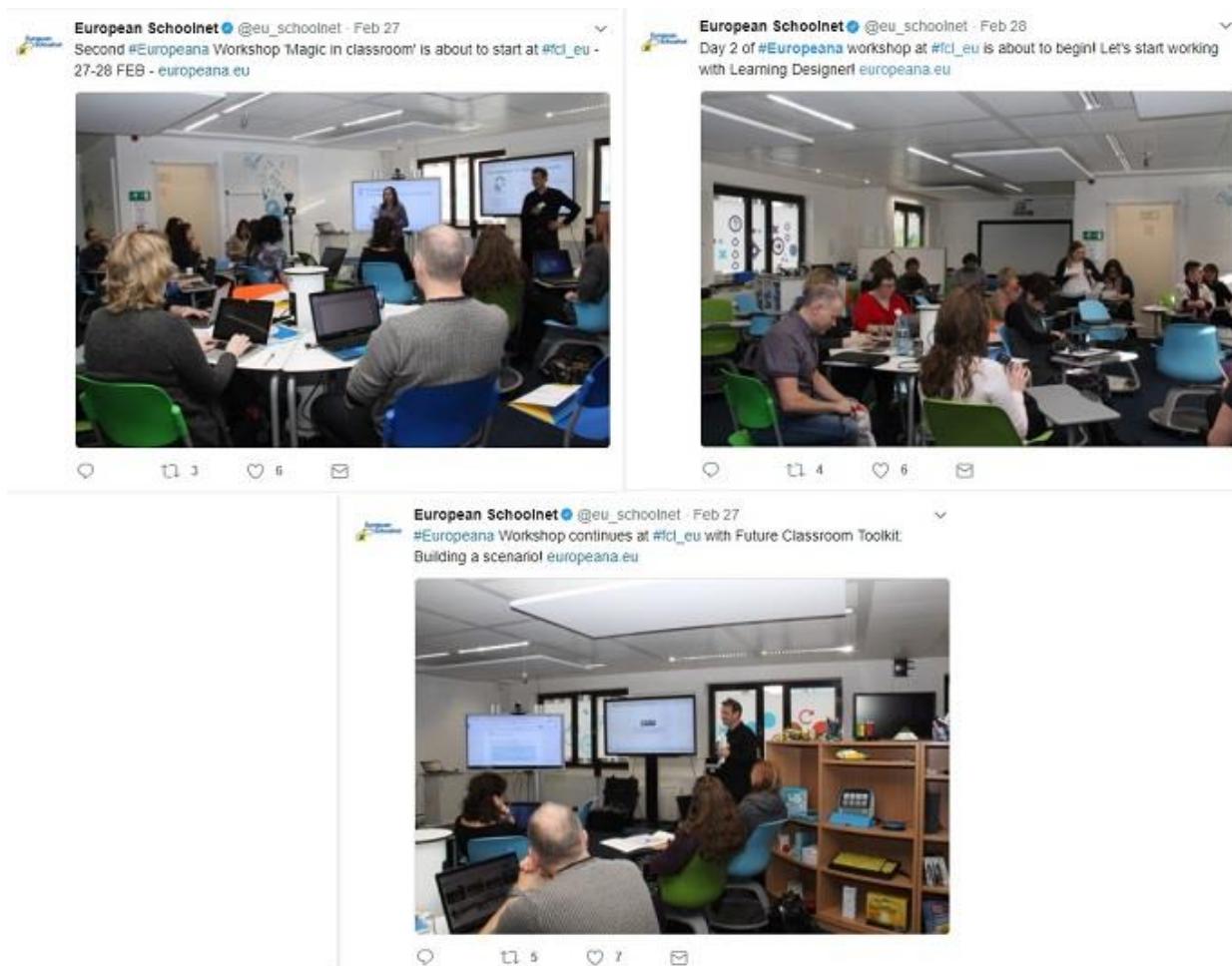


Figure 4: Selection of tweets posted during the second Europeana workshop, 27-28 February 2017

An overview of the workshop can also be seen in a blog post¹² written by the Europeana coordinator.

Following this second workshop, all participants have received a thank you message email alongside a feedback form of the workshop and instructions for the second pilot phase (February-June 2017).

2.7 Second Pilot Phase (February - June 2017)

During this period, the main task for teachers consisted of further developing the scenarios they had started during the second workshop, testing them with their students and improving them. For this purpose, several teachers from different countries collaborated in groups to develop common scenarios that they implemented in their respective schools. In this context, a second online meeting was organized with teachers on 6 and 8 June 2017 where teachers had to describe, in an allocated time slot, the following information to their peers:

- The Scenario and Learning Activity they created.
- The interaction in the classroom and in the school.
- How the Europeana DSI-2 pilot impacted their teaching practice and innovation in their school in general.

All presentations of teachers can be seen at this link: <http://bit.ly/2wnSDsd>.

¹² <http://pro.europeana.eu/blogpost/europeana4education-final-teachers-workshop-1>

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The EUN pedagogical coordinator provided teachers with a template (Annex 8 Scenario template) to help them prepare their scenario and learning activities. All teachers had to submit this learning scenario as a conclusion of their work in the pilot by 12 May 2017.

In total, teachers provided 13 learning scenarios by the end of the second pilot phase focusing on various topics and using a variety of Europeana resources. Several teachers chose also to collaborate and create a scenario together; hence the number of scenarios is less than the number of 20 teachers. The scenarios were subsequently reviewed by the EUN pedagogical coordinator and uploaded in the FCL Directory (fcl.eun.org/directory) to be used freely by teachers worldwide.

A screenshot of a scenario on the FCL Directory can be seen in Figure 5. Each scenario can be accessed independently and contains essential metadata (like keywords, topics, student age, etc.), can be downloaded as a PDF and has a Creative Commons BY license.

The screenshot shows the FCL Directory interface. At the top, there is a blue header bar with the text 'FCL Directory' and 'Directory details'. Below this is a teal button labeled 'Submit your resource'. The main content area has a light blue background with a network graph icon on the right. The scenario title is 'An interactive approach in natural history study'. Below the title, there are sections for 'Keywords' (natural, history, virtual, tour, game), 'Language' (English), 'Topics' (collaboration, game-based learning), 'Technology' (cloud-based solutions, digital media), 'Minimum age' (8), 'Maximum age' (10), 'Website' (<http://www.europeana.eu/portal/en>), 'Author' (Efi Saltidou), and 'License' (Creative Commons BY). On the left side, there is a sidebar for 'europeana education' with a logo, a 5-star rating icon (0 ratings), and a 'Sign in to rate' button. Below the sidebar are social sharing icons for Twitter, Facebook, Google+, LinkedIn, Email, and Print.

This Future Classroom Scenario has been developed as part of the Europeana DSI-2 project. The main objective of this scenario is to increase student concentration in natural history subjects study.

At this learning scenario basic natural history concepts are being gamified through the usage of a competitive two player memory match video game. Before the competitive game sessions begin students are introduced to the basic concepts and the world of natural history through a virtual digital tour of one of the most prestigious natural history museums, the London natural history museum.

The multiplayer memory match game is an educational game combining the classic memory game of

Figure 5: Screenshot of a teacher scenario on the Future Classroom Directory

2.8 Outputs and outreach

2.8.1 Teacher case study interviews

During the second teacher's workshop, EUN conducted a series of short interviews with three of the pilot teachers. These interviews supported the evaluation process by providing a set of case studies and fed into promotional activities and dissemination of the pilot activity and results.

The interviewees had to answer a set of four questions:

1. Please present yourself, subjects you teach, and your school.
2. What is your first experience in using the Europeana tools to find cultural heritage content and resources?
3. Can you give an example of an activity using Europeana that worked well - with your students or with other teachers?

4. How can the use of Europeana tools and content improve educational practices and learning of students?

As a result, EUN prepared the three individual videos of teachers (Figure 6). Using excerpts from these three, a fourth interview was produced with the purpose of acting as a summary of the work of teachers in the pilot. All videos can be seen in the following playlist: <http://bit.ly/2x5cTRw>.



Figure 6: Screenshots of the three case study interviews

The videos will be used to continuously promote Europeana in Education and increase its awareness and presence in teachers' activity.

2.8.2 Policy recommendations brochure

European Schoolnet works with its Ministries of Education by providing them with information and access to the organization's activities, initiatives and pilots results. The Ministries of Education in turn, based on local initiatives and priorities, can refer back to the materials and information provided by EUN and use them to inform their decisions and course of action.

Based on this experience in promoting results from pan-European school pilots, EUN has established an effective brochure format that enables for Ministries of Education to easily review policy recommendations and digest project outcomes. MoEs can then use this brochure as a basis for national dissemination activities and to inform teacher communities. The brochure (Figure 7) created on the results of the DSI-2 validation pilot is available in both printed and online form¹³.

¹³ <http://bit.ly/2gl5weQ>



Figure 7: Front cover of the Europeana DSI-2 Pilot brochure

3 Evaluation

3.1. Pilot Support

As described in the previous section, teachers received substantial support at the start of each pilot phase (and likewise during the project) to guide them in the implementation of the pilot. The support measures offered to teachers by European Schoolnet in collaboration with Europeana should be taken into consideration when interpreting the evaluation results as they considerably guided the project implementation and contributed to its success.

In particular the 2 two-day face-to-face workshops, which took place in the Future Classroom Lab in Brussels at the start of each pilot phase, guided teachers in the planning and implementation of each pilot phase. The aims of the workshops and related tasks for teachers for each pilot phase are therefore shortly summarised again.

The aim of the first workshop was to introduce teachers to the Future Classroom Toolkit (<http://fcl.eun.org/toolkit>), a set of resources and tools that help teachers innovate their classroom practices. Teachers were also introduced to the Europeana website content and tools. After the workshop teachers were asked to act as leaders of pedagogical change back in their school and to share their workshop experience with other teachers, the head teacher and other colleagues in their school. A first task consisted of further developing the learning activities developed during the workshop using Europeana content and tools, involving students, and sharing resources with other teachers.

During the second workshop in February 2017, prior to phase 2 of the pilot, teachers shared their experiences in implementing learning activities in phase 1. They also received further practical tips on how to use Europeana content and tools in the classroom. During the workshop teachers started to design a more comprehensive pedagogical scenario addressing innovative pedagogical practices based on the learning designer (<http://learningdesigner.org/>) tool in small groups with other pilot teachers. After the second workshop, teachers were asked to finalise the pedagogical scenario developed during the workshop and implement and test it with their students during the second pilot phase.

3.2. Methodology

The main aim of the small-scale pilot evaluation involving a small number of teachers (20) from 10 different countries was to investigate via a qualitative action research approach how the Europeana tools and resources can be used in teaching and learning and the challenges and successes in using them.

Each of the two pilot phases were evaluated separately using an online questionnaire containing closed and open questions distributed to all 20 teachers at the end of each pilot phase in February 2017 and in June 2017. (Annex 1 Evaluation Questionnaires).

The first phase questionnaire aimed to gather the following information from the pilot teachers: their teaching background and experience in using ICT, the school context in which they implemented the pilot (innovation and ICT context), how they introduced the Europeana pilot and Europeana resources at their school, and their first experiences in searching and using the Europeana website, tools and resources. The questionnaire also gathered teachers' ideas about how they planned to implement phase 2.

The second questionnaire captured feedback about the entire pilot implementation and on the Europeana website and resources after one school year of use. It collected information about the outcomes, challenges and successes of the implementation of the scenarios developed at the end of phase one and on the contextual conditions deemed necessary for success.

Additionally, four case studies (Annex 9 Europeana Teaching Scenarios) were developed to highlight teachers' pedagogical practices using Europeana resources, in order to supplement the online evaluation questionnaire results. These describe in more detail the practices and the contextual conditions needed to successfully integrate Europeana content in teaching and learning. The example cases are mainly informed by teachers' reports, presentations during webinars (one in each phase), feedback of teachers on specific issues during working group discussions in the face to face workshops, and the analysis of the pedagogical scenarios developed by teachers.

All 20 pilot teachers responded to the first questionnaire after phase 1 of the pilot in March 2017. 19 of the pilot teachers responded to the second questionnaire. The pilot evaluation has provided some useful first indicators on the pedagogical value of Europeana resources. A much larger sample of teachers and a different evaluation methodology would be needed, for example, in order to generalise the findings to more teachers and to carry out a more rigorous study on how use of Europeana impacts on student learning outcomes.

The findings from both pilot phases are described in the following sections. The first section 3.3 outlines the findings relating to the general teaching and ICT background of the pilot teachers as identified via the first questionnaire, followed by section 3.4 offering a comparative analysis of findings of phase 1 and phase 2. Results in section 3.5 highlight the impact of the pilot and the appreciation of the support provided mainly identified after phase 2 of the project. Section 3.6 concludes with recommendations for various stakeholders including Europeana, schools and policy makers to foster the uptake of Europeana content and tools.

3.3. Teaching Background and School Context (Phase 1 Results)

3.3.1. Background of teachers

Most of the teachers who participated in the pilot were experienced. Almost two thirds (12) had between 5 and 20 years of teaching experience. One-third (7) had more than 20 years' teaching experience. Only one teacher was in the early stages of their career, with 2-5 years' teaching experience.

Education level, subjects coverage and age range of learners

Teachers covered all general education levels, from primary to general lower and upper secondary education. Two teachers also taught students in upper secondary vocational education. The age of learners taught ranged from 8 to 18 years. Seven of the teachers taught at more than one level of education.

Table 1: Level at which pilot teachers teach

Level of education	Number of teachers
Primary education	9
Lower secondary Education (general)	11
Upper secondary education (general)	6
Upper secondary education (vocational)	2

A variety of subjects was taught by project participants, often more than just one subject. The following subjects were covered by the pilot teachers.

Table 2: Subjects that pilot teachers teach

Subject	Number of teachers
Primary	4
English	4
ICT	4

History	3
Art	2
German	3
Civics education	2
Religion	2
Economy/Business administration	1
Psychology	1
Biology /geography	1
Maths	1
Literature	1
Handicraft	1
Politics	1

3.3.2. The school context for the integration of ICT

The working conditions in schools from which teachers were involved in the Europeana pilot can be considered as mixed – and are therefore likely to be typical for many other schools. Around half of the teachers were working in schools offering favourable conditions for using ICT in lessons. In other schools, more technical, pedagogical and continuous professional development opportunities are needed.

ICT support in the school

When asked about the different types of ICT support provided in the school, the following picture emerged:

- 60% (12) of the pilot teachers were satisfied with the **leadership/head teacher support** in their school and rated this support to be “very good” or good”.
- The picture concerning **professional development opportunities** and **pedagogical support** offered in the schools was split: around half of the teachers stating that the support provided was “very good” (4) or “good” (5); the other half of teachers considered that the support in these two areas was “poor” (5) or “moderate” (6).
- 55% (11) of the teachers thought that the **technical support** in their school was “very poor”, “poor” or “moderate”, 9 teachers thought was “good” or “very good”.

Investigating in more detail the quality of the ICT access provided, the picture is likewise mixed. Around half of the teachers point to the fact that wireless access (45%) and the availability of mobile devices for students (55%) and teachers (45%) is “very poor” or “poor” in their schools.

The biggest barriers teachers mentioned relate to the cost of financing and maintaining ICT equipment and software; the professional development related to this; and access to ICT (via computer rooms or Bring Your Own Device). They also mentioned teacher related issues such as the openness of other teachers to pedagogical change and a lack of teacher training.

3.3.3. Teachers ICT background and prior knowledge in finding and using educational resources online

All teachers in the pilot were experienced in teaching with ICT. Most of them had used ICT for several years. One third (7) of the teachers had used ICT in their teaching for 7 to 9 years; 9 teachers have more than 10 years' experience teaching with ICT. Three teachers have used ICT for 4 to 6 years and one teacher for 1 to 3 years.

60% (12) of the pilot teachers had already looked for educational content on museum websites and used educational online resources “daily” or “almost daily” in their teaching before the pilot. Seven teachers did so at least several times per month or at least once per week. Not surprisingly, almost all teachers had searched and found online educational resources via Google prior to the pilot.

D3.4: Pilot validation report on use of Europeana for teaching and learning

Before the pilot, the majority of pilot teachers rated their level of competency already as “very well developed” or “well developed” when it comes to searching/finding (10 “very well developed, 8 “well developed”), using (11 “very well developed”, 7 “well developed”), evaluating and adapting educational resources that fit their subject teaching (10 “very well developed”, 6 “well developed”) prior to the pilot. 70% of teachers (14) also felt competent in creating online resources that fit their subject teaching. However, six teachers thought that this competency was only moderately or less developed.

Only four teachers had used the Europeana platform prior to the pilot, whilst three teachers knew about the platform, but did not use it. 13 teachers had neither known about the existence of the Europeana platform nor used it.

3.4. Comparative Analysis of Phase 1 and Phase 2 findings

3.4.1. Teachers' use and appreciation of Europeana tools and content

3.4.1.1. Devices used when working with the Europeana website

More than 80% of teachers used a **laptop** or **desktop** when working with the Europeana website and resources. 11 teachers used a **tablet** device and nine teachers a projector. Nine teachers also mentioned that they used the European website on their own **mobile phone**. 13 teachers reported that students brought their own device to school for Europeana related work.

3.4.1.2. Sharing of Europeana content

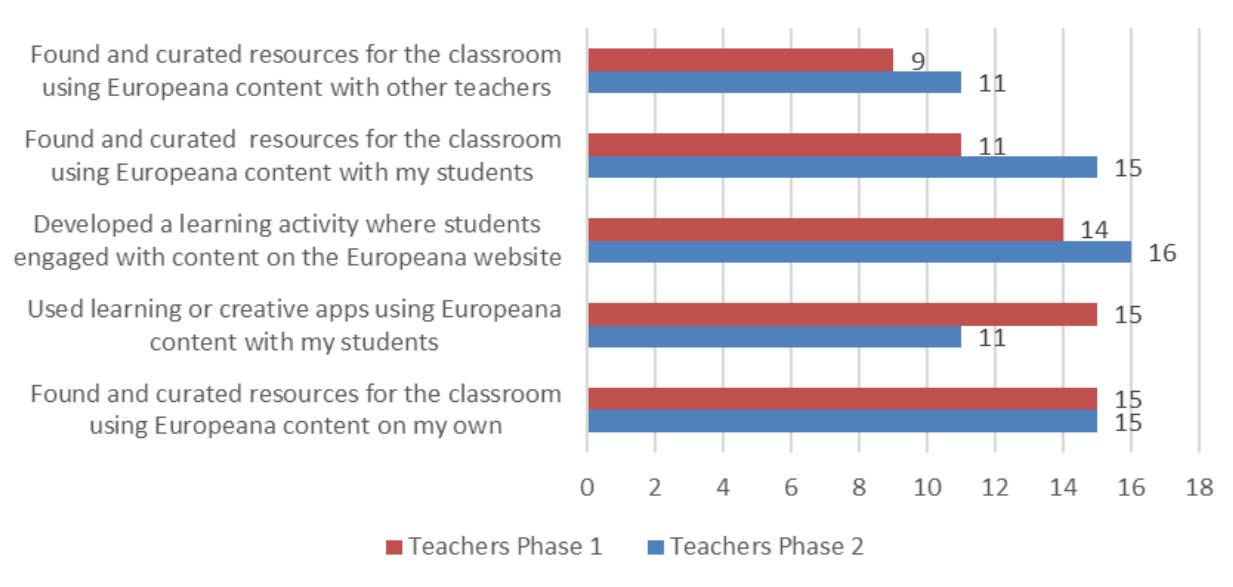


Figure 8: Sharing of Europeana content (number of teachers)

NB the total number of respondent teachers decreased from 20 in phase 1 to 19 in phase 2.

