

Impact Assessment Case Study

Understanding the Economic Impact of the MOOC "Europeana in your classroom: building 21st-century competencies with digital cultural heritage"

Executive summary

A Massive Open Online Course (MOOC) is a model for delivering learning content online to virtually any person with no limit on attendance. The 'Europeana in your classroom: building 21st-century competences with digital cultural heritage' MOOC helps teachers use digitised cultural heritage material in teaching by providing an introduction to the Europeana platform and specially developed resources, such as pictures, videos and apps, that can easily be integrated into lessons. Moreover, the MOOC helps teachers to build learning scenarios using digital cultural heritage, in a framework of 21st-century skills.

The MOOC was first launched in April 2018 on the European Schoolnet Academy website and has since been repeated in English and translated into Portuguese and Spanish. The course completion rate is calculated by dividing the total number of participants that completed the course, and were thus awarded a certificate for course completion, by the total number of participants who started the MOOC. The course completion rate is better than the average 10% completion rate of other MOOCs. It suggests that participants were interested in the content and objectives of the MOOC. The main outcome for MOOC participants was an increased sense of access to digital cultural heritage materials.

It was decided to conduct a Social Return on Investment (SROI) impact assessment between July and August 2019 to explore and inform future approaches to measuring the value of Europeana Education's value for its main stakeholder group, educators.

SROI measures change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by attributing monetary values to the estimated benefits for the main stakeholder groups and compares the costs of designing and administering the MOOC, as well as any other resources leveraged into it. This enables a ratio of benefits to costs to be calculated.

Two different valuation techniques were applied in order to estimate the social return on investment: cost-related methods (based on proxies) and revealed preference methods. In the first method, proxy values were attributed by the researchers to two out of three effects of participation in the Europeana MOOC. This method suggests that **every euro invested, to speak in terms of Social Return on Investment, is expected to yield € 1.50 in return.**

In the second method the costs per teacher of the MOOC (average €37) was compared with the value of a pre-selection of goods that the MOOC could be compared to. The benefit of this approach is that the value is chosen by the stakeholders. Moreover, the teachers were asked to reflect on the value of the MOOC as a whole, rather than on separate outcomes. It suggested that **every euro invested, to speak in terms of Social Return on Investment, is expected to yield €2.00 in return.**

The findings presented here must be used with care. A conservative approach was adopted to prevent overclaiming, following one of the key principles of SROI. The figure of a SROI of between €1.50 and €2.00 could therefore be even higher. One of the key principles of SROI is to involve stakeholders from the beginning to the end of the process, which was regrettably not possible in this analysis. The report ends by recommending that stakeholders are more involved in future SROI research. It also recommends that Europeana considers asking more outcome related questions as part of their data collection strategy and, as part of this, directly asks stakeholders to attribute a value to improved access to digital cultural heritage (e.g. via



willingness-to-pay methodology). This report should therefore be regarded as a guideline for measuring and monitoring future value for stakeholders.



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1. Introduction

The environments in which teachers work, and the demands placed upon them by society are increasingly complex. Even the best quality schools and universities cannot equip teachers with the skills and knowledge needed for a lifetime of teaching. Therefore, there is a growing pressure on teachers to innovate and to continuously develop their professional skills.

“Professional development is defined as activities that develop an individual’s skills, knowledge, expertise and other characteristics as a teacher”¹

“Teachers who have received some level training are generally found to teach better than those who have not, although it depends on the purpose and quality of the training received (Glewwe et al., 2014). Ongoing training plays a key role in improving learning outcomes by providing teachers with new ideas throughout their career about how to support weak learners”.²

1.1 About the MOOC 'Europeana in your classroom'

The Europeana Massive Open Online Course (MOOC) helps teachers use digitised cultural heritage material in their classrooms. A MOOC is a model for delivering learning content online to virtually any person with no limit on attendance.

The 'Europeana in your classroom: building 21st-century competences with digital cultural heritage' MOOC was first launched in April 2018 on the European Schoolnet Academy website and has since been repeated in 2019, to be rerun in 2020. The MOOC is made available in English, Portuguese and Spanish. The MOOC's offering is promoted on European Schoolnet and the Europeana website.

The MOOC introduced participants to the Europeana platform, where they find different resources for educators such as pictures, videos, texts and various tools that they can easily integrate into their lessons. Moreover, the MOOC helps teachers to build learning scenarios using digital cultural heritage, in a framework of 21st-century skills.

Through this course, participants learned how to navigate the Europeana Collections website, explored and became familiar with the various Europeana apps, tools and materials, and learned how to build learning activities using Europeana Collections resources. The course ran for 6.5 weeks, with a total number of 5 modules (one module per week) and 1.5 grace week so that participants could finalize the remainder of the coursework at the end of the course. The workload for participants was an estimated 3-4 hours per week with a total of 25 hours.