During the first phase of the pilot 15 teachers (75%) *found and curated resources for the classroom using Europeana content on their own* or *used learning or creative apps using Europeana content with their pupils*. 14 teachers developed a learning activity where *pupils* engaged with content on the Europeana website.

There seems to be a slight shift in the way teachers used Europeana content during phase 2 of the project (19 respondents). Four more teachers point out that they found and adapted resources for the classroom using Europeana content with students or that they developed a learning activity where students engaged with content on the Europeana website.¹⁴ Fewer teachers in phase 2 used learning or creative apps with students. This can be an indication that teachers in phase 2 of the project moved towards designing more comprehensive and complex learning activities based on the scenario implementation in phase two. During and after the second workshop in the Future Classroom lab teachers were asked to design teaching and learning scenarios involving Europeana content and tools.

¹⁴ Please note: The first questionnaire asked teachers if they “found and **curated** resources ...”, the 2nd questionnaire, asked teachers if they found and **adapted** resources....)

3.4.1.3. Use of Europeana curatorial and search features

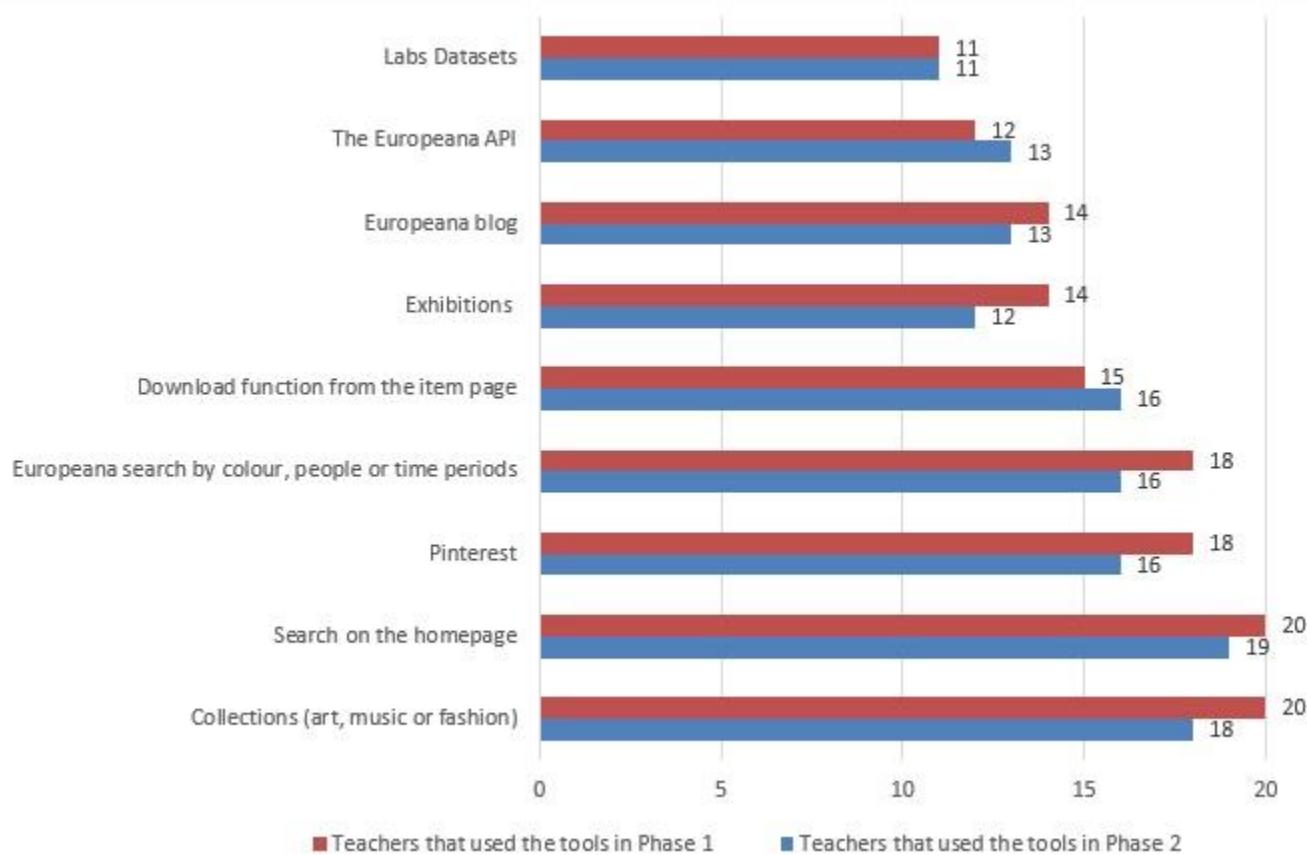


Figure 9: Number of teachers using Europeana features

NB the total number of respondent teachers decreased from 20 in phase 1 to 19 in phase 2.

3.4.1.4. Usefulness of Europeana curatorial and search features

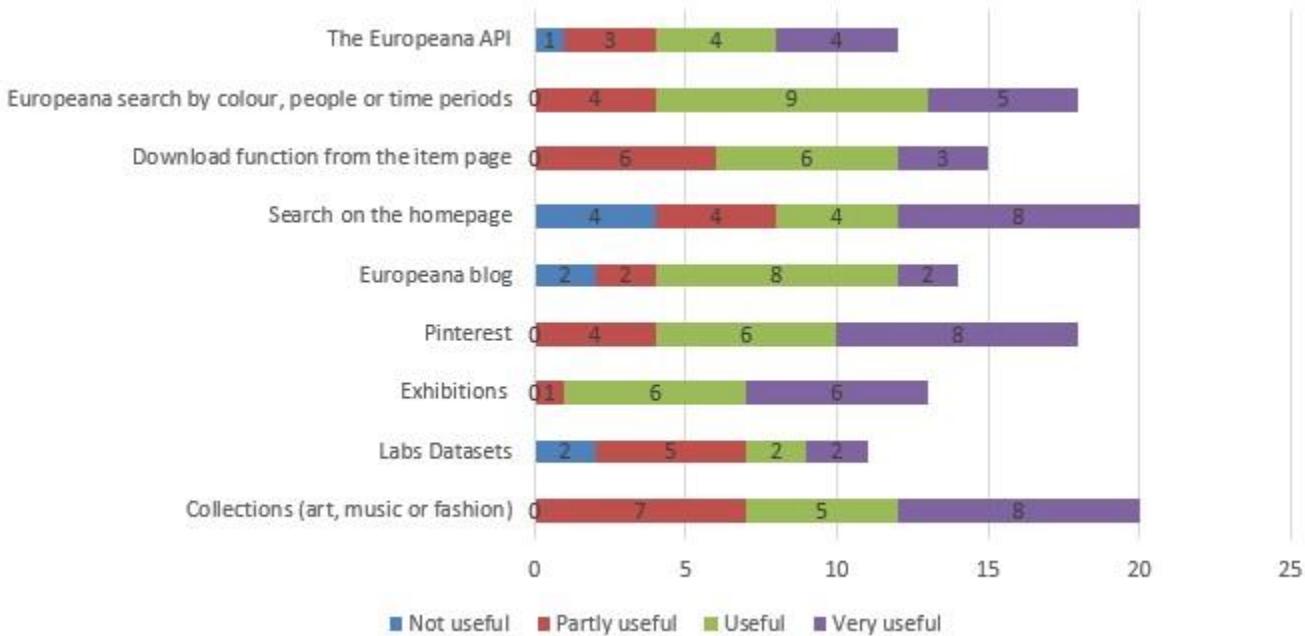


Figure 10: Teachers' appreciation of Europeana curatorial and search features (phase 1)

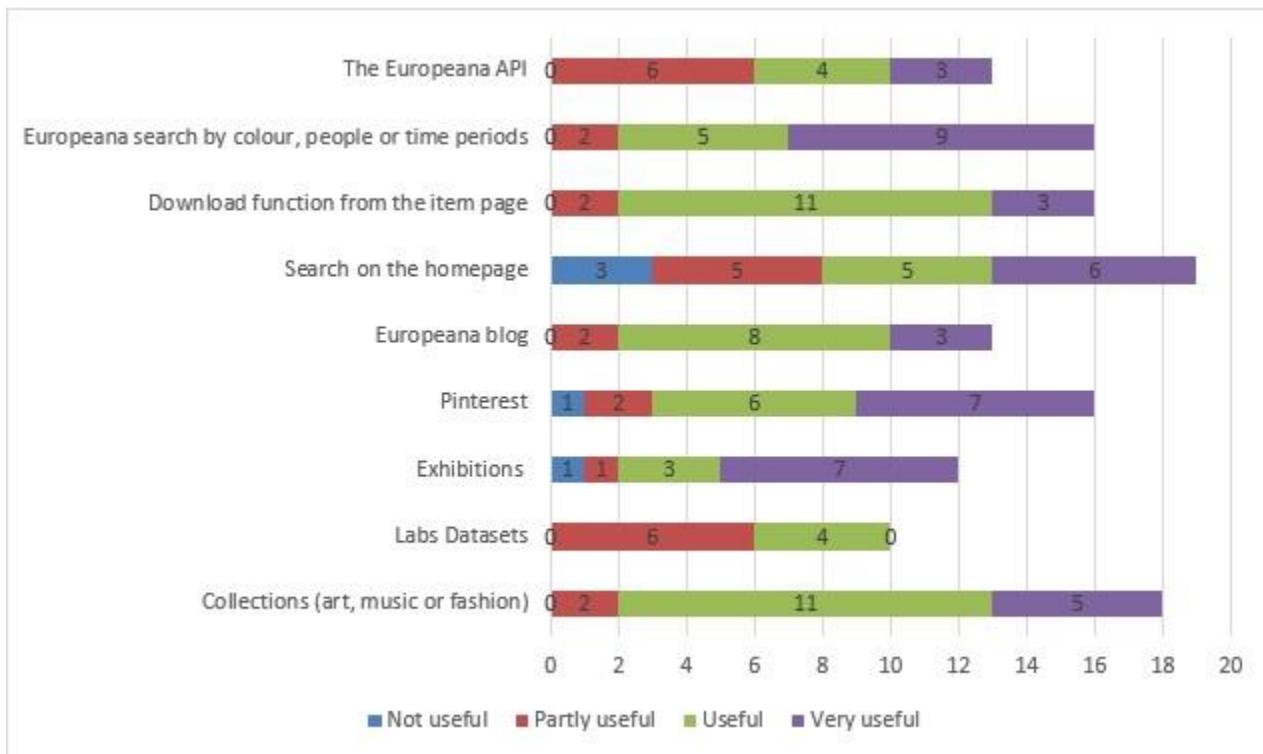


Figure 11: Teachers' appreciation of Europeana curatorial and search features (phase 2)

After both phases, the most popular functions on the Europeana website were the '**Collections (art, music or fashion)**' and the '**Europeana search by colour, people or time periods**' which all of the participating teachers used and the majority found "very useful" and "useful". '**Pinterest**' was also used by almost all teachers in phase 1 and phase 2 and considered by 14 teachers as "very useful" or "useful".

Interestingly, the features used the most were not always classified as being the most useful. The ‘Search on the homepage’ function was used by all 20/19 teachers in both phases and received mixed feedback. 60% found it “useful” (4) or “very useful” (8), but it was also the function that the highest number of teachers (4) did not find useful at all. (see specific comments on the search function in 3.4.6.)

All teachers used the ‘Download function from the item page’, but more teachers (13) found this function “useful” or “very useful” after phase 2. Only 9 teachers did so after phase 1.

Top 3 least useful or not used functions in both phases:

- Labs datasets
- Europeana API
- Europeana blog

‘The Europeana API’ and ‘Labs Datasets’ were less used than the other functions, less than half of the teachers (8-9) used them in both pilot phases. The ‘Europeana API’ received more positive feedback from teachers, who used it. 8 teachers found them (“very useful” or “useful”) compared to the ‘Lab Datasets’, which only 4 teachers found “useful” or very useful”.

Almost all 13 teachers that used the ‘Exhibitions’ feature found it useful (6) or very useful (6). Similarly, 10 of the 14 teachers that used the ‘Europeana blog’ found it useful (8) or very useful (2).

The positive responses to the ‘Exhibitions’ and ‘blog’ (featuring curated content selections) respond to the following comment from a teacher after Phase 1: “As a teacher's life is quite busy I like the ready curated Exhibitions and even the small posts on Facebook or Blog. These are materials which only need to be adapted and linked to very up to date problems and the learning scenario is ready. Pilot teacher from Hungary

3.4.1.5. Type of content used

Figure 5: Use of Europeana contents (Number of teachers)

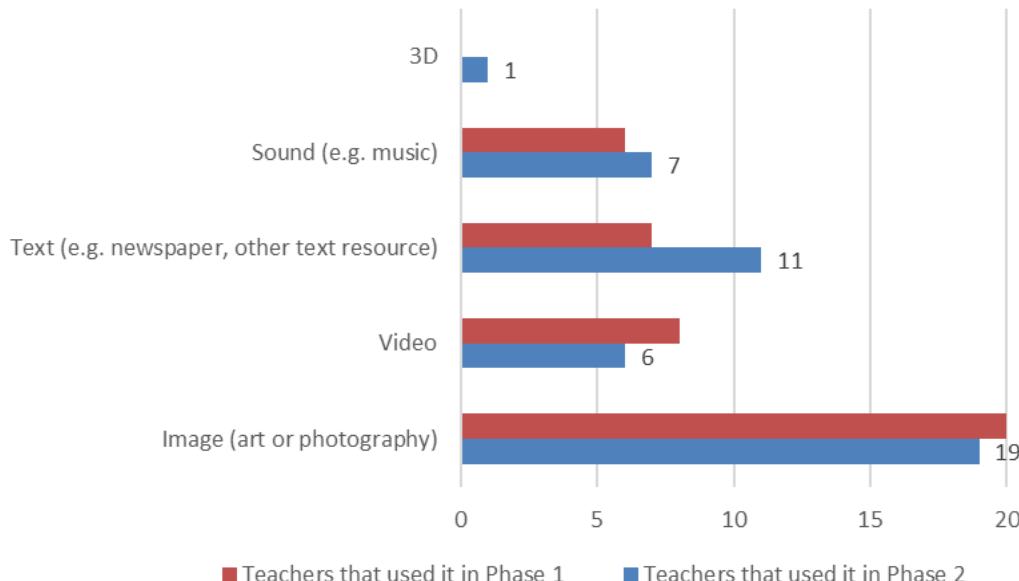


Figure 12: Use of Europeana contents (Number of teachers)
NB the total number of respondent teachers decreased from 20 in phase 1 to 19 in phase 2.

All teachers used images in the both pilot phases. In phase 2, more teachers than in phase 1 also used text. Sound and videos were used by fewer teachers during both pilot phases. This suggests that Europeana could do more to encourage greater use of multimedia content in education. The low uptake of videos could have been hindered by unsufficient broadband and wifi in schools, which were mentioned as issues by pilot teachers.

Topics on which teachers would like to find more content

To encourage other educators to use the Europeana collections, teachers recommended providing more content in their native language and matching content to national curriculum subjects and content. Suggestions from teachers after both pilot phases are summarised below.

Table 3: Pilot teachers' topic suggestions

Topics	Teacher suggestions
History	20th century history; Antic period; Italian History, Myths and Legends, Monuments; World War II Holocaust; Czech history
Arts & Literature	European Literature and Poetry, Greek Literature, Poetry, Poetry from Italy, Museums, & Ancient Theatre; Modern art / documenta / bauhaus; older arts, Czech artists (painters etc)
Other	Cinema, movies; Nature, Geography; Religion in Ireland and Europe; Religious Artefacts; Handicraft, fashion; Fictional worlds; Crafts; old tools; More country comparisons

A few pilot teachers pointed to topics related to History, Arts and Literature or other areas such as cinema, nature etc. A number of the teachers wanted content relating directly to their national context and their country (e.g. Finland). Some teachers also made other general suggestions, such as adding more curated exhibitions, more images, more materials for younger pupils, more multimedia content, and guidance on how to use Europeana API and more thumbnails of images. Finally, one teacher suggested adding quizzes and games and another teacher suggested allowing dedicated European educational professionals to develop pedagogical scenarios according to specific themes using Europeana content, which then could be shared with other teachers across Europe. In the future, the Europeana website could offer a specific area for teachers to showcase and share pedagogical teaching and learning scenarios using Europeana content and tools.

3.4.1.6. Search function

Reflecting the analysis above, several teachers made the general comment that the search engine is difficult to use.

- One teacher commented that it is difficult to find for results with two different categories e.g. 'spring' and 'Finland'.
- Another teacher reported that the fact that the postcards he searched for appeared in .jpg format and this made his search more difficult and that some images did not open.
- One teacher suggested adding semantic search and predictive search functions.
- Three teachers commented that they would like the search function to be more similar to mainstream search engines such as Google.
- One teacher found it discouraging that many of the images/texts that appeared as search results were not available for download. It was suggested that all image thumbnails should be shown, as students would otherwise leave the page.
- Several comments suggested to make checking for copyrights of the items more user-friendly e.g. by introducing clear and simple icons or images such as smiley faces in green, orange and red, which would also help students (and teachers) to understand copyrights better, or an age appropriate filter. In a similar vein, another teacher commented that she wanted to be sure that her students could not see any inappropriate pictures like naked bodies.

- A number of comments concerned search language. In particular, there was confusion around whether names need to be searched in the original language or not, e.g. Alfons, Alfonso or Alphons. One teacher commented that searching all content only in English is fine; two others suggested adding the possibility to search in different languages.
- Six teachers suggested improvements to make the search function easier to use for young children. Two teachers suggested differentiating possible search results according to the users' age and ability – one of them suggested “along the lines of Kiddle (<https://www.kiddle.co/>) work or world book searches”. Four comments suggested more use of pictograms or smileys, in particular to indicate copyrights.

3.4.1.7. Creative learning apps

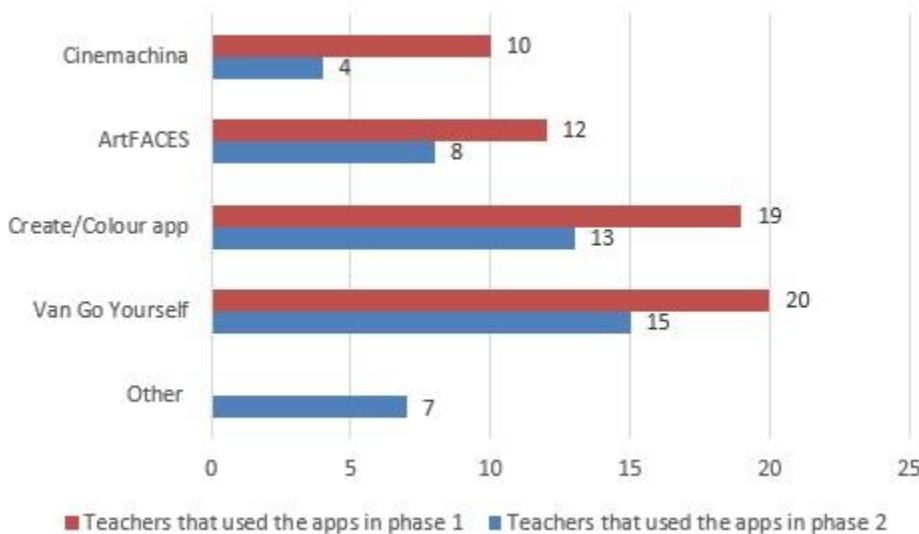


Figure 13: Use of apps by teachers in phase 1 and in phase 2

Usefulness of Europeana apps (phase 1)

Table 4: Teachers' appreciation of Europeana apps

App	Not useful	Partly useful	Useful	Very useful
VanGoYourself	0	4	6	10
Create/Colour app	0	5	9	5
Cinemacina	0	2	5	3
ArtFACES	0	4	6	2

Teachers were only asked about the usefulness of the apps after phase 1. After phase 1, all teachers had used the **VanGoYourself** and **Create/Colour app** and found it “useful” or “very useful”. 12 teachers had used the **Art FACES** and found it at least partly useful; 10 teachers had used the **Cinemacina app** and found it useful (from very useful, useful to partly useful).

As noted in section 3.4.2. in general fewer teachers used apps in their teaching in phase 2. However, as in phase 1, the most popular apps were the VanGoYourself App and the Create/Colour app. “Other” apps/ tools that teachers used included teaching aids (like Padlet) and creative apps (like Bubbelize, Quiver and JabberMouth app (adding voice to photos)) where Europeana content could be modified and used in a creative way. Other tools teachers reported using include Google functions (e.g. Google Docs) and PowerPoint (ppt).

3.4.2. Barriers to using Europeana content in teaching

Phase 1 and 2

Teachers pointed out a number of barriers to using Europeana content in teaching after phase 1, some directly related to the platform, others relating to their schools (mainly to the lack of ICT equipment or school network infrastructure). At the end of the second pilot phase, teachers saw fewer barriers and suggested more concrete solutions to the barriers they described.

1. Europeana platform

Teachers report quite a number of **practical issues** with the Europeana platform itself after the first pilot phase, but only a few at the end of the second pilot phase.

After the first pilot phase:

- Five comments related to the Europeana platform **search engine** (see above).
- Four comments were made regarding the **language barrier** to use the platform – as one teacher pointed out: *not all students speak and write English well*.
- Another three comments addressed a perceived **lack of resources** on the platform: *famous art pieces, country specific art pieces and content needs to be available*.
- Other comments were that the platform was too **complicated to use for students from primary school** in general.
- Other perceived restrictions included the **lack of thumbnail images** meaning that when looking for images, some results displayed as white frames.

After the second pilot phase:

- The only two comments regarding the platform itself were again the **lack of country specific content** and the **language barrier**.
- One teacher pointed out after both pilot phases the need to tailor the resources to fit with national subject curricula, e.g. images of places of worship and crosses in Ireland for the subject religion in Ireland. This reflects the analysis made earlier that **teachers want more content that is relevant to their national context**.

Improvements to the Europeana platform suggested by teachers

- **For younger students** who find it difficult to use the platform in English, more art apps might be helpful.
- Another teacher suggests to add more **materials that “travel well”** between countries, to overcome the language barrier.
- Further, one teacher suggests to invite both students and **national archives to contribute content**.
- Two teachers suggest **tailoring resources more for teaching**, with good learning stories or lessons plans ready to print and use.
- One teacher suggests the simplification of the Europeana API and the provision of an educational tool in order to integrate the API in everyday lessons.

2. Lack of knowledge about Europeana's resources

At the end of both pilot phases, some teachers also recommend that efforts should be made to make Europeana more widely known amongst educators. Suggested strategies include:

- Making it easier to find Europeana via Google search.
- A Facebook campaign on educational pages and groups.
- Organizing a network of teachers with ambassadors, projects and grants to support Europeana, similar to the eTwinning project.
- More national conferences or workshops to present how Europeana resources can be used during teaching lessons or to create interesting projects.

3. Issues related to the equipment and support at school

In general, for both pilot phases, six teachers mention the lack of IT equipment or school network infrastructure at their school as a barrier. One teacher also emphasises the need for a supportive head teacher. Two teachers stress time as a barrier and one teacher for the need for teachers to become more tech savvy and media passionate, to be able to use Europeana more effectively. Finally, one teacher stresses the need for policy makers to focus on open educational resources and to committing to a more integrated and widespread digital culture at schools.

3.4.3. Dissemination and awareness raising

After the first face-to face workshop, once back in the school, teachers were asked to present the Europeana pilot in general and specific aspects of it such as the Europeana website and tools, and the innovation the pilot could trigger at school (e.g. rethinking learning spaces as experienced in the FCL, different stages of the ematurity model).

Table 5: Number of teachers reporting to have addressed various stakeholders in Phase 1

Stakeholders	Number of pilot teachers that addressed:		
	Europeana Pilot	Europeana website & tools	Innovation aspect of the project
Headteacher(s)	16	15	14
Other teachers	14	18	13
Students	6	20	7
ICT coordinator	8	10	11
Parents	4	3	2
Ministry of Education representatives	5	4	3
Schools (other than your own)	6	8	5
Other	5	5	2

- Almost all pilot teachers (18) introduced the Europeana website and tools to students and other teachers.
- More than two thirds of the teachers introduced the pilot, the Europeana website and tools as well as the innovation aspect of the project to the headteacher(s).
- Around two third of the teachers introduced the pilot and the innovation aspect of the project to other teachers in their school.
- Around half of the teachers introduced each of the three aspects to the ICT Coordinator in the school.
- A small number of teachers introduced the project to parents (8) and to Ministry of Education representatives (5)
- Other groups to whom the project was presented included teachers from other schools, e.g. via a Facebook group and eTwinning.

Almost all stakeholders responded positively to the project immediately after its start. Students liked to engage with open content, the apps, and found the material different and interesting. Headteachers found the link to regional heritage interesting. Policy makers expressed interest in and were supportive of the project and were particularly keen to have more detailed evidence on how Europeana could enrich teaching practices in a wide range of curriculum areas. Fellow teachers' reactions were also in general positive, especially from art teachers but some were concerned about a lack of Europeana resources directly linked to the curriculum or other barriers existing in the school.

Feedback from stakeholders in phase 2

When asking teachers about the number of stakeholders they involved after the second pilot phase (in general only - not on specific aspects of the pilot as in phase 1) the following picture emerges:

Table 6: Number of Stakeholders involved in Phase 2

Stakeholders	Number of stakeholders involved
Headteacher(s)	27
Other teachers	261
Students	1068
ICT coordinator	32
Parents	421-521
Ministry of Education representatives	17 (from France, Austria, Ireland, Estonia and the Czech Republic)
Schools (other than your own)	19

As in Phase I, teachers were asked with whom they shared their experience with the Europeana pilot after the second pilot phase and how they responded to the project. All groups reacted positively (Head teachers, other teachers, students, ICT coordinators, parents, Ministries of Education, other schools etc.). Regarding their students' learning experience, teachers stated that students were in control of their own learning, developed self-esteem and interpersonal relationships through the European learning activities. A Hungarian teacher who implemented a collaborative scenario together with other teachers stated that her students enjoyed every part of the project mainly because of the international participation and the personal aspect.

The pilot teachers reported that other teacher colleagues' responses included that they were enthusiastic about the possible applications of the platform's content in their lessons, and appreciated in particular the apps. Teacher colleagues also generally found the Europeana platform very interesting, but a few reported difficulties with the search function. Several teachers also reported that their head teachers were very supportive, followed the pilot with interest, and one head teacher even attended several lessons. About half of the teachers also received positive feedback from policy makers.

Communication channels used to raise awareness about the pilot

Around three quarters of the teachers (15) used their personal Facebook account to disseminate Europeana. 10 teachers also used school social media channels. About a third of teachers used the school website, newsletters, etc., and a small number of teachers (4) also involved local or national press.

3.4.4. Recommendations by the pilot teachers

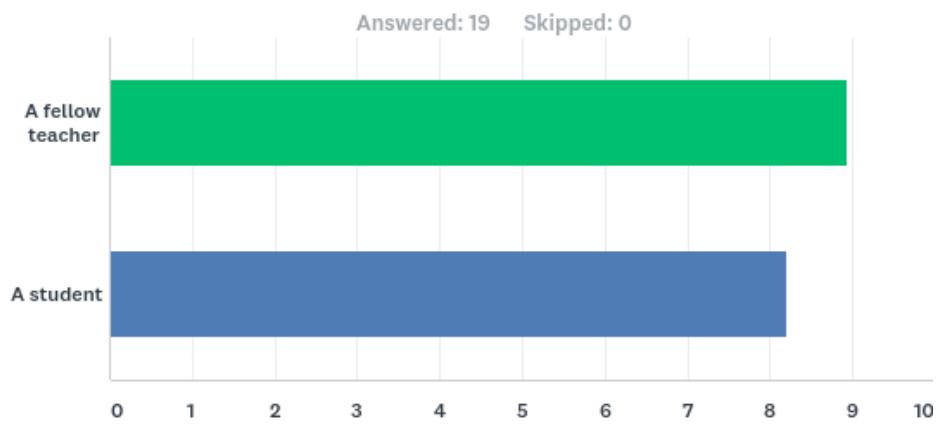


Figure 14: Likeliness for teachers to recommend Europeana resources after phase 2

Teachers are very positive about the project and would recommend Europeana to fellow teachers or students. After phase 2 of the project on a scale from 1-10 (10 highest score), teachers would recommend the Europeana platform to other teachers (8.94 points) and to students (8.21 points).

Teachers' views on Europeana and possible next actions

"The portal provides free access to a wide array of digital content that shows how important is digital preservation in Europe. Curation of cultural European heritage is very, very important to us all. This kind of work must continue...Europeans could know each other better with this too." Pilot teacher from Portugal

Most teachers proposed ideas for future actions to promote Europeana further such as 'one more workshop', 'more projects', 'a contest for students', and 'more workshops with international and national research groups, conferences'. Two teachers suggested selecting teachers to act as Europeana ambassadors at their schools or country. Another teacher suggested making Europeana more visible on Facebook, for example in targeted Facebook groups.

'Multipliers should visit schools in their own country and provide information about Europeana. Our group can do this if we are trained.' Pilot teacher from Austria

'Empower education professionals, starting from our highly engaged and enthusiast DSI2 Pilot group.' Pilot teacher from Italy

3.4.5. Teaching practices

3.4.5.1. General

The evaluation sought to get a general picture on the type of pedagogical practices teachers applied during both pilot phases. At the end of pilot phase 2, teachers were asked which pedagogical practices they had applied during the entire pilot period (phase 1 and 2).

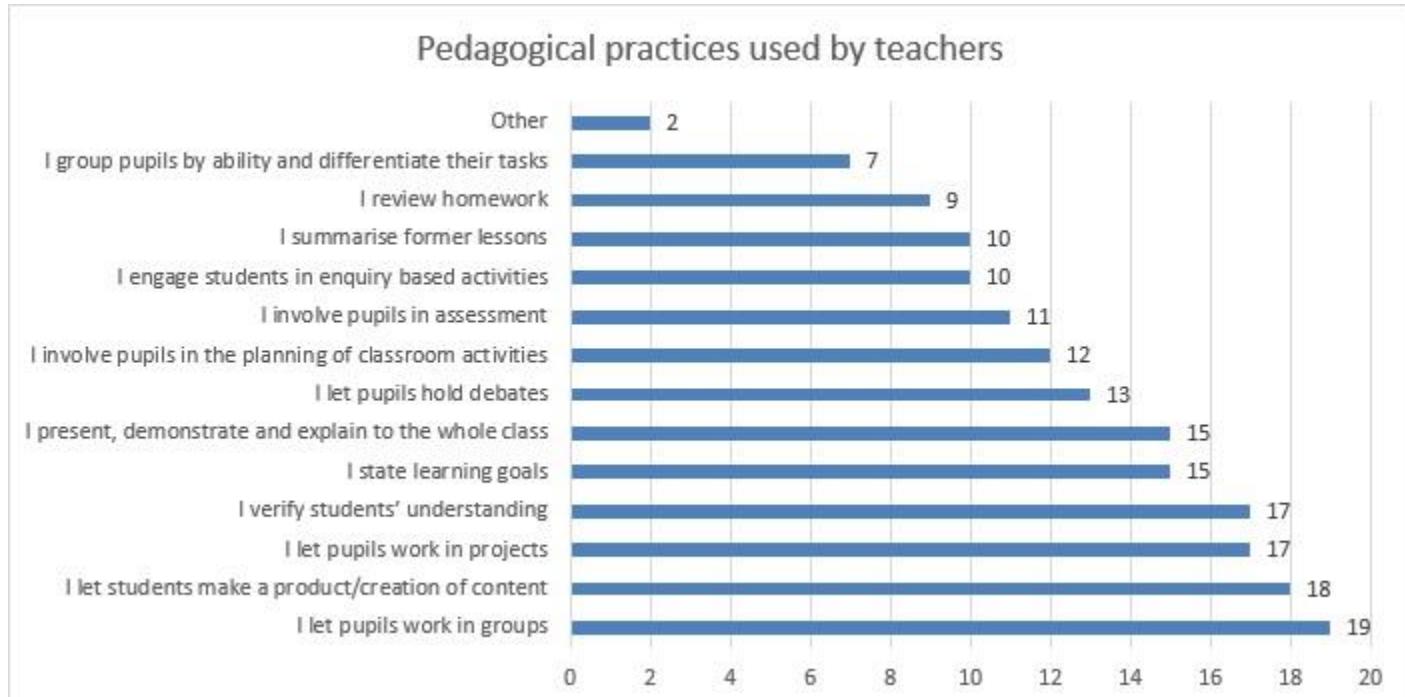


Figure 15: Pedagogical practices during the pilot (Phase 1 and Phase 2)

Teachers applied a variety of pedagogical practices throughout the pilot period, but there was an emphasis on student centred approaches. After phase 2, all teachers mentioned *let[ting] students work in groups* and almost all teachers (18) encouraged pupils to *make a product or create content*. 17 teachers *let students work in projects* and *verified students' understanding*. Most teachers designed activities involving students actively designing the learning process - *involving them in planning classroom activities* (11) or *letting students hold debates* (13). “Other” practices 2 pilot teachers mentioned were ‘personalized learning’ and ‘common projects with other countries’.

3.4.5.2. Changes in pedagogical practices

This question does not reveal any changes in the type of practices applied by teachers during the pilot implementation. When asking teachers specifically about a difference in their pedagogical approach after the pilot implementation compared to when they started the project, 16 of the 19 teachers declared that there was “some change” in their pedagogical approach. The change was seen as positive by teachers as they considered they progressed in specific areas such as designing more personalized student activities and giving more responsibility to students for their learning, which is reflected in the following teacher statements:

- “I feel more confident in assigning different tasks to students”, pilot teacher from Estonia.
- “I design my projects based on the areas of interest of students and use new teaching practices, tools and methods to reach our goal”, pilot teacher from Hungary.
- “Let the learners decide what they will learn and how they will learn. Give them control over content occasionally”, pilot teacher from Ireland.

Some teachers were already familiar with project-based learning approaches and the creation of learning scenarios, as a teacher from Portugal said:

"As I already was involved on Co-lab activities the changes weren't so big. I already work with new technologies, and I like changes and new challenges. Even my students were used to this way of work and they didn't feel difficulties."

3.4.5.3. Teaching activities involving the Europeana website and resources

Teachers were asked after both pilot phases which type of activities they carried out using the Europeana website and resources. The following graph shows in which areas there was a difference between the activities supported by teachers during phase 1 and during phase 2 of the pilot. Almost all teachers in phase 2 of the project used the Europeana website and resources more to engage with students in class and in the creation of content, and less so for lesson preparation. Around two thirds 13 of the teachers developed project based learning activities, applied cross curricular approaches and shared resources with other teachers.

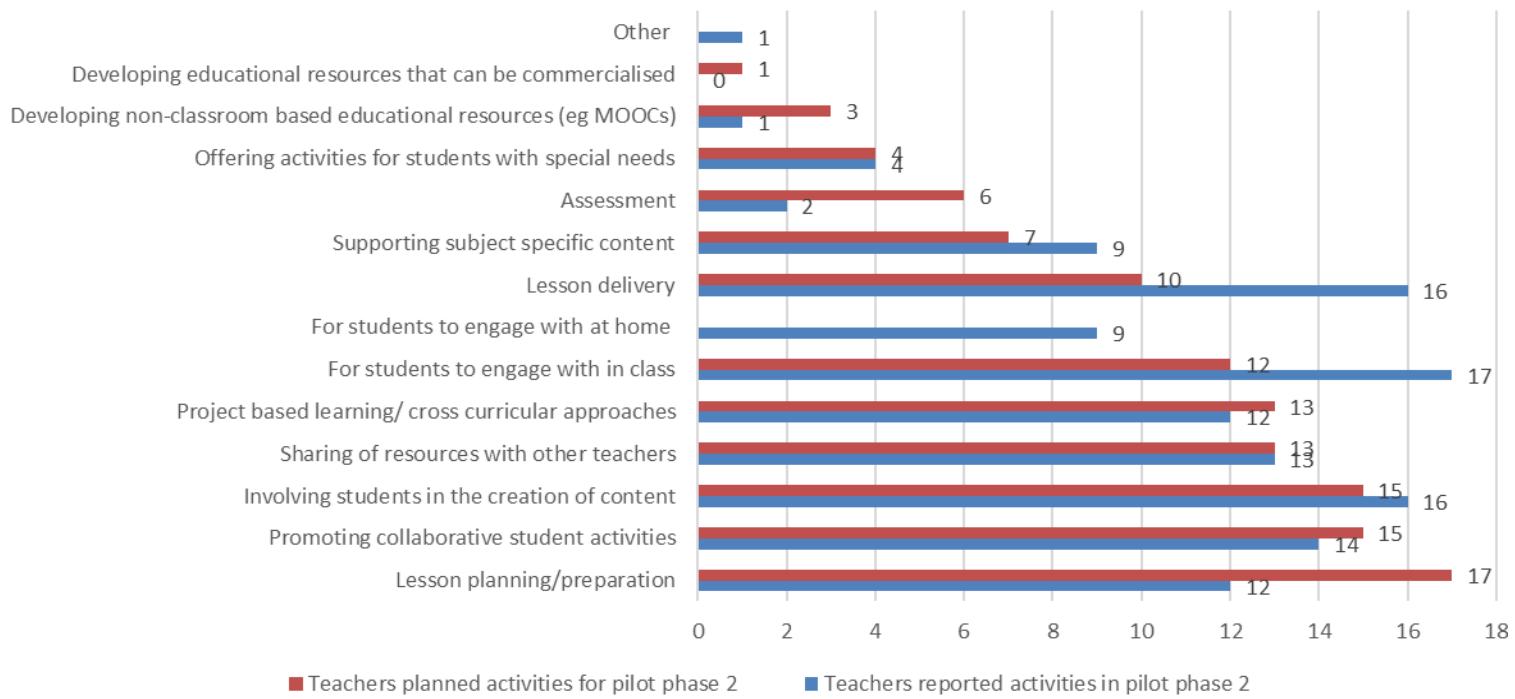


Figure 16: Teachers activities in Pilot phase 2 (number of teachers)

3.4.5.4. Scenarios implementation

As mentioned previously,, teachers were asked in the second face-to-face workshop to develop further the activities carried out in phase 1 and to design, implement and test a learning scenario involving Europeana content and tools. The teachers implemented scenarios using Europeana content and resources involving different types of actors.