Europeana offers free access to the MOOC and offers a learning platform for the creation and

¹ https://ris.utwente.nl/ws/portalfiles/portal/5146421/NC8010244ENC_002.pdf p 19

² INVESTING IN TEACHERS IS INVESTING IN LEARNING A PREREQUISITE FOR THE TRANSFORMATIVE POWER OF EDUCATION



dissemination of learning scenarios. The platform enables peer review, active learning and teacher participation. There are three review rounds for the MOOC learning scenarios: first one by 3 peers, second one by European Schoolnet³, (one of the Developer Teacher in 2018 and a Teacher Ambassador in 2019).

Europeana and European Schoolnet provided community and online support to the Europeana Education User Group consisting of sixty teachers in 2018 from fifteen European countries (Croatia, Czech Republic, Finland, France, Bulgaria, Albania, Greece, Italy, Lithuania, Poland, Portugal, Romania, Serbia, Spain, Slovakia) and 130 teachers in 2019 from 15 countries (Croatia, Finland, France, Bulgaria, Greece, North Macedonia, Italy, Hungary, Poland, Portugal, Romania, Serbia, Spain, Malta and Turkey) and the European Schools. In the first year, the group tested learning activities created by the teachers, gave feedback on the MOOC, and provided practical recommendations on the sustainability of the Europeana Education community of teachers. In the second year, the group creates further learning scenarios, tests their own work and a colleague's learning scenario in the classroom and writes a Story of Implementation about the experience, to be published on the Teaching with Europeana blog (<https://teachwittheuropeana.eun.org/>).

1.2 About Europeana Education services

Europeana Education services help teachers introduce innovative practices, design engaging learning experiences for their students and develop their digital and cultural competences. The Europeana website provides free online access to over 50 million digitised items drawn from over 3,700 museums, archives, libraries and galleries across Europe. Its collections feature a huge range of content from 43 countries and in 23 different languages, on various themes and media, including artworks, photographs, fashion designs, 3D images, maps, newspapers, and more.

What's more, teachers can choose from an array of interactive tools and digital learning resources with Europeana content to animate their classrooms and help students develop their digital and cultural competences. Working with digital cultural data and tools will improve their digital literacy, collaboration and critical thinking skills; the interaction with cultural heritage will enhance the appreciation for our cultural treasures, strengthen the sense of belonging and nurture the curiosity and tolerance to live in a global and interconnected world.

⁴

Europeana provides services and products that make it easier to find and use cultural heritage data in teaching materials. The main goal is to introduce teachers to Europeana resources for digital learning and inspire them to explore and use these resources in their classrooms through:

1. Enriched teaching materials
2. Digital learning (apps, games, platforms)
3. Pedagogical innovation

³ If the participant handed in their work to get it published on the Teaching with Europeana blog (<https://teachwittheuropeana.eun.org/>), then there is a third round of review by the course moderator.

⁴<https://www.etwinning.net/eun-files/Online%20E2%80%93%20eTwinning%20publication%202024.09.2018.pdf> - p 38 and 39



And in particular, we took a closer look at the MOOC *‘Europeana in your classroom: building 21st-century competencies with digital cultural heritage’*

Teachers in secondary education do not always have access to digital cultural heritage resources in their classrooms, for example because those resources are not easy to find and there are transaction costs for publishers and educational and learning services. As a result, teachers cannot fully utilize the potential of the resources available to deepen their students’ understanding of a shared heritage or to shape innovative and inspiring future classrooms.

1.3 Objectives of this assessment

This report documents the outcomes of a Social Return on Investment (SROI) analysis, carried out in July and August 2019. It serves a number of purposes:

- to give a clearer picture of the impact that the MOOC “Europeana in your classroom” produces;
- to give key stakeholders a better understanding of the way value is created by engaging in the analysis;
- to contribute to strengthening of the M&E system of the Europeana Education programme. The findings of the SROI could lead to a better understanding of which indicators need to be monitored in future.

By comparing the costs of designing and administering the MOOC, as well as any other resources leveraged into it, with the estimated benefits to the main stakeholder groups, this report aims to estimate the Social Return on Investment created.

2. The SROI methodology

In this assessment we are trying to find evidence for the assumption that engagement with the education work of Europeana in general and participation in the MOOC in particular, produces an effect of some kind, whether it is immediate or long term, direct or indirect.

This case study aims to assess the impact of offering a free MOOC to the professional development of participating teachers with specific reference to their:

- Access to digital cultural heritage resources
- Professional network
- (Pedagogical) competence and skills
- Job satisfaction

2.1 About Social Return on Investment

SROI is a framework for measuring and accounting for a broad concept of value: not only financial, but also social and environmental value. A SROI analysis documents the value changes (economic, social and environmental impacts) that are experienced by different stakeholders and expresses these values in one single framework.

SROI measures change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. This enables a ratio of benefits to costs to be calculated. For example, a ratio of 3:1 indicates that an investment of 1 euro delivers 3 dollars of social value. This 3 dollar return consists of cost savings as well as soft outcomes that have been monetized, such as job satisfaction.

It is important to keep in mind that SROI is about value, rather than money. Money is a common unit and as such is a useful and widely accepted way of conveying value. In the same way that a business plan contains much more information than the financial projections, SROI is much more than just a number. It is a story about change, on which to base decisions, that includes case studies and qualitative, quantitative and financial information.