13 learning scenarios were developed by pilot teachers, which can be seen on the FCL Directory (<http://fcl.eun.org/directory>).

7 pilot teachers implemented a scenario *on their own* and another 7 teachers implemented a *collaborative scenario with other teachers from the Europeana pilot project*. 3 teachers implemented a *collaborative scenario with teachers in their school* and 2 teachers *implemented a collaborative scenario with teachers from other schools in their country*.

Pilot teachers used Europeana content in a minimum of 63 classes.

Table 7: Number of classes with which Europeana content was used

Number of teachers (18 responses)	Number of classes with which Europeana content was used
4	1
3	2
3	3
4	4
5	2
3	More than 6

Teachers mentioned some challenges when implementing the scenario

Half of the pilot teachers mentioned **time** constraints as a main challenge when implementing the scenario. When working on a collaborative scenario, teachers from different schools had to adjust schedules for meetings and timetables and to allocate sufficient time for the coordination of student activities in different schools with other teachers: “*making the schedule that works in three schools at the same time*”, according to a Finnish pilot teacher. A few teachers also mentioned that they needed to “find time to test the scenario”, indicating that the activities developed were sometimes seen as an “add on” activity rather than being fully in line with the normal classroom activities planned. “*Teachers in my school were not familiar with Europeana and getting the permission to take students on a school trip was a challenge.*”

Finding suitable content on Europeana that matches teachers’ ideas or the curriculum requirements was also mentioned by some teachers. “*Finding and adapting the materials to the curriculum of the class involved*”. “*Finding enough information in Europeana for my idea*”, pilot teacher from Ireland

Teachers also point out that the scenario implementation posed challenges regarding students’ foreign language skills or was demanding for students:

- “*Students were enthusiastic, they worked with motivation and they developed a big number of competences. They explored woman’s role on Disney characters, advertising and traditional stories. They have some difficulties in working with texts in foreign languages*”. Pilot teacher from Portugal
- “*Getting to finish this ambitious project that required a lot of skills and work for the students*”. Pilot teacher from France

Two teachers’ suggested improvements to the Europeana website to make it more easily exploitable by young students:

- “*Without a translation it is only partly useful for younger non-native pupils*”, according to a Czech pilot teacher. “

However, teachers had a positive experience when implementing the scenarios with their students:

- “*My first task for pupils (teenagers) was to spend some time on Europeana website and then choose a piece of art close to their interest (heart) I had some worries that they would choose something very quickly so that they don’t have to spend so much time on “art web” but it didn’t happen! On the contrary, they searched for a long time, showed interesting pictures to their friends and finally picked one very carefully so that they are able to represent it later. (clothes, tanks, countryside)*”. Pilot teacher from the Czech Republic

3.4.5.5. Skills development

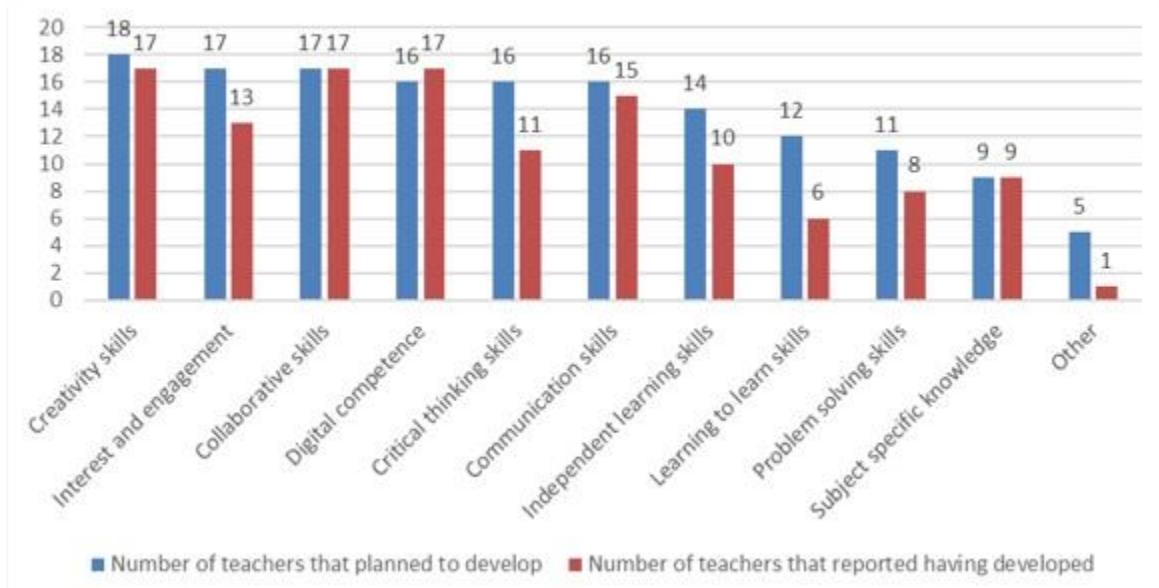


Figure 17: Planned and reported skills development of students (Number of teachers)

After phase 1 of the pilot, teachers were asked which type of skills they would like to develop with their students when implementing the pilot. At this stage, most teachers selected from a given list of items to improve their students' **creativity skills, interest and engagement, and collaborative skills**. Teachers also mentioned "other" skills they wanted to develop in their students, such as: foreign language skills; (international) collaboration; organizational and research skills; synthesizing information; interviewing experts; public speaking and presenting; and cooperation in using virtual work-spaces. They intended to foster their students' global awareness; multicultural literacy; European culture and identity; and life skills. One teacher also wanted to ensure that students have fun in learning.

After phase 2 of the pilot, the evaluation sought to identify how far teachers had achieved their goals and which skills they thought they had developed with their students.

When comparing the answers from phase 1 and phase 2, teachers stated that they developed Digital Competence, Collaborative skills, Creativity skills, Communication skills and subject specific knowledge in line with their initial plan.

Fewer teachers who had aimed to develop critical thinking, independent learning or learning to learn skills in their students stated that they actually did so: critical thinking skills (11 out of 16), independent learning skills (10 out of 14), and learning to learn skills (6 out of 12).

One teacher stated after phase 2 that his students had also developed a sense of global awareness, which was aimed at initially by some teachers.

"The European element of the project really made them feel part of something bigger than just their own country. They appreciated difference - loved seeing and hearing from their digital classmates across Europe." Pilot teacher from Ireland

Teachers' skills:

After phase 2 teachers reported on a variety of skills they had developed by participating in the pilot.

Teachers mentioned that the project has developed their digital competence (8 teachers) in particular *their research skills using Europeana or content management skills* or how to use digital communication tools and social media: “*I work collaboratively with ICT tools with European objectives*”, pilot teacher from France.

The development of creativity skills was mentioned by 6 teachers. “*Creativity was boosted*” (pilot teacher from Ireland), or “*I developed more creativity skills, not that I would not have them before, but I was somehow scared to use them*” (pilot teacher from the Czech Republic).

Not surprisingly, some teachers also reported having developed their communication skills as they worked with teachers and students from other countries.

Teachers’ comments also show that the project enabled a change in perspective and triggered reflection on their teaching practices. It allowed them to “*observe and retrieve different ways of teaching*” (pilot teacher from France); or “*connecting different disciplines for knowing and understanding*” (pilot teacher from Greece). And one teacher from the Czech Republic stated: “*I started to use digital technologies more and while planning a lesson I ask myself how to implement digital technologies*.

A Hungarian pilot teacher also stated progress in developing specific teaching approaches: “*I used the Europeana Exhibition project to connect students’ prior knowledge, life experience and personal life with our learning goal. I tried to infuse passion in their learning (personalised content about leaving Europe migration, ...facilitating learning experiences that promote interaction with peer students from other countries, ... engaging students in problem solving and critical thinking, planning and implementing their own part of the project.*”

3.4.6. Innovation and change

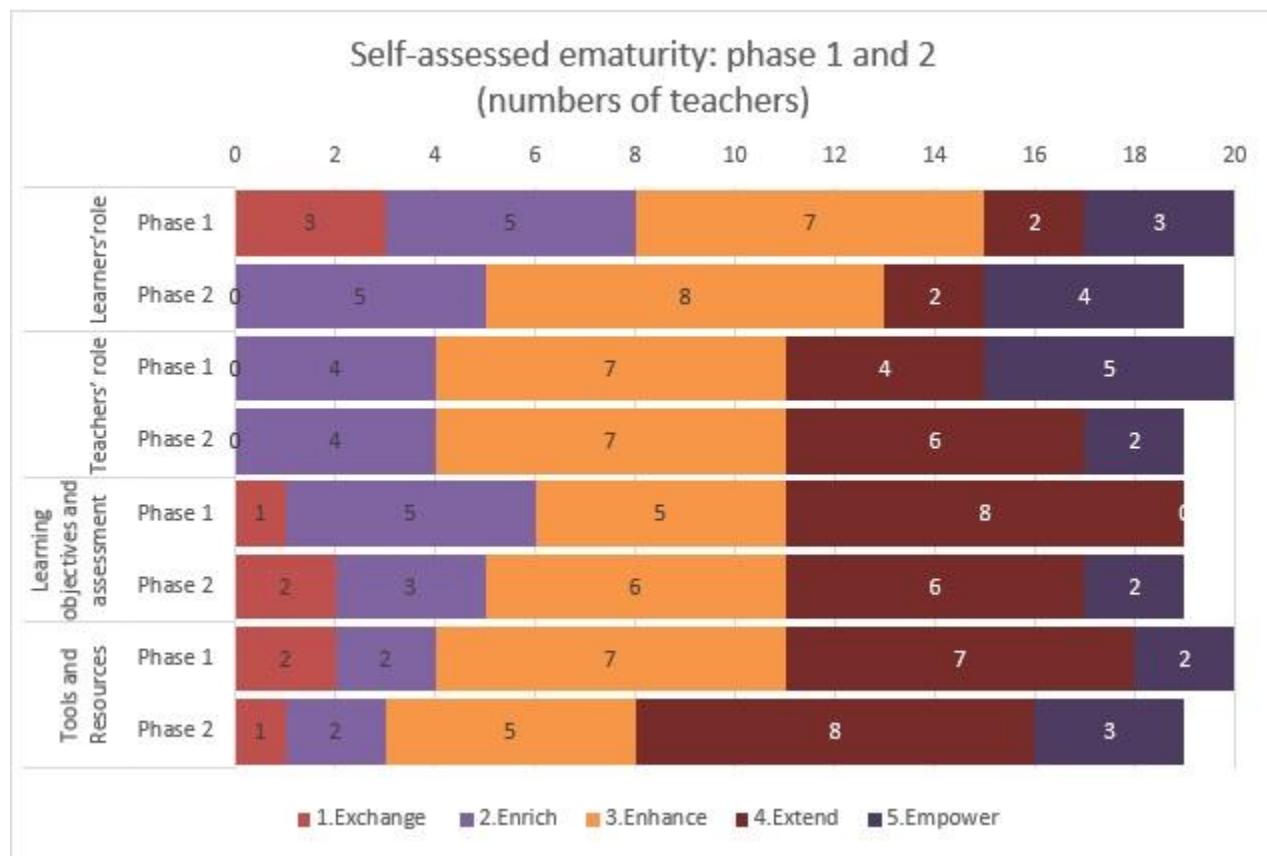
In the first FCL workshop, teachers used the e-maturity model (<http://fcl.eun.org/tool2p1>), an interactive tool for assessing a school’s level of Future Classroom maturity. Key features at each level are the following:

Table 8: Future Classroom e-maturity model

1.Exchange	2.Enrich	3.Enhance	4.Extend	5.Empower
Isolation of teaching and learning, with technology used as a substitute for traditional methods.	The learner becomes the user of digital technology, which improves learning and teaching practices.	The learner is able to learn more independently and be creative, supported by technology providing new ways to learn through collaboration.	Connected technology and progress data extends learning and allows learners greater control on how, what and where they learn.	The capacity to extend learning and teaching through ongoing whole school innovation, with teachers and learners empowered to adapt and adopt new approaches and tools.

3.4.6.1. Teachers’ innovation capacity

After both pilot phases, teachers were asked to self-assess their teaching practices according to levels of innovation in four areas: To what extent would you say you are innovative when using ICT in your classroom?

**Figure 18: Self-assessed e-maturity: Phase 1 and 2 (Number of teachers)**

After phase 1, the results of this self-assessment indicate the following:

Project participants have the full range of levels, from novice to pioneer. Most teachers positioned themselves at the average (level 3 "Enhance" or lower levels (level 1 "Exchange" and level 2 "Enrich") as regards the **role of the learners**. Eight teachers positioned themselves at the first two levels of the e-maturity model, which means that the learner uses technology directed by the teacher and sometimes collaborates in learning and learning is personalized only to some extent.

The majority (80%) of teachers felt confident that they were innovative teachers with respect to their **role as a teacher** and positioned themselves at the higher levels of the e-maturity model (from level 3 "Enhance" to level 5 "Empower"). Five teachers already considered they have reached the highest level in this area. According to the e-maturity model, this means that the learner is autonomous and empowered, deciding what, where, how and when they would learn using technology confidently, applying critical thinking and problem solving skills. The teacher is a connected, collaborative designer of engaging learning activities when reaching level 5 "Empower".

Around two thirds of teachers in the pilot assessed themselves to be at level 3 "Enhance" or level 4 "Extend" when it comes to their capacity to work with **tools and resources**, and integrating ICT in **learning objectives and assessment**. In the latter area, at these two levels teachers should be capable of providing learners with quality feedback from a range of assessment approaches to improve learner performance (level 3 "Enhance") and to allow objectives to be set that go beyond traditional subject boundaries taking into account progress and needs (level 4 "Extend").

After phase 1 of the pilot some teachers mentioned specific **issues** impeding progress in innovation and which they would like to address when implementing the pilot activities. They relate to the different areas of the e-

maturity model, e.g. the level of innovation as regards the role of learners, their role as a teacher, defining learning objectives and assessment, and the use of tools and resources. Teachers felt that designing and implementing learning scenarios using Europeana tools and content, could be an **enabler** to make progress in defined areas as expressed by some pilot teachers after phase 1:

- One teacher pointed out that the implementation of the pilot would change the role of the teacher and “*help my students to evolve and [me to] step back on class giving the stage to kids*” (*pilot teacher from Portugal*)
- Two comments related specifically to the teaching practices “expected” in schools as opposed to new practices required by the pilot scenarios. There is a “*lack of interdisciplinary practices*” (*pilot teacher from Italy*, and “*time management issues and finding a balance between the course book[,] like teaching which is expected and project based teaching using innovative classroom scenarios*” (*pilot teacher from Hungary*).
- The area of learning objectives and assessment raised some aspirations: “*It will be fantastic to be able to do formative and even summative assessment using any of those fantastic tools that are at our disposal*” (*pilot teacher from Portugal*) and “*building shared assessment rubrics from scratch*” (*pilot teacher from Italy*)

When comparing teachers' responses in phase 1 and phase 2, some positive shifts can be reported in the four areas of the ematurity model.

Role of the learner: 3 teachers, who after phase 1 put themselves at the lowest level, indicated a shift towards a higher level. One teacher reporting a shift from level 2 “Enrich” to level 5 “Empower” stated that in phase 1 “*learners used tools and resources only with the teacher*”. During phase 2 “*tools and resources were more independently used by learners*”. Another pilot teacher from Ireland agreed that there had been “*more flexibility to allow for ownership of their learning*” in phase 2 and noted a shift from level 3 “Enhance” to level 5 “Empower”. Another pilot teacher from Austria states: “*Pupils are now even more self-organised and they are more capable of working in teams*”.

More teachers (2) noted a shift towards the highest stage as regards **learning objectives and assessment**. “*I introduced peer assessment We try to set our learning objectives together and check at the end of the project if we managed to do all of them.*” (*pilot teacher from Hungary*)

There were likewise improvements in the area of **tools and resources**, with more teachers after phase 2 positioning themselves at level 4 “Extend” and at level 5 “Empower”, and fewer teachers at level 1 “Exchange” and at level 3 “Enhance”. These point to progress from level 1 “*Exchange*” to level 2 “*Enrich*”, from level 3 “*Enhance*” to level 4 “*Extend*”, and from level 4 “*Extend*” to level 5 “*Empower*”. The latter can be illustrated by several teachers’ comments:

- “[I] appreciated the tools, apps and resources shown during the face to face workshops in the FCL and the benefits from collaborating with other teachers”
- “*I have already used a lot of different tools but this project gave me as a teacher a new insight. I use not only the applications from the Europeana web page but also tools we tried and used during the workshops.*” (*pilot teacher from Hungary*)

There are fewer shifts as regards the **role of the teacher** over time. Teachers’ considered themselves already at a high level after phase 1 of the project. Comments from teachers illustrate: “*I tried to improve the quality of my work with using new tools and methods. Europeana has a lot of new and interesting areas to discover.*” (*pilot teacher from Hungary*) Or “*I trust learners more in the use of new technology, and it works.*” (*pilot teacher from France*)

3.4.6.2. School's capacity to support innovation

After phase 1, whilst teachers generally felt that they were in the middle levels of innovation (level 3 “Enhance” and level 4 “Extend”) in using ICT in their classroom, the picture as regards the capacity of the school to support innovation was slightly different, with more teachers (11) pointing to the lower levels (levels 1 and 2) of the e-maturity model. The picture at the end of both phases was the following:

Table 9: Teachers' assessed innovation level of their school

	Area	1.Exchange	2.Enrich	3.Enhance	4.Extend	5.Empower	Total responses
Schools' capacity	Phase 1	4	7	2	3	4	20
	Phase 2	1	8	5	2	2	18

Based on teachers' assessment of the situation in their school after phase 1, this indicates that slightly more than half the pilot schools (11) were seen by their teachers to be only at the start of supporting innovation in the classroom. However, seven teachers considered that their school was already at the highest levels 4 “Extend” and level 5 “Empower” in their capacity to support innovation.

After phase 1, teachers mentioned a range of **issues** their schools should address to foster innovation. They mainly related to professional development (e.g. overcoming resistance to change), collaboration (e.g. more time for collective planning, involving other stakeholders) and to the quality of ICT infrastructure (e.g. missing equipment, connected hardware, and a robust wireless network across the whole school that is accessible to both teachers and students). One teacher mentioned the difficulty in involving students in creating lessons.

When comparing in detail teachers' shifts of levels between phase 1 and phase 2, the following picture emerges:

Table 10: Shift in the capacity of the school to support innovation

Shift in level	Total responses
no change	9
From level 1 “exchange” to level 2 “enrich”	1
From level 1 “exchange” to level 3 “enhance”	1
From level 2 “enrich” to level 3 “enhance”	2
From level 3 “enhance” to level 4 “extend”	2
From level 4 “extend” to level 5 “empower”	2

Fewer teachers after phase 2 thought their school was at the lowest level of the ematurity model. Progress was reported towards the middle levels of the ematurity model from level 1 “Exchange” to level 2 “Enrich” and level 2 “Enrich” to level 3 “Enhance” indicating that progress has been made by the schools to support innovative processes.

Individual comments from teachers confirm a shift towards more collaboration across the whole school (likewise encouraged through the FCL workshops).

- “Some [change] towards shared innovative practice.” (pilot teacher from Italy)
- “I had two meetings with the whole staff and a lot of discussions with closer colleagues. We formed and altered some learning spaces, taught them how to use some presentation and curation tools.” (pilot teacher from Hungary)
- “Some of my colleague start to use Europeana and new tools.” (Czech Pilot teacher)

- “Unlike other schools here we not only allow but also support using smartphones and other devices. Teachers in our school are encouraged to think of new ways how to implement digital technologies in our lessons.” (Czech pilot teacher)

Other comments reveal an investment in the ICT Infrastructure initiated during the pilot, but also an uptake of use of available devices.

- “We decided to invest in digital equipment and the question of furniture in class is now being asked.” (pilot teacher from France)
- “Many investments have been made in my school: digital school, tablets, broadband ...” (pilot teacher from France)
- “We now use even more new media tools with several devices” (pilot teacher from Austria)

Comments reveal likewise that the problems mentioned after phase 1 related to infrastructure and a need for more collaboration have been at least partly addressed in some schools.

3.5. Impact of the pilot implementation and pilot support (Phase 2)

3.5.1. Positive influence of the pilot implementation

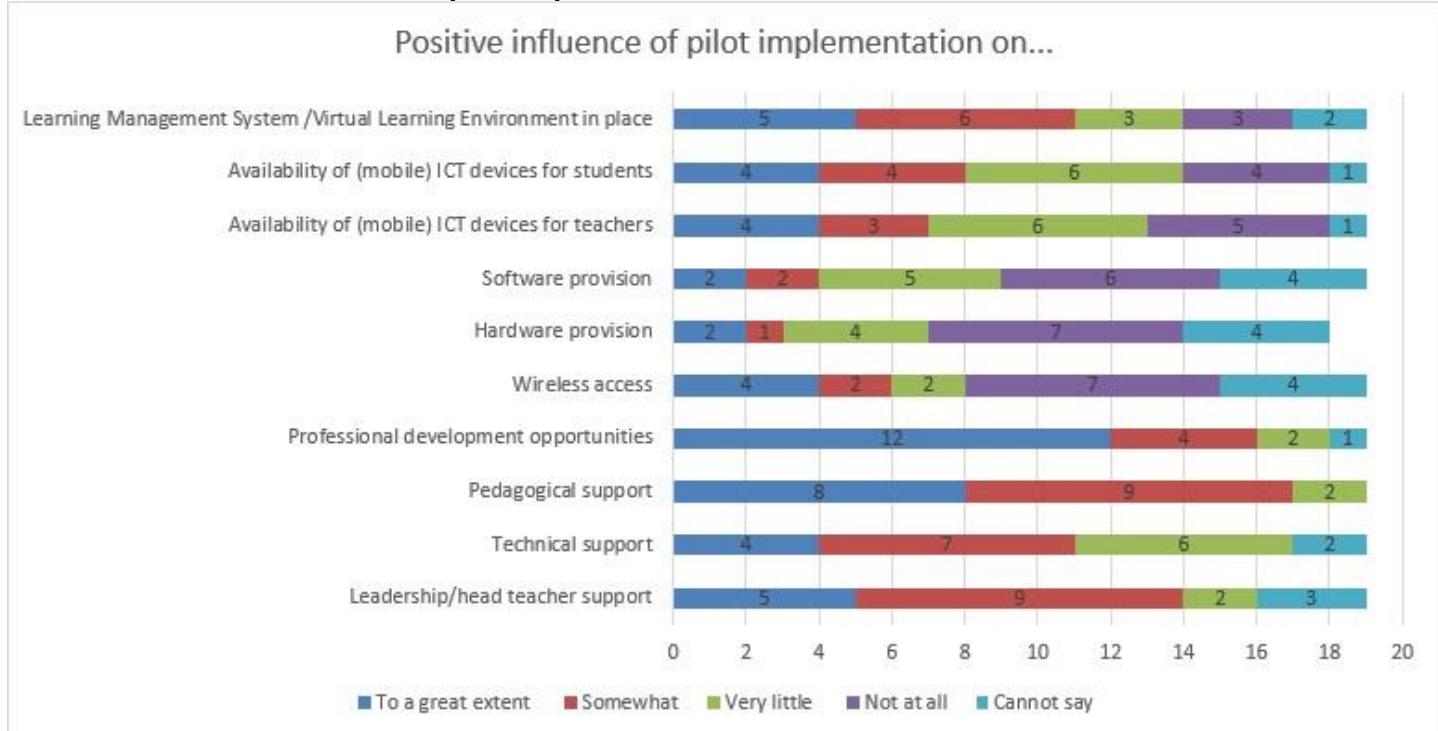


Figure 19: Positive influence of pilot implementation

The three areas where the pilot had the most positive influence (with the highest ratings of ‘to a great extent’ and ‘somewhat’) are (in order):

- Pedagogical support
- Professional development opportunities
- Leadership/headteacher support

“It offered me an extraordinary opportunity for professional and even, personal development. My students benefit a lot of the competences that I developed. It was a great experience! ‘Pilot teacher from Portugal

"I myself learned a lot thanks to this pilot. I realized how big are the modern opportunities (all digital technologies) I also had to think a lot about using art in ESL lessons I believe it moved me ahead in my pedagogical career"
 Pilot teacher from the Czech Republic

"The head teacher [sic] organized special school seminars in order to educate teacher's from other schools in the europeana tools and content for specific historical periods like WWI." Pilot teacher from Greece

"We created a relaxed learning space and learned how to use our devices. The school has limited resources, very few PCs no laptops, no tablets. The students were willing to bring their own devices just to make our lessons more attractive and enjoyable. The IT staff let us use the wifi, gave us separate codes, the headteacher allowed us a classroom with projector and smartboard. We published our results on the school web page." Pilot teacher from Hungary

Technical support and LMS/VLEs in place were the next greatest positive influence (ratings of 'to a great extent' and 'somewhat'), reflected in the following comment:

"The participation to the pilot helped to have a quick assistance when internet was not working at school." Pilot teacher from Italy

That fewer teachers saw a bigger influence on the availability of software, hardware, devices (for pupils or teachers) and wireless internet availability is not surprising, considering that these areas require cash investment which may take time to find and allocate. Nonetheless, this was not always the case:

"We put new apps on our 30 school tablets. We bought 6 new tablets for special needs teachers. We got new wifi installed. Some training time was put aside for learning how to use the technology." Pilot teacher from Ireland

3.5.2. Appreciation of support offered during the pilot

As mentioned previously,, teachers participating in the pilot were actively supported by European Schoolnet in collaboration with Europeana throughout the whole project implementation. The following graph shows the appreciation of teachers on the quality of support provided.

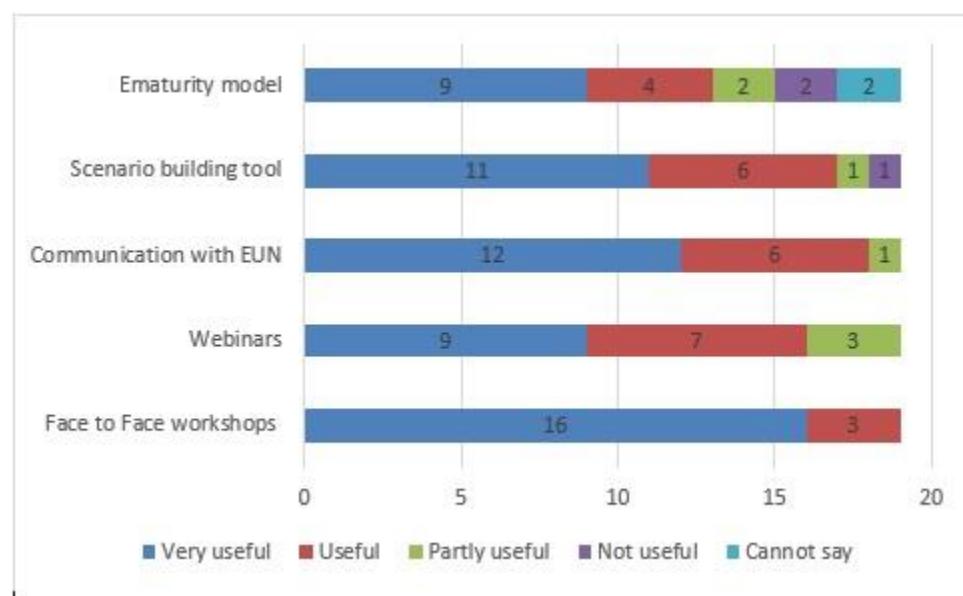


Figure 20: Teachers' appreciation of support during the pilot (Number of teachers)

D3.4: Pilot validation report on use of Europeana for teaching and learning

All 19 teachers found the face to face workshop in the FCL to be very useful (16) or useful (3). 19 teachers found also communication with EUN very useful (12) or useful (11). 17 teachers thought that the scenario building tool was very useful (11) or useful (6). 9 teachers found the webinars and the ematurity model very useful (7/ 6 useful).

Teachers were asked if they had any suggestions on how to improve the support provided during the pilot. 11 teachers commented that they had no suggestions for improvement. Notable comments included 'Everything was perfect!', 'I think they have done the best'. 'Everything was fine!', 'Nothing, it was great', 'They were brilliant no complaints', 'Everything was well done!', 'EUN supported us the best way possible' and 'EUN and Europeana were fantastic and they did all that was necessary'. Three teachers would have appreciated more workshops, one of them also more webinars. One teacher also suggested to make the webinars public, and to encourage communication in other languages. Another teacher suggested local workshops. Finally, one teacher also suggested the provision of hardware and software support to the schools.

4 Pilot conclusions and recommendations

Although the DSI-2 pilot was small, involving only 20 teachers, the evaluation results are promising both in terms of Europeana itself and the project's impact on teachers and teaching.

The teachers liked to work with the Europeana website; in particular, they liked the Collections (Art, music or fashion), the European search by colour, people or time periods, the download function, the apps and Pinterest. Furthermore, they liked the fact that Europeana resources can be used in a variety of school contexts, both at primary and secondary school level and different subjects from arts, history, to language and science education. The teachers strongly recommended the Europeana platform to other teachers and to students. After the pilot teachers described the project to a wide range of stakeholders – school leaders, ICT coordinators, other teachers, policy makers and parents – all responded positively to the project.

However, the evaluation revealed some concerns and issues relating to Europeana and its use in schools. These are briefly summarised below along with some recommendations for future actions.

Finding cultural heritage resources

Although most of the teachers in the pilot were experienced in teaching with ICT and more than half had looked for educational resources via websites of museums and art galleries, 13 out of the 20 pilot teachers had not used Europeana prior to the pilot and they did not know of the existence of the Europeana platform. Only 4 teachers had already used the platform and 3 teachers knew about its existence, but did not use it. There is no reason to believe this is not also true of teachers in general.

Recommendation 1 Making teachers more aware of the availability of Europeana curated resources and tools is key and the Europeana 2017 Business Plan already outlines a number of ways in order to achieve this, including by working to develop a Europeana Education community and by establishing a network of teacher ambassadors. Working with its supporting Ministries of Education, European Schoolnet has already successfully put in place a network of Future Classroom Ambassadors in 15 countries and large networks of teacher ambassadors in the Scientix project and as part of the European Commission's eTwinning initiative. European Schoolnet could leverage this model to assist Europeana to establish a network of European ambassadors and a pan-European teacher community.

Europeana content

Although Europeana content was much appreciated by teachers, some teachers suggested the need to find more specific content relevant for their country and curriculum, content suitable for younger students, and ready-to-use materials like curated exhibitions, which they liked a lot.

Recommendation 2 More specific resources could be added to Europeana, taking into account national curriculum requirements. Teachers could also be encouraged to think more freely about how to integrate existing Europeana resources in an innovative way into their teaching, for example by using thematic searches rather than only focusing on finding one specific painter or painting. The pilot teachers also recommended extending the Europeana database with more content from museums or national archives, adding content that 'travels well' between countries and overcomes language barriers, and providing content more suitable for younger learners.

Searching Europeana

Teachers compared the search function unfavourably (and perhaps unfairly) with Google and found it less intuitive and not as powerful. Most negative comments were related to this function.

Recommendation 3. Europeana could consider improving the search function and provide clearer guidance on its use, e.g. on the use of search terms in different languages. While this project has already provided some very useful user requirements in terms of an enhanced search functionality, Europeana may also wish to carry out a more in-depth study with a larger sample of teachers. It would also be useful to manage expectations:

communicate to teachers both Europeana's benefits (quality content with clear indications on sources and copyright) and limitations (its goal is not to copy Google). Search functions could be enhanced to offer a clear advantage over a Google search, for example to improve the indications on copyright, making them easily understandable both for teachers and students.

School ICT infrastructure

Some teachers who participated in the pilot worked in schools with less favourable ICT infrastructure, which can impede the integration of the Europeana content and tools in the classroom. The project initiated some positive developments in schools, such as further investment in tablets or broadband, or rearranging classroom spaces.

Recommendation 4. In order to manage teacher expectations, Europeana should make it clear to potential users that a reliable school ICT infrastructure with Wi-Fi fully functioning and accessible by all teachers and students is a key condition for the successful uptake and use of the Europeana platform and resources.

Teaching and learning

Teachers needed time to familiarise themselves with finding resources on Europeana and trying them out with their students, first in smaller activities and only later adapting them for their classes. Teachers were positive about the Europeana apps, particularly to start classroom based activities with and to address younger students. Over time, teachers moved from simple to more complex and innovative pedagogical scenarios.

Integrating Europeana resources into learning activities triggered beneficial changes in the classroom, with most (80%) teachers changing their pedagogical practice as a result of the project. Some teachers considered that they progressed in designing more personalized student activities and giving more responsibility to students for their learning. The Europeana pilot also had a positive impact on aspects outside the classroom, in particular teachers' professional development, and pedagogical support, but also, to a lesser extent, on leadership/head teacher and technical support, and even on the availability of (mobile) ICT devices and wireless access. Around half the teachers worked in schools offering favourable technical and pedagogical conditions for using Europeana. In others however, technical, pedagogical and continuous professional support was inadequate.

Recommendation 5. Further effort should be made by Europeana and its partners to improve and promote the apps and exemplify their use for teaching.

Recommendation 6. Europeana should provide support for teachers within the foreseen Europeana Education community including very practical guidance on activities, tools and apps and also tools supporting innovation and change in schools.

Mainstreaming the use of Europeana in schools

The participating teachers received continuous support throughout this small scale pilot and were motivated by participating in face-to-face workshops and online exchanges. Given the level of funding available, the project adopted a small scale action research methodology. A follow-up study would need to determine to what extent the level of sustained support influenced the attitudes and experiences of the teachers (Hawthorne effect) and whether other teachers will respond so positively to Europeana resources. However, based on the data gathered and also European Schoolnet's experiences in much larger validation pilots, EUN believes that there is a strong possibility that uptake and mainstreaming of Europeana cultural heritage resources could be achieved in a number of ways. To that end, it is important that teachers should get some feeling of ownership over the platform.

Recommendation 7

Europeana should provide teachers with free access to online training opportunities in how to utilise Europeana resources and tools. In this context, European Schoolnet has already agreed to develop a five-module MOOC as part of a new DSI-3 project that will start in September 2017. Europeana could also explore whether online professional development could be carried out within eTwinning online Learning Events and Courses.

Recommendation 8

Europeana could work with European Schoolnet and with policy makers in education ministries in order to expose more Europeana resources via the EUN Learning Resource Exchange¹⁵ infrastructure and via educational content portals such as those maintained by Ministries of Education, national ICT agencies and EdReNe¹⁶ members (Educational Resource Network).

Recommendation 9

Europeana could aim to create a database of searchable scenarios, based on learning activities developed by teachers. This could be a key activity for the Europeana teacher ambassadors that are proposed under recommendation 1. Ambassadors could also have a more general role in: running regular webinars for teachers; providing support for teachers enrolled on a Europeana MOOC; and in helping to animate a national Europeana teacher community that is interested in the pedagogical use of cultural heritage content.

Recommendation 10

Several teachers highlighted the crucial importance of the face-to-face workshops in the pilot. It is not obvious at present where the funding for these sorts of workshops could be found so that they could be implemented nationally on a regular basis at large scale. One possibility, however, could be to explore different funding options with members of the Europeana network or as part of a sustainability plan related to the long-term support of an Ambassador network.

Further research

The very positive project findings are of course encouraging but they are based on a short time-scale and a small number of teachers in an action research pilot. To some degree the positive findings may also reflect the fact that teachers were strongly motivated and supported throughout the project.

Recommendation 11.

Europeana should consider designing funded follow-up K-12 projects with a larger, more diverse cohort of participants in more countries and over a longer period of time.

In the new DSI-3 project, it is already planned to create teacher professional development materials and a Europeana MOOC for teachers along with new educational datasets.

Other projects could be considered under DSI-4 in which further school-friendly material could be developed by and for teachers e.g. video case studies, curriculum-linked lesson plans that are evaluated with learners of different abilities and ages. Curated content and resources made by teachers is a ‘quick win’, allowing Europeana content to be easily used in the classrooms. In order to engage policy makers in more Ministries of Education, Europeana could also consider a large-scale project in order to evaluate the impact of Europeana cultural heritage resources on student learning outcomes.

¹⁵ <http://lreforschools.eun.org/>

¹⁶ <http://edrene.org/>

4. Annex 1 Evaluation Questionnaires

Teacher Questionnaire (Phase 1)

March 2017

Objectives of the evaluation

This qualitative evaluation study seeks to explore 'HOW' Europeana resources can support innovative pedagogical practice. The evaluation report will also provide guidelines and exemplar learning activities to enable a wider community of teachers to integrate Europeana resources in their classroom practice.