This report values the seven principles of the international SROI Network: involve stakeholders; **understand what changes, value the things that matter; only include what is material; be transparent; and verify the result.**⁵

3. The process

This SROI analysis was conducted during July and August 2019. The scope, stakeholder analysis, and change pathways were created in a participatory manner and in close consultation with Europeana programme staff. Subsequently the outcomes were validated with stakeholders: teachers and the moderators, and European Schoolnet. They were questioned on the most important changes they expected and were challenged to make them

⁵ <http://www.thesroinetwork.org/what-is-sroi>



more specific and concrete by means of further questioning (so *what?*) and probing. Finally, the outcome areas were prioritised and the top four were identified as a priority for this report.

In the following paragraphs we will further outline the six steps we followed in the process:

3.1 Scope

This SROI study covers the period from 2018 to 2019. The scope includes the MOOCs delivered in English, Spanish and Portuguese. The SROI is an evaluative study, which means that it was conducted retrospectively and based on outcomes for stakeholders that had occurred already.

3.2 Stakeholders - who experiences change?

Who changes as a result of our activities? In other words, who are our stakeholders? The stakeholder analysis gives information about the different people and parties that are affected by the MOOC and vice versa. Stakeholders are defined as people or organisations that contribute to or experience change, whether positive or negative, as a result of the MOOC. The main stakeholders reached by the MOOC are:

- Teachers
- Delivery partners
- European Schoolnet
- Ministries of Education
- Europeana
- Students

Central in the SROI analysis is the totality of contributions that these main stakeholders make to the execution of the MOOC and the different benefits they experience. Based on a discussion with the team at Europeana and after review of the key documents and stakeholder interviews, it was decided which stakeholders experienced material change (meaning relevant and significant outcomes). Subsequently, they were included in the SROI analysis. In this section, an overview is presented of the key stakeholders.



Stakeholder	Description	Method of engagement	Impact valued in SROI analysis	Reason for materiality decision
Teachers	From several surveys, we know that the average educator interested in Europeana resources is a professional with a background in secondary education, teaching history and language learning subjects, with more than ten years of experience, and looking for bringing innovation into their practice. Regardless, the proportion of teachers of primary education remains fairly steady at around 30%, which indicates a significant interest in this group in the pedagogical use of Europeana content.	Interviews and post participation survey	Yes	The teachers are the participants in the MOOC and the primary and intended beneficiary of the course. Therefore they are the most material stakeholder and it is expected that value is created for them.
Course moderators	The course modules are moderated by teachers who are part of the Europeana Teacher Ambassador network (a Developer Teacher in 2018). The moderators answer practical questions and provide (virtual) guidance and support to participants.	Interviews	No	European schoolnet (EUN) contributes to the investment required to deliver the MOOC.
European schoolnet	European Schoolnet is a key stakeholder involved both in the design as well as the delivery of the MOOC .	Interviews with key stakeholders	Yes	European Schoolnet (EUN) contributes to the investment required to deliver the MOOC. EUN is tasked to provide teachers with an educational experience through the MOOC as one of its course offerings. However, EUN is not a material beneficiary, since no changes are expected for them.
Students	Students are the beneficiaries of the improved pedagogical competencies and digital skills of teachers. They are not directly affected by the MOOC and the impact on them is outside of the accountability line of Europeana, meaning outside their scope of (direct) influence.	Not engaged as part of this assessment	No	Outside of the accountability line of Europeana

Table 1: Overview of key stakeholders and materiality decision



3.3 Input

The analysis is based on costs for delivering the MOOCs in 2018 and 2019 and input from stakeholders involved in the design and delivery of the course. The results are not specific to 2018 and 2019 – they are intended to represent the investment in and value of running the MOOC in a given year.

The SROI ratio presented in this report represents the investment required to deliver a typical Europeana MOOC and the outcomes experienced by the material stakeholders involved in a typical Europeana MOOC.

Resources invested

Europeana invested €72,100 thus far in the delivery of 4 MOOCs. Europeana Foundation subcontracted European Schoolnet to deliver most of the work and implementation of the MOOCs. The delivery of the English versions in general took more time in comparison with the translated versions. This is because in the first edition, the MOOC had to be created from scratch, then updated for the second edition. The translations were carried out when the content was already agreed upon in English, therefore “saving time and costs”.

With regards to the costs and time spent per MOOC version, the distribution of time and resources can be understood as follows:

- MOOC EN first version - 48%
- MOOC EN re-run - 40%
- MOOC ES & PT - 12%

MOOC version	Costs EUN	Costs Europeana	# Participants/ Teachers	Costs per teacher
1st MOOC EN	€50,000	€1,500	1,004	€52
EN re-run	€16,000	€1,250	1,696	€10
Spanish MOOC	€20,000	€350	128	€159
Portugese MOOC	€20,000	€0	150	€133
Total	€106,000	€3,100	2,978	€37

Table 2: The costs for the MOOC ‘Europeana in your classroom’ versions in English, Spanish and Portuguese as well as the English re-run. EUN and Europeana costs are rounded down. Included participants/teachers have completed at least one MOOC module.