The questionnaire seeks to gather feedback from teachers on phase 1 of the pilot (November 2016- February 2017) in the following areas:

- Teachers' professional background
- School context
- Teachers' ICT background and use of online resources
- Teachers' appreciation and use of Europeana tools and content
- Dissemination and awareness raising
- Teachers' plans for phase 2 of the pilot

Evaluation approach

Given the small number of teachers and schools participating in the pilot, the evaluation approach is qualitative. This first questionnaire is a mix of closed and open questions. In the course of phase 2 (March 2017– June 2017) we aim to capture evidence of your professional practices by involving teachers in the documentation and reflection of how they integrated the Europeana tools and resources and the scenarios in their day to day practice during the duration of the pilot.

Filling in the questionnaire.

1. Every teacher who was selected to participate in pilot is asked to fill in the questionnaire.
2. You should fill in the questionnaire ONLINE: <https://www.surveymonkey.com/r/JFJZXZL>
It should take you around 20- 30 min to fill in. You will have to fill in all the questions in one session before you can submit your answers. We therefore advise you to use the word document to get an overview about the questions beforehand.
3. Please consult the ematurity model you used during the 1. Workshop in Brussels <http://fcl.eun.org/toolset2>. There are 2 questions about the level of innovation in your school and your level of innovation as a teacher.
4. By completing the questionnaire you give permission for the submitted data to be used as part of the study. **Your personal data (name)** will not be revealed in the report without asking for your permission.
5. Please fill in the questionnaire by 10 April 2017.

Questionnaire

About you

1. Your name (Surname and First name):

2. Your email

3. Your country:

- List of countries
-
-

About your teaching

4. How long have you been working as a teacher?

- This is my first year
- 2-5 years
- 5-10 years
- 10-20 years
- 20-30 years
- More than 30 years

5. Which subjects do you teach during the pilot?

List

6. Which age group of learners do you teach during the pilot?

List

7. Which pedagogical practices do you apply?

- I state learning goals
- I summarise former lessons
- I verify students' understanding
- I review homework
- I present, demonstrate and explain to the whole class
- I let pupils work in groups
- I group pupils by ability and differentiate the tasks they are given
- I involve pupils in the planning of classroom activities
- I involve pupils in assessment

- I let pupils work in projects
- I let pupils hold debates
- I engage students in enquiry based activities
- I let students make a product/creation of content
- Other, Please specify

About your school

8. School name

9. School website address

10. Please specify the type of school:

- Primary school
- Lower secondary school (general education)
- Lower secondary school (vocational education)
- Upper secondary school (general education)
- Upper secondary school (vocational education)

ICT in your school

11. To what extent would you say your school is innovative as regards its **capacity to support innovation in the classroom?** Please indicate the level according to the e-maturity model and highlight any issues your school should address to foster innovation.

(1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower) (one option possible only)

Issues to be addressed

12. Your level of satisfaction with the support for ICT in your school (multiple options)

Very good, good, moderate, poor, very poor

- Leadership/head teacher support
- Technical support
- Pedagogical support
- Professional development opportunities

13. Your level of satisfaction with current access to ICT in your school. (multiple options)

Very good, good, moderate, poor, very poor

- Wireless access
- Hardware provision
- Software provision
- Availability of (mobile) ICT devices for teachers
- Availability of (mobile) ICT devices for students
- Learning Management System /Virtual Learning Environment in place

14. What is currently the biggest barrier for the integration of ICT in your school?

Your ICT background

15. For how long have you been using ICT in your teaching? (select one)

- Less than 1 year
- 1-3 years
- 4-6 years
- 7-9 years
- 10-15 years
- Over 15 years

16. To what extent would you say you are an innovative teacher when using ICT in your classroom? Please refer to the levels of the e-maturity model and position yourself as a teacher in one level. Please indicate any issues you would like to address in this area when implementing the pilot scenario?

Learners' role (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower) (*select one*)

Issues to address:

Teachers' role (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower)

Issues to address:

Learning objectives and assessment (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower)

Issues to address:

Tools and Resources (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower)

Issues to address:

Use of online resources (general)

17. How did you search and find online educational resources suited for your subject teaching **prior to the pilot?**

(multiple options)

- Via Google
- Via Wikipedia
- Via a national content portal
- Via web sites of museums and art galleries
- Via commercial educational websites
- Other, please specify

18. How often did you use online educational resources in your teaching prior to the pilot?

Never or almost never, several times a month, at least once a week, every day or almost every day

19. How would you rate your level of competency in the following tasks **prior to the pilot?**

Very well developed, Well developed, Moderately developed, Less developed, Least developed (select one option in each row)

- Searching and finding online educational resources that fit my subject
- Use of online educational resources in my subject teaching
- Evaluation and adaption of online educational resources for my subject teaching
- Creation of online resources for my subject teaching

Use of Europeana website and resources

20. Did you use the Europeana platform **prior to the pilot?** (select one)

- Yes
- No, but I knew about Europeana.
- No, and I did not know about Europeana.

21. How many classes did you lead using Europeana content during the first phase of the pilot?

Number text box

22. During the pilot period so far, I have (*multiple options*)

- Found and curated resources for the classroom using Europeana content on my own
- Found and curated resources for the classroom using Europeana content with other teachers
- Found and curated resources for the classroom using Europeana content with my students
- Developed a learning activity where pupils engaged with content on the Europeana website
- Used learning or creative apps using Europeana content with my pupils

23. Please describe how you have used Europeana content in your teaching in more detail, and where possible provide links to (online) lesson plans or any resources that you have developed.

Open text

24. Please rate the usefulness of the following Europeana curatorial and search features if you have used them to **find content** to use in your classroom: (Select one option in each row)

Very useful, useful, partly useful, not useful, have not used yet in my teaching

- [Collections](#) (art, music or fashion)
- Labs [Datasets](#)
- [Exhibitions](#) (please name any that you have used)
- [Pinterest](#)
- Europeana blog
- Search on the homepage
- Download function from the item page
- [Europeana search by colour, people or time periods](#)
- The Europeana API

25. Which type of content from the Europeana website did you use? (*multiple options*)

- Text (eg newspaper, other text resource)
- Image (art or photography)
- Sound (eg music)
- Video
- 3D

26. On which topics would you like to find more content or resources?

Open text

27. What improvements could make the search function more educator- or student-friendly?

Open text

28. How useful did you find the following learning platforms that use Europeana content?

Very useful, useful, partly useful, not useful, have not used yet in my teaching (Select one option in each row)

- Historiana
- Learning Resource Exchange
- Inventing Europe

29. How useful did you find the following creative or learning apps that use Europeana content?

Very useful, useful, partly useful, not useful, have not used yet in my teaching (Select one option in each row)

- Van Go Yourself
- Create/Colour app
- Cinemachina

- ArtFACES

Did you use any other tools /apps to integrate Europeana resources in your teaching? Please list.

30. What else would you like to see or what improvements could be made to the [Europeana Collections platform](#) to encourage educators to use Europeana content?

Open text

31. Which barriers exist in using Europeana content in your teaching? Can you think of any solutions to these (eg on your own, with other colleagues, with the help of Europeana, with the help of EUN, with the support of your headteacher, national Ministry of Education etc.)?

Open text

Dissemination and awareness raising

32. To whom did you introduce the Europeana pilot and which aspect of the pilot did you introduce? Please also specify how many people you involved? (multiple options)

Europeana pilot, Europeana website and tools, innovation in general

- Headteacher(s)
Number involved – open textfield
- Other teachers
Number involved
- Students
Number involved
- ICT coordinator
Number involved
- Parents
Number involved
- Ministry of Education representatives
Number involved
- Schools (other than your own)
Number involved
- Others (please specify)

Open text

33. What dissemination and awareness raising methods/channels did you use during the pilot?

Multiple options

- Facebook (personal)
- Twitter (personal)
- School website
- School social media channels (eg Facebook, Twitter)
- School newsletter or other communication (eg letters)
- Local or national press (please give details and links if possible)
- Personal blog (please give links)
- Professional blogs (please give links)

34. If you introduced Europeana to the following groups, how did they respond (positively and negatively)?

Please include their concrete comments where possible.

- Students (open text)
- Other teachers (open text)
- Headteachers (open text)
- Policy makers (open text)
- Other (open text)

Future plans until the end of the pilot

35. What do you plan to use the ***Europeana tools and resources*** for? (multiple choice)

- Lesson planning/preparation
- Lesson delivery
- For students to engage with in class
- Assessment
- Sharing of resources with other teachers
- Supporting subject specific content
- Offering activities for students with special needs
- Promoting collaborative student activities
- Involving students in the creation of content
- Project based learning activities/ applying cross curricular approaches
- Developing non-classroom based educational resources (eg MOOCs)
- Developing educational resources that can be commercialised.
- Other (please specify)

36. Which skills or competencies do you aim to improve for your students? (multiple choice)

- Digital competence
- Collaborative skills
- Critical thinking skills

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- Creativity skills
- Communication skills
- Independent learning skills
- Problem solving skills
- Interest and engagement
- Subject specific knowledge
- Learning to learn skills
- Other (please specify)

37. Which skills or competencies do you aim to develop for yourself?

[Open text](#)

38. How likely are you on a scale from 0 to 10 to recommend Europeana (resources) to:

0 (not likely at all) – 10 (very likely)

- A fellow teacher
- Pupil

Thank you for providing this information.

Teacher Questionnaire (Phase 2)

June 2017

Objectives of the evaluation

This qualitative evaluation study seeks to explore 'HOW' Europeana resources can support innovative pedagogical practice. The evaluation report will also provide guidelines and exemplar learning activities to enable a wider community of teachers to integrate Europeana resources in their classroom practice.

The second evaluation questionnaire seeks to gather feedback from teachers on the overall pilot implementation and on specific aspects of the second pilot phase covering the period (**March 2017- June 2017**) in the following areas:

- Teaching approach during the pilot implementation
- Innovation and change
- ICT access and use during the pilot implementation
- Activities and impact of using the Europeana website and resources during phase 2
- Sharing of experience
- Appreciation of the pilot

Evaluation approach

Given the small number of teachers and schools participating in the pilot, the evaluation approach is qualitative. This second questionnaire is a mix of closed and open questions. We also aim to capture evidence of your professional practices by involving you in the reflection of how you integrated the Europeana tools and resources and the scenarios in your day to day practice. This will be done during forthcoming semi-structured Skype interviews in June 2017.

Filling in the questionnaire.

6. Every teacher who was selected to participate in pilot is asked to fill in the final questionnaire.
7. You should fill in the questionnaire **ONLINE**. It should take you around 20- 30 minutes to fill it in. You will have to fill in **all the questions in one session** before you can submit your answers. We therefore advise you to use the Word document to get an overview about the questions beforehand.
8. Please consult the ematurity model you used during the first workshop in Brussels <http://fcl.eun.org/toolset2>. There are 2 questions about the level of innovation in your school and your personal level of innovation as a teacher.
9. By completing the questionnaire you permit us to use the submitted data as part of the study. **Your personal data (name)** will not be revealed in the report without asking for your permission.
10. Please fill in the questionnaire by 30 June 2017.

Questionnaire

About you

39. Your name (First name and surname):

40. Your email

41. Your country:

- List of countries

Teaching approaches during the pilot

42. Which pedagogical practices did you apply during the whole pilot period (phase 1 and phase phase 2)?

- I state learning goals
- I summarise former lessons
- I verify students' understanding
- I review homework
- I present, demonstrate and explain to the whole class
- I let pupils work in groups
- I group pupils by ability and differentiate the tasks they are given
- I involve pupils in the planning of classroom activities
- I involve pupils in assessment
- I let pupils work in projects
- I let pupils hold debates
- I engage students in enquiry based activities
- I let students make a product/creation of content
- Other, Please specify

43. How different is your pedagogical approach now compared to before you joined the project?

- No change
- Some change
- Very different

Please explain your choice above.

Innovation and Change

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44. After the pilot implementation, please indicate **your level of innovation as a teacher** according to the ematurity model. If you perceived a progression in the level, please describe briefly what has changed.

Learners' role (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower) (*select one*)

Progression:

Teachers' role (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower)

Progression:

Learning objectives and assessment (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower)

Progression:

Tools and Resources (1- Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower)

Progression:

45. After the pilot implementation, to what extent would you say **your school** is innovative as regards its **capacity to support innovation in the classroom**? Please indicate the level according to the ematurity model and highlight any progression (or not) your school made to foster innovation in the classroom (e.g. *from enrich to enhance*)

(2- *Exchange, 2- Enrich, 3-Enhance, 4-Extend, 5-Empower*) (*one option possible only*)

Progression

ICT access at school

46. Which of the following devices **did you use** when working with the Europeana website and resources?

- Netbook
- Laptop
- Desktop
- Tablet device
- Interactive Whiteboards/Displays
- Projector
- Other (please specify)

47. Which of the following devices **did your students use** when working with Europeana website and resources?

- Netbook
- Laptop
- Desktop
- Tablet device
- Interactive Whiteboards/Displays
- Projector

- Other (please specify)

48. Did your students bring their own devices to schools for Europeana related work?

Yes, no

Activities and impact using the Europeana website and resources (Phase 2)

49. How many classes did you lead using Europeana content during the second phase of the pilot?

Number text box

50. During the second pilot period, I have (*multiple options*)

- Found and adapted resources for the classroom using Europeana content on my own
- Found and adapted resources for the classroom using Europeana content with other teachers
- Found and adapted resources for the classroom using Europeana content with my students
- Developed a learning activity where pupils engaged with content on the Europeana website
- Used learning or creative apps using Europeana content with my students
- Other (please specify)

51. What did you use the Europeana website and resources for during the second pilot period?

- Lesson planning/preparation
- Lesson delivery
- For students to engage with in class
- For students to engage with at home
- Assessment
- Sharing of resources with other teachers
- Supporting subject specific content
- Offering activities for students with special needs
- Promoting collaborative student activities
- Involving students in the creation of content
- Project based learning activities/ applying cross curricular approaches
- Developing non-classroom based educational resources (e.g. resources to be used at home, MOOCs) (please specify)
- Developing educational resources that can be commercialised (please specify)
- Other (please specify)

52. Please specify with whom you implemented the Europeana scenario during the second pilot period:

- I implemented a scenario on my own
- I implemented a collaborative scenario with teachers in my school
- I implemented a collaborative scenario with teachers from other schools in my country
- I implemented a collaborative scenario with other teachers from the Europeana project
- Other (please specify)

53. What were the main challenges in implementing the scenario?

Open text

54. Please describe how you have used Europeana content in your teaching (during the second pilot phase) in more detail, and where possible provide links to (online) lesson plans or any resources that you have developed.

Open text

55. Which skills or competencies improved for your students after the implementation of the pilot? (multiple choice)

- Digital competence
- Collaborative skills
- Critical thinking skills
- Creativity skills
- Communication skills
- Independent learning skills
- Problem solving skills
- Interest and engagement
- Subject specific knowledge
- Learning to learn skills
- Other (please specify)

56. Which skills or competencies did you develop for yourself by participating in the pilot?

Open text

Appreciation of Europeana content and tools (Phase 2)

57. Please rate the usefulness of the following Europeana curatorial and search features if you have used them to **find and use content** in your classroom: (Select one option in each row)

Very useful, useful, partly useful, not useful, have not used yet in my teaching

- Collections (art, music or fashion)
- Labs Datasets
- Exhibitions (please name any that you have used)
- Pinterest
- Europeana blog
- Keyword search on the homepage
- Download function from the item page
- Europeana search by colour, people or time periods
- The Europeana API
- Other (please specify)

58. Which type of content from the Europeana website did you use? (*multiple options*)

- Text (eg newspaper, other text resource)
- Image (art or photography)
- Sound (eg music)
- Video
- 3D

59. Are there any other topics (not mentioned in the interim evaluation) on which would you like to find more content or resources?

Open text

60. What other improvements (not mentioned in the interim evaluation) could make the search function more educator- or student-friendly?

Open text

61. What else would you like to see or what improvements could be made to the Europeana Collections platform to encourage educators to use Europeana content?

Open text

62. What tools or apps (if any) did you use to integrate Europeana resources in your teaching?

- VanGo Yourself
- Create/Colour app
- Cinemachina
- ArtFACES
- Other (please specify)

63. Which barriers exist in using Europeana content in your teaching? Can you think of any solutions to these (eg solutions you could implement on your own, with other colleagues, with the help of Europeana, with the help of EUN, with the support of your headteacher, national Ministry of Education etc.)?

Open text

64. How likely are you on a scale from 0 to 10 to recommend Europeana (resources) to:

0 (not likely at all) – 10 (very likely)

- A fellow teacher
- Pupil

Sharing of Experience

65. Since the **beginning of the pilot**, with whom did you share your experience of the Europeana pilot and which aspect of the pilot did you share? Please also specify how many people you involved (multiple options).

the pilot scenario, student created outputs, Europeana resources and tools, results of the pilot

- Headteacher(s)
Number involved – open text field
- Other teachers
Number involved
- Students
Number involved
- ICT coordinator
Number involved
- Parents
Number involved
- Ministry of Education representatives
Number involved
- Schools (other than your own)
Number involved
- Other
Number involved

66. How did they respond (positively and negatively)? Please include their concrete comments where possible.

- Students (open text)
- Other teachers (open text)
- Headteachers (open text)
- Parents (open text)
- Policy makers (open text)
- Other schools (open text)
- Other (open text)

67. What channels did you use to share your experience of the Europeana pilot implementation

Multiple options

- Facebook (personal)
- Twitter (personal)
- School website
- School social media channels (eg Facebook, Twitter)
- School newsletter or other communication (eg letters)
- Local or national press (please give details and links if possible)
- Personal blog (please give links)
- Professional blogs (please give links)
- Other (please specify)

Appreciation of the pilot

68. To what extent did the pilot implementation have a positive influence on:
(to a great extent, somewhat, very little, not at all, cannot say)

- Leadership/head teacher support
- Technical support
- Pedagogical support
- Professional development opportunities
- Wireless access
- Hardware provision
- Software provision
- Availability of (mobile) ICT devices for teachers
- Availability of (mobile) ICT devices for students
- Learning Management System /Virtual Learning Environment in place
- Other (open text)

If the pilot has had a positive influence on any of the above, please describe this briefly below.
(Open text)

69. To what extent did you appreciate the following support and tools offered during the pilot:
Very useful, useful, partly useful, not useful, cannot say

- Face to Face workshops in the Future Classroom Lab
- Webinars
- Communication with EUN
- Scenario building tool
- Ematurity model
- Other (open text)

70. What could EUN or Europeana have done to better support you during the pilot period?
Open text

71. Is there anything else you'd like to add about your experience or your views on what Europeana should do next to increase the use of Europeana content in education?

Open text

Thank you for providing this information.

5. Annex 2 Memo to Ministries of Education

Europeana DSI2– Pilot Teachers selection: Memo for MoEs

Contents

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Summary

20 teachers from across 10 different European countries (one primary and one secondary level teacher per country) are needed to join the Europeana DSI-2 project. The teachers will develop and test pedagogical scenarios and learning activities that incorporate Europeana content (November 2016 – May 2017).

The key objective of Europeana DSI-2 project is to build on and continue operation of the existing Europeana Digital Service Infrastructure's (DSI1) Core Service Platform (CSP). As a resource for the creative and cultural economy, for education and for research, Europeana DSI is a major platform for individuals and professionals to get connected to the wealth of digital cultural resources. Europeana DSI-2 will develop, run and maintain six thematic collections (Europeana Art History, Europeana Newspapers, Europeana Fashion, Europeana 1914-1918, Europeana Photography and Europeana Music).

In order to help mainstream re-use of digital cultural content of Europeana, EUN will work with Ministries of Education to identify the 20 teachers from across 10 different European countries (one primary and one secondary level teacher per country) who cover a range of disciplines and curriculum topics.

This small scale validation pilot, includes two face-to-face workshops, one to take place in November (exact dates to be confirmed) and another in February 2017.

The selection of teachers to participate in the Europeana DSI2 implementation activities needs to be finalized by the 10th of October.

This document provides an overview of the methodology of the selection procedure related to the pilot teachers, tasks that the selected pilot teachers will be asked to carry out as well as the profile for the teachers that describe “ideal” DSI2 Pilot teacher.

The information in this document aims to help Ministries of Education with the selection process, in order to identify the most suitable teachers for the pilot.

Main tasks to be carried out by the DSI2 Pilot teachers

The DSI2 Pilot Teachers will be asked to carry out a set of tasks in order to test the provided Europeana content plus measuring their efficiency and impact. The identified tasks of the Pilot Teachers are:

- a. Participate in two (2) two-day EUN workshops in the Future Classroom Lab in Brussels, one planned to take place in November 2016 and the second one in February 2017;
- b. Participate in Phase 1 Piloting (December 2016 - February 2017): test with their pupils the pedagogical scenarios and learning activities that involve Europeana data, developed during the first workshop in the FCL;
- c. Participate in Phase 2 Piloting (March 2017- May 2017): teachers pilot either fully developed/updated versions of their original scenarios and learning activities or new learning activities that they have produced during the second workshop;
- d. Participate in regular online meetings/webinars with the EUN trainer as well as in an online social media DSI2 group discussions to allow them to exchange experiences and ask questions;
- e. Provide feedback and evaluation data via blogs, online questionnaires and interviews;
- f. Use the Europeana portal/Learning Resource Exchange (LRE) service to search for relevant materials.

Benefits for MoE and teachers

- Opportunity for MoE to: obtain an insight into how Europeana can be exploited as a pedagogical resource.
- Opportunity for teachers to be part of the selected pilot group of this European project.
- Training provided to teachers in the EUN Future Classroom Lab scenario development process.
- Travel and accommodation costs of teachers covered to participate in the two workshops.
- Participating teachers will appear as collaborators in the reports produced.
- Certificate of participation for teachers at the end (including hours of work done).

Selection criteria of Pilot teachers

The selection criteria for the DSI2 teachers for the pilot are the following:

Basic knowledge of English (understanding, writing, reading): teachers should be in a position to understand and communicate in English in order to attend DSI2 organized workshops, work on the learning scenarios and collaborate online with the EUN trainer and teachers from the other pilot countries.

Interest in cultural content: teachers will be asked through an application form to express their interest on the use of data and knowledge provided by DSI2, how the Europeana content can be included in the curriculum plus what kind of skills and experience they wish to acquire during their involvement in DSI2.

Interest in learning and sharing experiences and good practices: teachers will also be asked to demonstrate their interest in collaborative activities and learning as well as using pedagogical methods including any previous positive experience and lessons they have acquired by their involvement in other European projects.

Good internet connection at home both in terms of stability and available bandwidth as well as frequent access to technical infrastructure (i.e., PC's) since teachers need to be able to regularly connect online and provide feedback.

Timeline of activities

1st Workshop

The first workshop will take place end-November 2016, in the Future Classroom Lab in Brussels and the main aim will be on how to develop pedagogical scenarios and learning activities. Teachers will be introduced to other elements of the Future Classroom Toolkit <http://fcl.eun.org/toolkit> along with the project validation methodology and instruments. The workshop will also explore how teachers are currently searching for cultural heritage resources and will introduce them to Europeana collections. By the end of the workshop, teachers will have developed initial scenarios/learning activities that involve use of Europeana data. Some of these will link directly to topics/issues in national curricula and others will be more open (developed by teachers from countries where there is no national curriculum or where schools/teachers have more autonomy over what is taught).

1st Pilot phase

The first pilot phase will take place following the 1st workshop, between December 2016 and February 2017. In this phase, the teachers will return to their classrooms to further develop and pilot the initial scenarios and learning activities they worked on during the workshop. Teachers will be supported during this phase via regular online meetings with the EUN trainer and a dedicated social media group that allows them to exchange experiences and ask questions. Teachers will provide feedback and evaluation data via blogs, online questionnaires and interviews.

2nd Workshop

The same teachers will come together for a second-two-day workshop in the FCL in Brussels in February 2017 the purpose of which is to refine the scenarios and learning activities and develop supporting materials that will help other teachers outside the project to adopt these. The second workshop will also explore if there are collaborative scenarios and learning activities that groups of teachers and their pupils can develop and pilot in Phase 2, in order to explore the cross-cultural dimensions of Europeana collections.

2nd Pilot Phase

Teachers either pilot fully developed/updated versions of their original scenarios and learning activities or new learning activities that they have produced during the second workshop. Data capture in this phase of the evaluation (February 2017 – May 2017) particularly focuses on Lessons Learned in order to inform guidelines and recommendations for both policy makers and teachers concerning the pedagogical affordances of Europeana collections.

Evaluation methodology and feedback

The DSI2 Pilot activities will explore teachers' opinions and ideas that can help improve the overall outcome of the project. Feedback from the participating teachers will be collected through blogs, online surveys and interviews.

Next steps

Step 1: MoEs interested to have teachers from their country joining the project:

- Please let Dr Gina Mihai, Europeana DSI2 coordinator for EUN: (gina.mihai@eun.org) know by 20th September 2016; Due to the limited places (only 10 countries are needed), MoEs interested will be taken onboard on a first come, first served basis.
- Let us know which option you prefer: 1) to look for the two teachers yourself (one primary / one secondary school teacher) OR 2) we launch a call for interested teachers from your country, you choose from the list of applicants (EUN can take care of the selection for you as well).

Step 2: Selection of the teachers must be done by 10th October

Step 3: By 15th October 2016: EUN to send the application form alongside the official invitation to the selected teachers;

Step 4: By 10th November 2016: Agreement between the DSI2 consortium and pilot teachers will be signed for the work to be carried out between November 2016 – May 2017.

More information

Please do not hesitate to contact: Gina Mihai, Project Manager at EUN and Europeana DSI2 coordinator for EUN: gina.mihai@eun.org

6. Annex 3 Official invitation to selected teachers

Dear xxx

Congratulations on being selected by the European Schoolnet (EUN) Ministries of Education representative in your country to participate in the Europeana DSI2 pilot project and welcome onboard.

In order to complete your profile and gather all the necessary information, we kindly ask you to fill in the following application form **by 13th October 2016**:

<http://tinyurl.com/gmhhwxj>

As a pilot teacher in Europeana DSI2, we will offer you:

- The opportunity to be part of the selected pilot group of this European project;
- Two Trainings provided in the EUN Future Classroom Lab scenario development process;
- Travel and accommodation costs covered by the project to participate in the two workshops;
- You will appear as collaborator in the reports produced;
- Certificate of participation at the end (including hours involved in the project).

During **the validation pilot (November 2016 - May 2017)** you will develop and test pedagogical scenarios and learning activities that incorporate Europeana content.

Within this pilot you will carry out a set of tasks listed below in order to test the provided Europeana content plus measuring its efficiency and impact:

- a. Participate in two (2) two-day European Schoolnet (EUN) workshops in the Future Classroom Lab in Brussels, one planned to take place on 28th – 29th November 2016 and the second one on 27th – 28th February 2017;
- b. Participate in Phase 1 Piloting (December 2016 - February 2017): test with your pupils the pedagogical scenarios and learning activities that involve Europeana data;
- c. Participate in Phase 2 Piloting (March 2017- May 2017): you either fully develop/update versions of your original scenarios and learning activities or new learning activities that you have produced during the second workshop;
- d. Participate in regular online meetings/webinars with the EUN trainer as well as in an online social media DSI2 group discussions to allow you exchange experiences and ask questions;
- e. Provide feedback and evaluation data via blogs, online questionnaires and interviews;
- f. Use the Europeana portal service to search for relevant materials.

All the above listed activities and benefits will be included in an agreement which will have to be signed with European Schoolnet **by 10th November 2016**.

Regarding your participation to the 1st workshop which will take place on 28th – 29th November 2016, **thank you for reading the following information carefully:**

- In order to book your flight, please register via the following link by **Monday 17th October 2016**;

<http://tinyurl.com/EuropeanaDSI2-ws1-nov2016> (please do not share this link with anybody)

Once you register:

We will forward your travel preferences to the travel agency Skytravel we are working with who will be contacting you within the following week.

BEFORE accepting a flight make sure to check:

- 1) your name and last name are correct;
- 2) the dates are correct;
- 3) the airports of departure / arrival are correct for both ways.

If you agree to the flights and mistakes are found later, you will have to cover the changes / corrections.

Remember:

- European Schoolnet will organize and pay for the flights, accommodation from Sunday to Tuesday (2 nights) and all meals on Monday until Tuesday lunch.
- Any other costs like to/from airport, local transport and medical insurance is at the participants' expense.
- European Schoolnet **will not reimburse any airline tickets purchased individually.**
- Please also note the travel agency will contact you (do not contact them first) and they only deals with flights/trains and have no information on hotel, programme, etc. Full details on the hotel you will be staying, programme, etc, will be sent out by myself, latest 1 week before the event.
- Please remember **you must keep all boarding passes.** You will have to hand them in at registration (and send the return tickets by email AND snail mail afterwards)
- **Once confirming attendance, if you fail to attend the event for whatever reason, you will have to reimburse the cost of the plane tickets.** We strongly recommend you get travel /medical insurance.

Once more, congratulations on being selected to participate in the project and looking forward to a fruitful collaboration.

7. Annex 4 Teacher Agreement



Project name: Europeana DSI2 – CEF-TC-2015-1-01

EUN PARTNERSHIP AISBL (“EUN”) MEMORANDUM OF UNDERSTANDING

Teacher's name:	
Teacher's Email:	
Name of School:	
Address of School	

Description of tasks for the pilot teachers (November 2016 - May 2017)

1. Participate in two (2) two-day European Schoolnet (EUN) workshops in the Future Classroom Lab in Brussels, one planned to take place on 28th – 29th November 2016 and the second one on 27th – 28th February 2017.
2. Participate in Phase 1 Piloting (December 2016 - February 2017): test with your pupils the pedagogical scenarios and learning activities that involve Europeana data.
3. Participate in Phase 2 Piloting (March 2017- May 2017): you either fully develop/update versions of your original scenarios and learning activities or new learning activities that you have produced during the second workshop.
4. Participate in regular online meetings/webinars with the EUN trainer as well as in an online social media DSI2 group discussions to allow you exchange experiences and ask questions.
5. Provide feedback and evaluation data via blogs, online questionnaires and interviews.
6. Use the Europeana portal service to search for relevant materials.

Declaration: The teacher declares that he/she is free to enter into this Memorandum and that there is no term or condition in any employment contract or similar commitment that would prevent him/her from performing the tasks detailed in this document.

Benefits for the pilot teachers:

Note: No fees, royalties or expenses will be paid to teachers by EUN. However, by participating in the activities and carrying out the tasks detailed above, pilot teachers will benefit from the following:

1. The opportunity to be part of the selected pilot group of this European project.
2. Two Trainings provided in the EUN Future Classroom Lab scenario development process.
3. Travel and accommodation costs arranged by EUN and covered by the project to participate in the two workshops.



1. You will appear as collaborator in the reports produced.
2. Certificate of participation at the end (including hours involved in the project).

Signatures:

EUN PARTNERSHIP Marc Durando	Pilot Teacher
---------------------------------	---------------

1st November 2016

8. Annex 5 Final list of pilot teachers

No	Surname (Last Name, Family Name)	First Name	Country where you teach	Primary/secondary school education	Subjects you teach	Age of students you will teach during the 2016 - 2017 school year
1	Fleck	Manfred	Austria	primary	primary	9-10 years old
2	Simetzberger	Barbara	Austria	secondary	business subjects	14-15 years old 15-16 years old 16-17 years old 17-18 years old 18+ years old
3	Teichmannova	Martina	Czech Republic	primary	primary	8-9 years old 10-11 years old
4	Vitkova	Marketa	Czech Republic	secondary	Language	10-11 years old 11-12 years old 12-13 years old 13-14 years old 14-15 years old
5	Lahemaa	Siret	Estonia	primary/secondary	Art and design Technology	8-9 years old 9-10 years old 10-11 years old 11-12 years old 12-13 years old 13-14 years old 14-15 years old 15-16 years old
6	Naulainen	Madli-Maria	Estonia	secondary	History Technology, Civics	9-10 years old 15-16 years old 16-17 years old 17-18 years old 18+ years old
7	Kääär	Miia	Finland	secondary	Geography, Biology, health education	13-14 years old 14-15 years old 15-16 years old
8	Vuorio (Vuorio replaced by Père Virpi in February 2017)	Jaakko	Finland	primary	primary	8-9 years old 9-10 years old 10-11 years old 11-12 years old 12-13 years old
8	Virpi	Pere	Finland	primary	primary	
9	Pastor	Loïc	France	secondary	Language, Literature	11-12 years old 14-15 years old 15-16 years old, adult : Grammar and data processing
10	ROISIN-FIRTINA	Gilles	France	primary	primary	9-10 years old 10-11 years old
11	Anagnostopoulou	Konstantina	Greece	primary	History Language Maths, primary, Environmental studies	9-10 years old
12	Kioutsouki	Pagona	Greece	secondary	Language, German as a foreign language	11-12 years old 12-13 years old 13-14 years old

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13	Köfler	Andrea	Hungary	primary/secondary	Art and design Language, Media and art studies of motion picture	10-11 years old 11-12 years old 12-13 years old 13-14 years old 14-15 years old 15-16 years old 16-17 years old 17-18 years old
14	Lakatosné Lőrincz	Katalin	Hungary	secondary	Language	12-13 years old 13-14 years old 14-15 years old 15-16 years old 16-17 years old 17-18 years old 18+ years old
15	Boggins	Mark	Ireland	primary	primary	< 8 years old
16	Keleghan	Heather	Ireland	secondary	Religion and Civic Social Political Education	11-12 years old 12-13 years old 13-14 years old 14-15 years old 15-16 years old 16-17 years old 17-18 years old
17	Valentini	Claudia	Italy	secondary	EFL, Media Education, Special Needs	14-15 years old 15-16 years old 16-17 years old 17-18 years old 18+ years old, UnivAQ Teacher Education
18	Panzica	Francesca	Italy	primary	Language Primary	10-11 years old
19	Brandão	Maria Antónia	Portugal	secondary	Philosophy; Psychology	17-18 years old
20	Lopes	Victoria	Portugal	primary/secondary	History, Art History, Cinema, Theatre, Guionism	12-13 years old 13-14 years old 14-15 years old 15-16 years old 16-17 years old 17-18 years old

9. Annex 6 Agenda for the first teacher workshop

Day 1 – Monday, 28 November 2016	
9.30	Introduction – objectives of the workshop. European Schoolnet and the Future Classroom Lab Ice breaking activity (teachers introducing each other through some interactive activities) Introduction to the teacher community platform used during the project
10.15	Future Classroom Toolkit – part one Introduction to the Future Classroom Sharing school environment of participants Future Classroom Maturity Modelling – how to identify your level of innovation maturity and how to get to a higher level
11.15	Coffee break
11.30	Future Classroom Toolkit - part two Trends and Stakeholders – how to identify relevant trends and stakeholders and involve them in the development of your scenario
13.00	Lunch
13.45	Introduction to Europeana
16:45	End of Day 1
19.30	Dinner

Day 2 – Tuesday, 29 November 2016	
9.30	Curation of resources and innovative technologies for the classroom
11.00	Coffee break
11.15	Group work
12.30	Lunch
13.15	Presentations of the workshop outcomes
14.15	Next steps of the project
15.00	End of the workshop 1

10. Annex 7 Agenda for the second teacher workshop

Day 1 – Monday, 27 February 2017	
09:15	Registration
09.30	Introduction <ul style="list-style-type: none"> • objectives of the workshop • Ice breaking activity
10.00	Feedback Round: Change and challenges <ul style="list-style-type: none"> • Participants share and discuss experiences after first workshop • Evaluation procedure of the project
11.00	Coffee break
11.15	Future Classroom Toolkit: building a scenario <ul style="list-style-type: none"> • Identify main elements of scenario building • Introducing Europeana in the Classroom Hackathon
12.00	Discover more in Europeana
12.45	Lunch
13.30	Interact with Europeana Digital tools for tours, exhibitions and e-learning <i>[Coffee break included]</i>
16.00	End the day with collaboration activity
16.45	End of the day
19.30	Dinner

Day 2 – Tuesday, 28 February 2017	
09.30	Learning Activities as part of a Scenario Working with Learning Designer
10.00	Europeana in the Classroom Hackathon Create a scenario – group work
11.00	Coffee break
11.15	Europeana in the Classroom Hackathon continues Create a scenario – group work
12.30	Lunch
13.15	Presentations of the workshop outcomes
14.00	Next steps of the project
15.00	End of the workshop 2

11. Annex 8 Scenario template

Future Classroom Scenario

Title of the scenario:

Names of author(s)

Relevant Trend/s

Write the trend(s) or trends the Scenario is intended to respond to.

e.g. <http://www.allourideas.org/trendiez/results>

Maturity Level

What level of maturity is the scenario intended to achieve? Write the current situation on the left and describe the desired level on the right.

FROM: Current Maturity level	TO: Desired Maturity level

Learning Objectives, Skills and competencies

What are the main objectives?

What skills will the learner develop and demonstrate within the scenario? (e.g. 21st Century Skills).

Learner's Role

What sort of activities will the learner be involved in?

Tools and Resources

What resources, particularly technologies, will be required?

Learning space

Where will the learning take place e.g. school classroom, local library, museum, outdoors, in an online space?

Future Classroom Scenario Narrative

Describe in max 10 sentences the main ideas of the scenario.

Learning Activities

Add the link to the Learning Activities created with Learning Designer (<http://learningdesigner.org>)

12. Annex 9 Europeana Teaching Scenarios

A. Europeana Teaching Scenario: Mucha inspiration

Key words: age range of learners: 10-11 years, Duration 160 min

1. Background information

Martina Teichmannova took her 10-11 years old students on a learning journey about the Czech Art Noveau painter Alfons Mucha. She teaches at the primary and lower secondary school [Zakladni skola nam. Aloise Jiraska, okr.Usti nad Orlici](#) in the Czech Republic. While she finds the leadership support, technical support and wireless access at her school to be good, she would appreciate more pedagogical support to integrate ICT in her teaching. The availability of (mobile) ICT devices for students is very limited in the school. Prior to the pilot, she did not know about Europeana. The learning activities took 160 minutes to complete.