3.4 Data collection - who did we collect data from?

An evaluative approach to SROI needs quality outcomes data. In this study we therefore based our conclusions on a number of data sources:

- Important pieces of information were retrieved from internal documents of Europeana and from the organisation’s administration. For a list of consulted documents, see Appendix 2.

- In order to collect additional information from our key stakeholder (educators), we applied the following data collection methods:
 - We used the results of existing data available within the organisation on participants (i.e. the post participation survey - Participating teachers in the past 2-3 MOOCs have been engaged pre- and post-MOOC participation with a survey. Separate surveys had gone out to the English, Spanish and Portuguese participants)
 - Because the surveys were already closed, we were unable to add new questions to the existing pre-post participation questionnaires, so we decided to design an additional retrospective questionnaire to complement the dataset (see appendix 3 for the questionnaire) we had available from the pre- and post MOOC surveys. We designed a new questionnaire with retrospective design for teachers. The questionnaire featured a number of questions on the key outcome areas we had prioritized. We posted the questionnaire on the education community Facebook group early August 2019 with the aim to target all participants of previous MOOCs.
 - Finally 3 semi-structured interviews were held with Europeana staff, European schoolnet and a course moderator. The interviews aimed at reaching a better understanding of the value addition of the MOOC.



4. How does the MOOC produce change?

In order to ‘understand what changes’ (one of the key principles of SROI) we have to understand what value is created for or by different stakeholders as a result of different types of change. This principle requires the theory of how these changes are created to be stated and supported by evidence. We mapped the most important changes or outcomes by creating a simple [impact map/change pathway](#) for the primary stakeholders of the MOOC. We identified a number of key changes the MOOC produced for the key stakeholder: the teacher.

Outcomes	Indicators used
Improved access to digital cultural heritage for educators	Teacher reporting on improvement in: <ul style="list-style-type: none"> • Awareness of how to use and search Europeana datasets • Confidence and ability to use Digital Cultural Heritage for their lessons
Strengthened professional networks	Teacher reporting on the extent to which they experience: <ul style="list-style-type: none"> • Valuable connections with peers from across the continent • An improved professional network
Improved professional skills	Teacher reporting on the extent to which they improved: <ul style="list-style-type: none"> • Their digital, collaborative and pedagogical competencies
Improved job satisfaction	Teacher reporting on the extent to which: <ul style="list-style-type: none"> • Teaching has become more enjoyable for them

Outputs

We first looked at the direct outputs of the MOOC.

Reach and completion rates

The reach of the 2019 MOOC was quite high, over 3,000 people registered for the English version. Furthermore, the completion rate was also very high. According to a visualization of MOOC completion rates assembled by Katy Jordan (2013), the 50 investigated MOOCs have generated 50,000 enrollments on average, with the typical completion rate hovering below 10%.⁶ The fact that this MOOC has a completion rate that is almost 3 times higher than average is a significant result in itself. Finding explanations for this high completion rate was not part of the scope of this research, but it could be a result of the trusted nature of the distribution networks (EUN and Ministries of Education). Equally, it could be due to the course content itself and the value teachers find in the content as they participate, making it more

⁶ Khalil, Hanan & Ebner, Martin. (2014). MOOCs completion rates and possible methods to improve retention-A literature review. World Conference on Educational Multimedia, Hypermedia and Telecommunications.

likely that they complete the course.

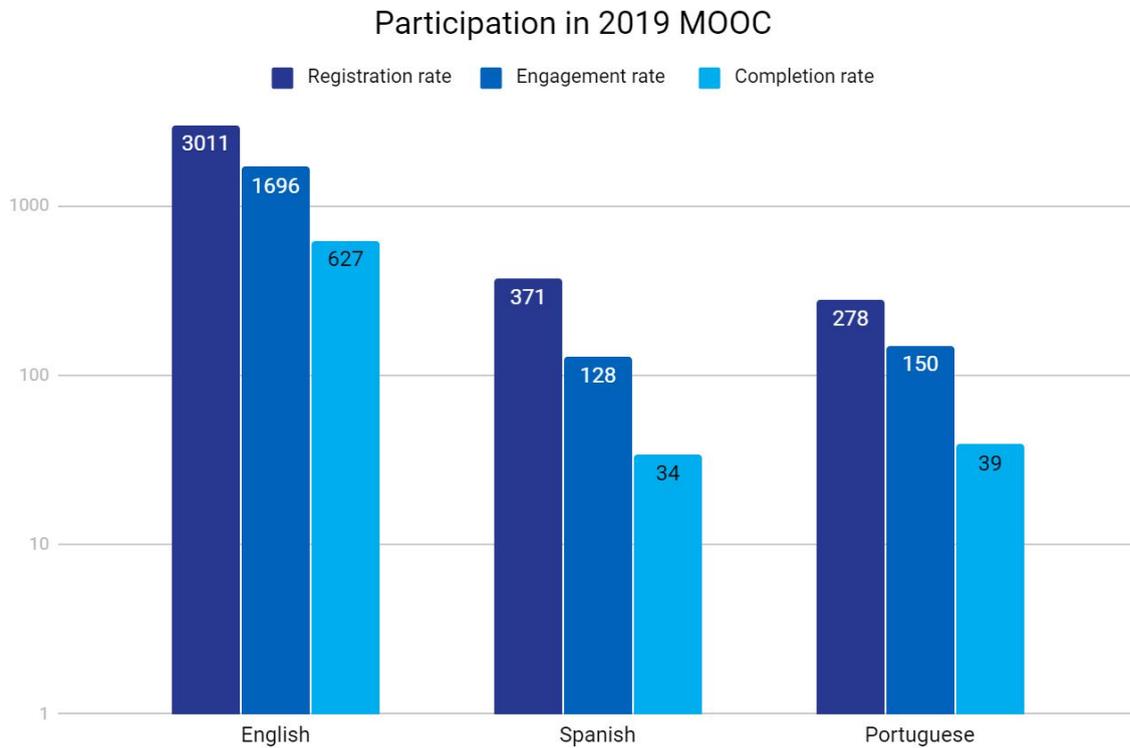


Figure 1: Participation levels of the 2019 MOOC “Europeana in your classroom: building 21st-century competences with digital cultural heritage” for the English, Spanish and Portuguese versions. Results from the post-course surveys (English, Spanish, Portuguese) 2019 (N=282).

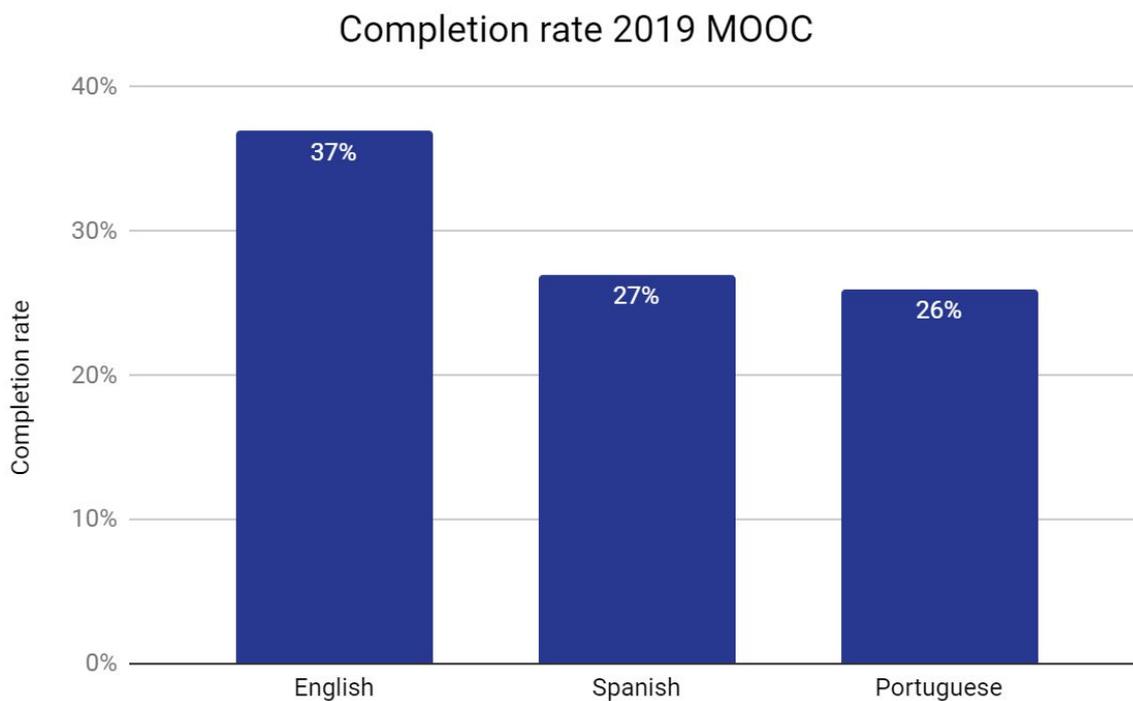


Figure 2: Completion rate of the 2019 MOOC “Europeana in your classroom: building 21st-century competences with digital cultural heritage” for the English, Spanish and Portuguese versions. Results from the post-course surveys (English, Spanish, Portuguese) 2019 (N=282).

with digital cultural heritage” for the English, Spanish and Portuguese versions. Results from the post-course surveys (English, Spanish, Portuguese) 2019 (N=282).

Course quality and satisfaction rates

The overall course net promotion scores (NPS) and satisfaction ratings are equally very high. The majority of the respondents rate the offering of the MOOC as above average or even excellent. And almost 99% of the participants rate the overall value of the course as good or very good.

How would you compare the course offering of the MOOC to other professional development courses you participated in?