2. Goals of the Learning Activities

Martina was inspired by her own experiences: Firstly, a French volunteer teaching at her school had tried to persuade her that Mucha was French. Secondly, a Dutch colleague had asked her whether she felt more Czech or European. She decided to focus on Art Noveau and Mucha's life because he had an interesting and very cosmopolitan life, travelling a lot. The aim of the learning activity was to get her students to talk about their travel experiences for them to realize about their opportunities to learn abroad.

3. Description of the Learning Activities

First part: Sharing experiences about travelling in Europe

First, the teacher presented a photo of Alfons Mucha, the Czech Art nouveau painter using [Blabberize](#). Then, students were divided in groups to read Mucha's biography and answer some questions, such as which were the countries in which he lived in (see *Figure 1*).



Figure 2: Europe's changing boarders

Then, Martina gave a presentation about Europe's changing boarders and compared travelling today with travelling in Mucha's time, during the two world wars and during the communist times (see *Figure 2*). Next, students wrote down their own experiences in a worksheet (see *Figure 3*) and then exchanged orally within their group. Finally, students voted on [Tricider](#), if they felt more Czech or European.

Second part: Introduction to Art nouveau

Martina used the pictures she found on Europeana to explain Mucha's style of painting to her students.

„There were a lot of pictures of Mucha on Europeana, which was great.“



Figure 21: Students working in groups

What countries of Europe have you visited ?

Were there any different habits ? Can you describe it ?

If anyone asked you WHERE ARE YOU FROM, what was your answer ?

Are you proud of being Czech ?

Do you feel as an European citizen ? Why ?

Figure 3: Worksheet on students' experiences

As the next step, her students produced their own Art Noveau painting. They could choose between three options: The first one was colouring an existing painting, using a colouring book from Europeana also suited for students with special needs. The second option was to draw the second half of a panting taken from a Mucha calendar, and the third option was for students to make their own Art Noveau painting (see *Figure 4*). Martina published [a video](#) to show case the results of the project.

4. Tools used

Martina's students used Mucha's pictures from the Europeana collections, and other online tools such as [Blabberize](#) and [Tricider](#). Students used their mobilephones during the pilot.

5. Outcomes & reflections

"I use new tools. I can apply them to my lessons. I can use sources from Europeana. I have new contacts in Europe so I am able to find new partners."

When Martina had difficulties to find specific resources at first, she decided to turn things around: She looked at the Europeana resources first and tried to think what learning activities she could prepare with her students. For the search itself, she noted problems searching names in different language versions and that more intuitive searching would be helpful.

Her students liked Mucha's life and were suprised how boarders have changed in Europe. They also liked Art Noveau and enjoyed creating their own art work. Most of the students voted that they feel more Czech, which the teacher thinks is due to their young age. She asked a colleague to try the same lesson with her ninth grade students. In that class, nearly 50% voted that they felt more European.

According to the teacher, the Learning activities helped students to improve their collaborative, critical thinking, creativity and communication skills and subject specific knowledge; and increased students' interest and engagement. The teacher stated that she has developed her communication and social competences, her ICT skills and her subject specific knowlege in English, History and Art.

Finally, Martina also discussed the topics she taught to her students with her colleagues and published an article about the [Europeana pilot](#).



Figure 4: Students' art works

B. Europeana Teaching Scenario: The Voyage of the Gods & Ancient Ireland

Key words: Subjects: cross curricular (art, history), Age range of learners: 14-16

1. Background information



Heather Keleghan is in the early years of her career as a teacher of religion at the secondary school [Maryfield College](#), Dublin, Ireland, a school for girls aged 12 to 18. She teaches Religion and Civic, Social and Political Education. Heather uses ICT in lessons daily and describes herself as competent with ICT. In her school, however, the wifi connection is poor and most teachers use ICT rarely for teaching. She involved 14-16 year old students in the Europeana pilot. More than six classes made use of Europeana resources in two activities: The Voyage of the Gods and Ancient Ireland.

2. Goals of the Learning Activities

Heather set herself two goals for her Europeana Learning Activities: to engage in cross-curricular activities in history and art and to develop her own competence as a teacher to act as enabler of her students' learning. She aimed to improve students' ability to learn independently, with students 'taking over their own learning'.

3. Description of the Learning Activities

1) The Voyage of the Gods'

Heather decided to give her students the web quest to learn about the Greek God Athena, by exploring the videos and images that are part of the Europeana exhibition 'The Voyage of the Gods', a virtual exhibition designed and based around the story of Athena. In groups of 2 or 3, students prepared a [Presentation on Athena](#). Once these presentations were completed, students could challenge themselves with a quiz available on the exhibition site.

The exhibition's section 'Your Hero' allowed the teacher to effortlessly connect this year's school theme 'A Modern Day Hero or Saint' with a lesson in her religion class. The school had a non-uniform day where students could dress up as their hero. Moreover, the start of year Mass was based around modern day saints the students had in their lives such as parental figures, celebrities and humanitarian workers. Students prepared a book dedicated to their own personal heroes.

2) Ancient Ireland

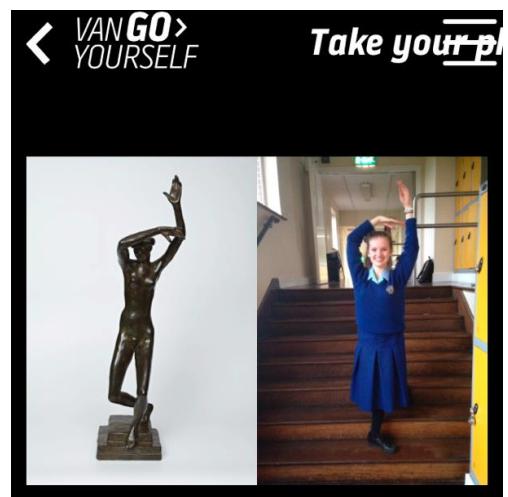
Heather's second learning scenario was based on the monastic site in Ireland called Glendalough. It was a cross-curricular history and art project. First, students worked in groups on a QR treasure hunt with the help of Europeana to find out about specific buildings and the history of the monastery. "They loved that!", according to Heather. Next, students looked at the many Celtic crosses at Glendalough, often worn down. Students redesigned the inscriptions or produced new art work for the crosses. Finally, the students went on a field trip to the site, looking at the round tower and two nearby lakes.

<h1>The Greek God Gazette</h1>		
Vol XCIII, No. 311	Monday, January 9th, 2017	L.25
<h2>Athena-Greek Goddess</h2>		
	<h3>Who was Athena?</h3> <p>According to the Greek legend, Athena was the daughter of Zeus and the Queen of the Amazonians. But the stories of her parentage vary greatly from myth to myth. Some say that it was Poseidon who had given birth to her brother to Zeus, while others say that it was Zeus himself who had given birth to her. Athena was known for her love of wisdom and knowledge, and she often liked to disrupt the other children he had already swaddled. Zeus had been so annoyed by this that he had decided that Athena would rule the heavens, ruling over Zeus himself, the Lord of the Universe, as a bid to protect humanity from the many miseries that could befall a pregnant mother with the baby Athena in her belly.</p>	 <p>The Birth of Athena</p> 
<h3>Congratulations!</h3> <p>Athena has just Sun!</p> <p>What's new? See our latest news</p> 	<h3>Do not mess with Athena</h3> <p>Tiny winy spider</p> <p>Athena loves her babies, but she also loves her spiders. She is known to be a bit of a spider collector, always keeping them in her pocket or tucked away in her hair. She is also known to be a bit of a spider collector, always keeping them in her pocket or tucked away in her hair.</p> 	



4. Tools used

Students used two different Europeana apps: the [Create/CColour app](#) and [Van Go Yourself](#). The European colour app can help students actively engage with art history, letting student recreate famous paintings using their own imaginations with different colours and images, according to Heather. She found Van Go Yourself to be an imaginative app allowing students to recreate famous Van Gogh paintings with their friends. "They become the subjects in the painting and bring it into the 21st century". Students found the activity really enjoyable but also Heather appreciated its cross curricular nature. "Apps like these are really useful for the students," according to the Irish teacher, "because all they need is in one place." Both apps have been integrated quite successfully into art and art history lessons throughout the school, creating "a real community spirit." Students used laptops, tablets and smartphones, as they brought their own devices. They also used other online tools e.g. ['Kahoot'](#).



5. Outcomes & reflections

"Overall it was an exciting learning experience for all involved and one that I hope will engage both students and teachers of Maryfield College to develop a positive attitude towards technology and online data bases such as Europeana as a potential learning tool in the future classroom."

The Europeana Learning Activities provided an opportunity to develop cross-curricular methodologies as they connected with other subjects on curriculum such as art, art history and history classes. For the students, using Europeana for their learning was difficult at first. They found the apps and sites dedicated to exhibitions much more accessible and user friendly than the Europeana website itself. They were also still a bit immature to understand the concept of copyright. The Europeana search tool is a "massive barrier" for Heather. "In order for Europeana to be a success, it needs to be on par with Google. For it to be successful in Ireland, the content needs to match demand for resources that match the curriculum, for example images of art and buildings that are present in the history and art history subjects on the curriculum.", according to the teacher.

By the end of the pilot project though, students "loved using technology in the classroom and were becoming in control of their own learning." What Heather particularly liked about Europeana is that it "moves the teacher away from teacher-based to the student and gives them a real opportunity to engage in their own learning. They can take their work home and do projects at home. The teacher becomes the guide, there if the student needs help. It's the students who research the images and documents, work out what project they want to do, they present to the teacher themselves and publish on social media platforms." The students' response to the project was "excellent" according to Heather: "The opportunity to integrate technology into learning was very exciting for them and they enjoyed using technology in the classroom. They most enjoyed the QR code treasure (...) and the field trip, as it took learning outside of the classroom." Europeana challenged Heather to take learning outside the classroom and to get away from the idea that learning can only take place in the classroom.

Heather considers that students developed their digital, collaborative skills, creativity, communication skills, and independent learning skills, and showed increased Interest and engagement. During the pilot project, Heather considered that she changed by introducing technology into the classroom and becoming more innovative when planning lessons, developing her creativity skills and digital competency.

Europeana also encouraged other teachers to experiment with QR codes and use Kahoot, and to see that technology can enhance students' learning. Other history teachers used Europeana to locate images for their lessons. In general, gathering support from colleagues was difficult, as some teachers were very against technology, but the school principal was very supportive.

"Introducing Europeana to my fellow staff members was an exciting opportunity to engage a teacher who may be feeling slightly anxious or afraid of the unknown when it came to introducing technology into the classroom to aid learning", according to Heather. In her opinion, Europeana is an excellent way to help teacher and

D3.4: Pilot validation report on use of Europeana for teaching and learning

technology work together to help make sure that students are receiving accurate information online. "It opened up dialogue between staff members and allowed teachers an opportunity to discover new teaching resources they might not have known about beforehand", Heather concluded.

C. Europeana Teaching Scenario: Learning colours: language learning & art

Key words: Subjects: German, Arts, Age of learners: 12-13 years old, Duration of activity: 2 lessons

1. Background information

Pagona Kioutsouki, a Greek teacher, participated in the Europeana pilot with her students from the lower secondary school [3.Gymnasium of Komotini](#). The school is located in the city Komotini in the region of East Macedonia and Thrace in Greece. Pagona teaches German as a foreign language at her school. She has more than 20 years of teaching experience. While Pagona rates her school's wireless access as very good, she finds the availability of (mobile) ICT devices for teachers poor (and very poor for students), as well as her schools' leadership and technical support. Prior to the pilot, she did not know about the Europeana platform. During the pilot, she used Europeana resources to design a learning activity with 12-13 year old students in her German lessons. This learning activity took two lessons to complete.



Figure 22: 3. Gymnasium of Komitini

two lessons to complete.

2. Goals of the Learning Activities

The aim of the learning activity was two-fold: for students to learn the names of colors in German and to experience arts in a pleasant way, suitable for their age and in a relaxed atmosphere. The focus of the activity was rather on students' own first impressions of the paintings than on providing an in-depth study of arts ensuring students' full understanding of the paintings. Students' first impressions of the paintings served as a starting point to introduce new vocabulary.

3. Description of the Learning Activities

LESSON 1

As an introductory activity, students had 10 minutes time to learn the colors in German at their own pace, with a [learning activity](#) the teacher had created beforehand using the online learning tool [Quizlet](#). This activity included a picture of each color, and its name in Greek and German, including an audio version. The teacher selected this first activity, in order to encourage students to learn autonomously.

As a next step, students used the [Europeana colour app](#) to color the painting "Foodscapes" of Carl Werner. Then, students worked in pairs. One student had to give instructions, the other colored the painting following the instructions. Afterwards, they compared their two paintings. Both should look identical.

Next, students used the [Europeana Cinemacina app](#) to go on a virtual exhibition tour and explore paintings of Paul Klee, Josef Albers, Fernand Leger and Piet Mondrian. Students worked again in pairs. One student named one color in German and the other one pointed to the place in the painting where the color was. At the end of the lesson, students used the online tool [wordle](#) to create a word cloud with their five favorite colors.

LESSON 2

As their final activity, the students decorated their classroom in the style of the Dutch painter Piet Mondrian. At the beginning of the lesson, they watched a [short YouTube video](#) in German to learn how to paint like Piet Mondrian. Then, the class was divided in two groups. One group created paintings in the style of Mondrian to decorate the classroom windows, using window color and black tape. The second group created paintings in the style of the Dutch painter to decorate the classroom doors, using colored construction paper in different geometric forms.

4. Tools used

"The Europeana digital library provides a virtual space for learners outside the structure of the classroom"

The students used two different Europeana apps: the colour app and [Cinemacina app](#). Students also used other online tools such as [Quizlet](#) and [Wordle](#).

5. Outcomes & reflections

Through this learning activity, students improved their digital competence, collaborative skills, creativity and showed greater interest and engagement. Improving students' motivation was the biggest challenge, according to the teacher Pagona Kioutsouki. As a teacher, she improved her ability to design a meaningful learning activity that combines several subjects and learning goals. Finally, Pagona Kioutsouki concluded that using Europeana tools to combine language and Arts teaching can provide a pleasant learning experience to students. She also suggested some possible improvements: Students should be able to distinguish between Europeana and other websites more clearly, the website could be made more attractive for young students and a better translation assistance would be helpful.



Figure 23: Decoration of the classroom doors

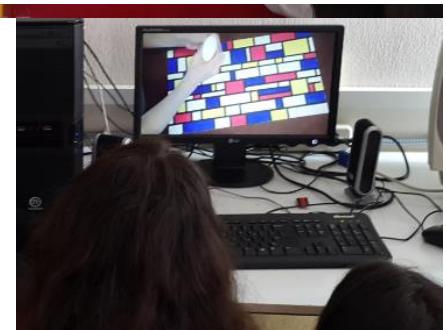


Figure 3: Learning about painting like Mondrian



Figure 4: Painting like Mondrian

D. Europeana Teaching Scenario: An interactive approach to natural history study

Key words: Biology: 9-10 year old learners, Duration 120 min

1. Background information

Konstantina Anagnostopoulou and Evangelia Petraki teach at [Ralleia Experimental Elementary School](#), Peireaus, Greece, a special public school which shares close ties with the University of Athens. The Model Experimental School provides student teachers with practical training in teaching methodology and in education in general.



Figure 1: Teachers at the school

The school caters for primary levels of education. ICT facilities are described as poor and there is no wifi.

Konstantina has been teaching Greek, mathematics, history, environmental studies and religion for 10-20 years. Her use of ICT for teaching and learning goes back 7-9 years and she uses online educational resources about once a month. She teaches a 'big class' of 26 students, 9-10 years old, of whom one has autism.

2. Goals of the Learning Activities

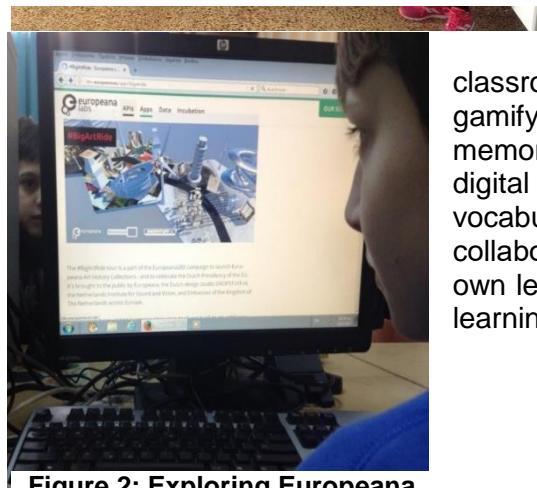


Figure 2: Exploring Europeana

The main idea is to stimulate the students' learning by using future classroom technologies and techniques, in particular game-based learning, gamifying basic natural history concepts through a competitive two-player memory match video game. Activities are designed to develop students' digital competence, using new tools, second language skills, using English vocabulary related to natural history topics, social competences, working and collaborating effectively in a group, and learning to learn, managing one's own learning both individually and in groups and developing an appetite for learning.

3. Description of the Learning Activities

Lessons took place in the school's computer lab.
First part:



In the first the cloud-learning technique applied: students introduced basic concepts



Figure 3: London's Natural History Museum

and the world of natural history through a virtual digital tour of one of the most prestigious natural history museums in the world: the London Natural History Museum. In pairs, students followed the tour in English through web browsers on computers in the

activity based

was

were to the

and the

school's computer lab. „The students succeeded in having an intriguing first contact with the diverse cultural heritage content offered by Europeana,” says Konstantina.

Second part:

Figure 4: Students working in pairs

Students competed in pairs by playing Europeana Memory Match, a multi-player memory match game combining the classic memory game of finding pairs (pelmanism) with a quiz testing players' knowledge of natural history. It was implemented in compliance with Europeana in the Classroom teaching techniques and methods.

4. Tools used



Figure 5: Interactive Apps

London's Natural History Museum interactive tour, accessed through an up-to-date web browser. The app is hosted in [Google's Education cloud platform](#), and was developed through a partnership with Google Arts and Culture Initiative division. [Europeana Memory Match](#), a pilot application developed in the Europeana Creative project, enabling and promoting greater re-use of cultural heritage resources by creative industries. It uses the Europeana Web Rest API to integrate digitised natural history collections held by the many museums participating in the Europeana project. The app was installed on each Microsoft Windows-based computer.

5. Outcomes & reflections

Students gained knowledge of natural history according to Konstantina. They remained on task for longer than usual: „A subject like natural history is difficult to teach inside a classroom using traditional teaching approaches because students get bored and soon begin to lose concentration in class.“ Students enjoyed this new teaching approach, „becoming addicted to it“, according to Konstantina, requesting similar activities in other lessons. The student with autism found the activities particularly engaging and interesting. Konstantina considers that her own digital competence increased significantly; she now uses the full range of classroom tools and apps. The interactive tour of the museum and the game-based learning activity inspired fellow teachers to use Europeana content in their courses. Other teachers asked to take part in advanced specialist workshops in order to understand better the Europeana content and the tools developed in the Europeana labs initiative.



Figure 6: Memory Match