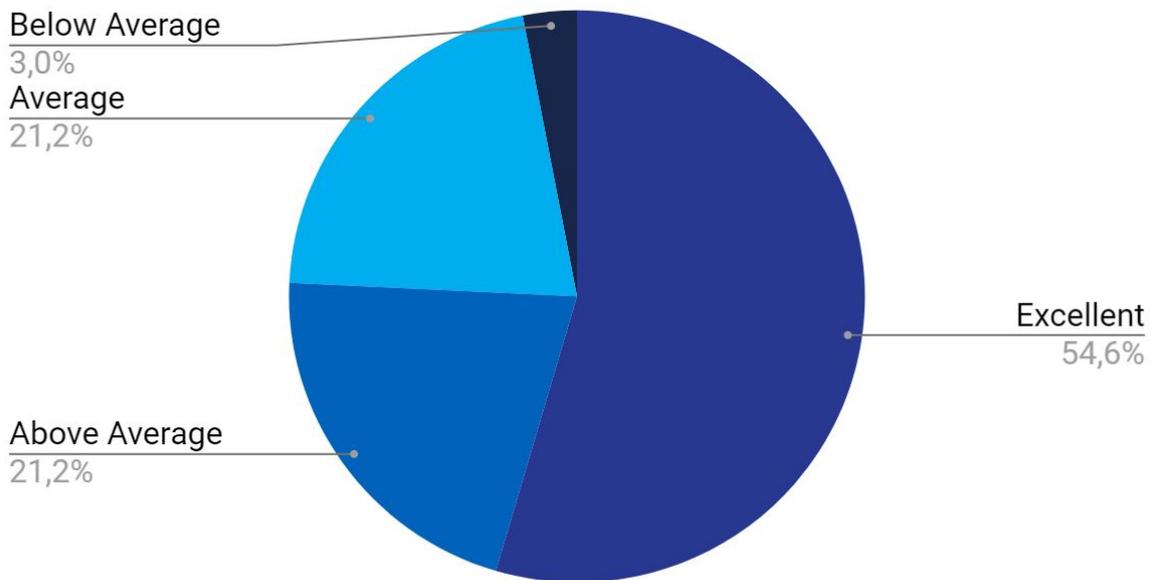


Figure 3: Answers on the question “How would you compare the course offering of the MOOC to other professional development courses you participated in?”. Results from the August 2019 survey (N=33).

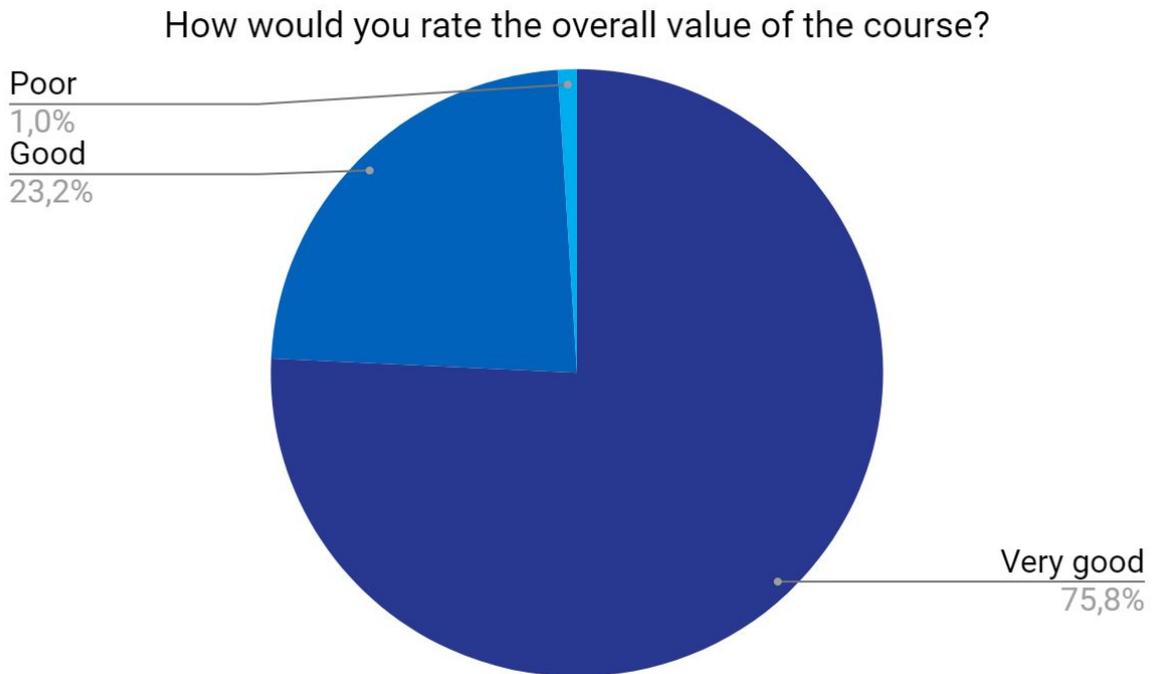


Figure 4: Answers on the question “How would you rate the overall value of the course?”. Results from the post-course surveys (English, Spanish, Portugese) 2019 (N=282).

4.1 Improved access to digital cultural heritage for educators

What we wanted to know

Making cultural heritage available and accessible and subsequently enabling people to discover interesting digital cultural content are part of Europeana’s key objectives. The MOOC has been designed with the main purpose of increasing access to digital cultural heritage content for teachers so that they can find Europeana as a trusted source of freely available high quality cultural heritage data that can be used in teaching activities. We wanted to know to what extent teachers experience a change in how often they access and use (Europeana's) digital cultural heritage resources in education as a result of participating in the MOOC. In addition we wanted to find out how much they value this access.

What we asked

After the completion of the MOOC we asked if teachers have an increased awareness about (Europeana's) cultural content as a resource for education and to what extent they feel more confident to use digital cultural heritage in their classroom. Concretely the questions we asked included:

- *“I became aware of how to use and search Europeana datasets to teach different subjects.”*
- *“The course has made me more confident and able to use Digital Cultural Heritage for my lessons.”*

- “According to you, on a scale from 1 (not important at all) to 10 (very important), how important is it that Europeana exists?”

What we found

The main outcome for the MOOCs participants was an increased sense of access to digital cultural heritage materials. We found confirmation that the MOOC is indeed highly effective in reaching one of its main objectives; equipping teachers with the confidence and ability to use Digital Cultural Heritage for their lessons. More than 90% of the participants in the English, Spanish and Portuguese MOOCs became more aware of how to use and search Europeana datasets to teach different subjects (Figure 5).

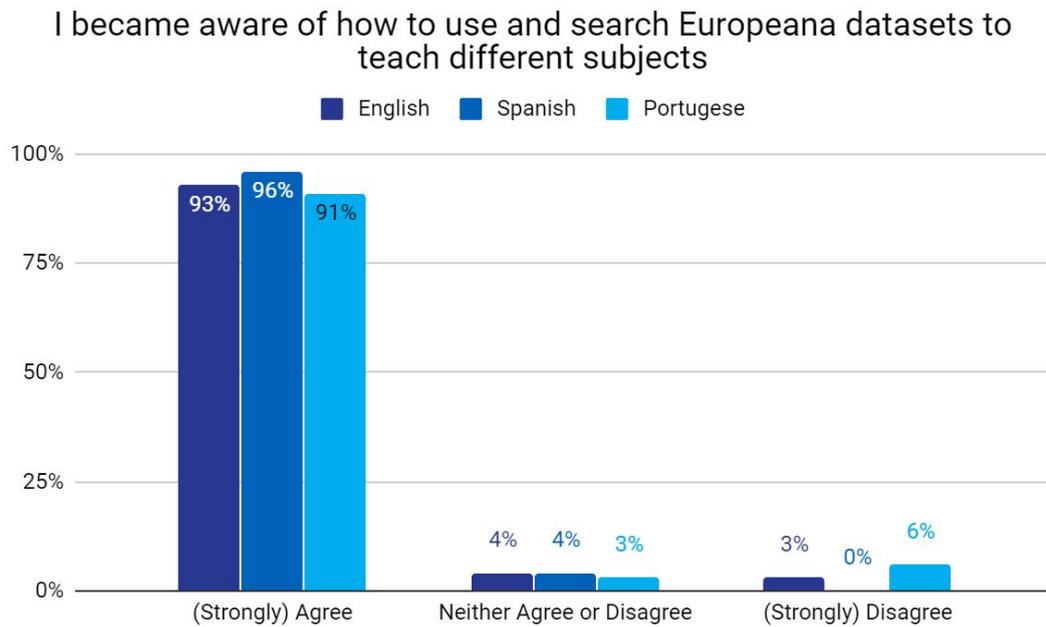


Figure 5: Answers on the statement “I became aware of how to use and search Europeana datasets to teach different subjects”. Results from the post-course surveys (English, Spanish, Portugese) 2019 (N=282).

In addition, more than 84% of the respondents we asked agreed or strongly agreed that the course has made them more confident and able to use Digital Cultural Heritage for their lessons.

The course has made me more confident and able to use Digital Cultural Heritage for my lessons

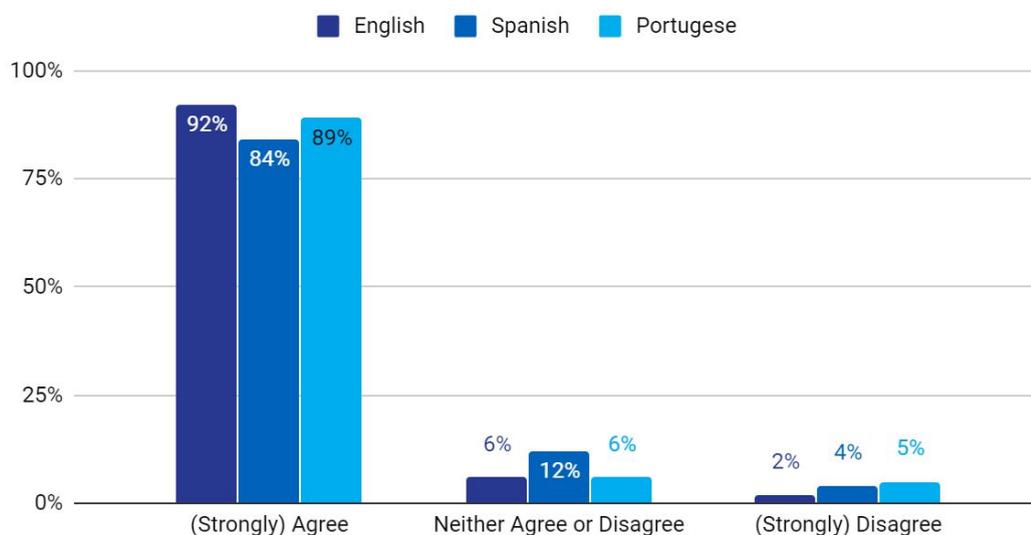


Figure 6: Answers on the statement “The course has made me more confident and able to use Digital Cultural Heritage for my lessons”. Results from the post-course surveys (English, Spanish, Portuguese) 2019 (N=282).

Finally, on average the respondents⁷ in the August survey rated the existence value of Europeana with a 9 on a scale of 10 (“very important”).

4.2 Strengthened Professional Networks

What we wanted to know

During the MOOC teachers work together with other teachers from across Europe. Teachers interact throughout the whole course, through different activities and thanks to the animation of the course moderators on the course forum and social media. They interact less so when they develop their own learning scenarios, unless they develop them in pairs, which was also possible. They become familiar with each other's work through the peer review process. We wanted to find out to what extent teachers are strengthening their professional networks as a result of the interaction they enjoy with other teachers as part of the course content.

What we asked

- “Were you able to connect with peers during and following your participation in the MOOC?”
- “To what extent do you feel that participation in the MOOC has improved your professional network?”

What we found

Teachers consulted about the impact of the program held the view that the learning scenario writing with peers as well as the peer review process was a way for them to build personal

⁷ Answers on the question: “According to you, on a scale from 1 (not important at all) to 10 (very important), how important is it that Europeana exists?”. Results from the August 2019 survey (N=36).

relationships with other teachers. More than 90% of respondents indicated that they have somewhat or to a great extent improved their professional network as a result of participating in the MOOC.

To what extent do you feel that participation in the MOOC has improved your professional network?

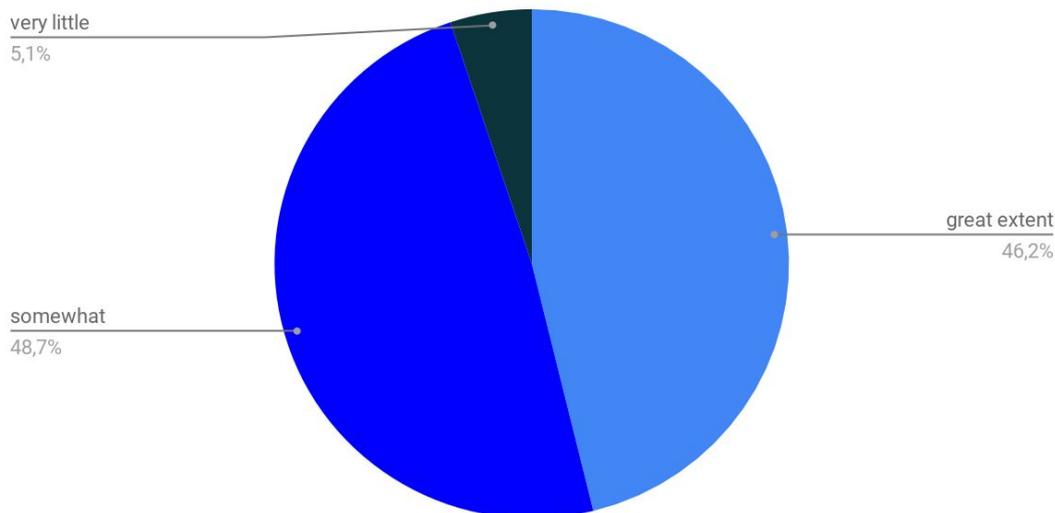


Figure 7: Answers to the question “To what extent do you feel that participation in the MOOC has improved your professional network?”. Results from the August 2019 survey (N=39).

4.3 Improved Professional Skills

What we wanted to know

Ongoing development, rapid societal changes and increased digitization in all spheres of life ask a certain degree of continuous learning on the part of teachers to be able to provide learners with the (digital) competences necessary to effectively participate in 21st century society. According to the 2013 International Computer and Information Literacy Study (ICILS) of the IEA (International Association for the Evaluation of Educational Achievement), on average 43% of teachers globally participate in external training.⁸

We were interested to learn to what extent the MOOC contributed to the professional development of teachers that participated in the course.

What we asked

We asked a number of questions pertaining to the improvement of teachers’ professional skills:

- “I have gained practical ideas of how I can improve my professional practice”
- “The participation in the MOOC has helped me to improve the quality of my work”
- “As a result of participating in the MOOC I have improved my professional skills”

⁸ (cf. Fraillon et al. 2014, p. 191).

- “What existing skills do you feel have improved from taking part?”
- “As a result of participating in the MOOC I apply new teaching techniques using Europeana’s digital cultural heritage resources”

What we found

More than 80% of the teachers acknowledged that as a result of participating in the MOOC their professional skills have improved (figure 8).

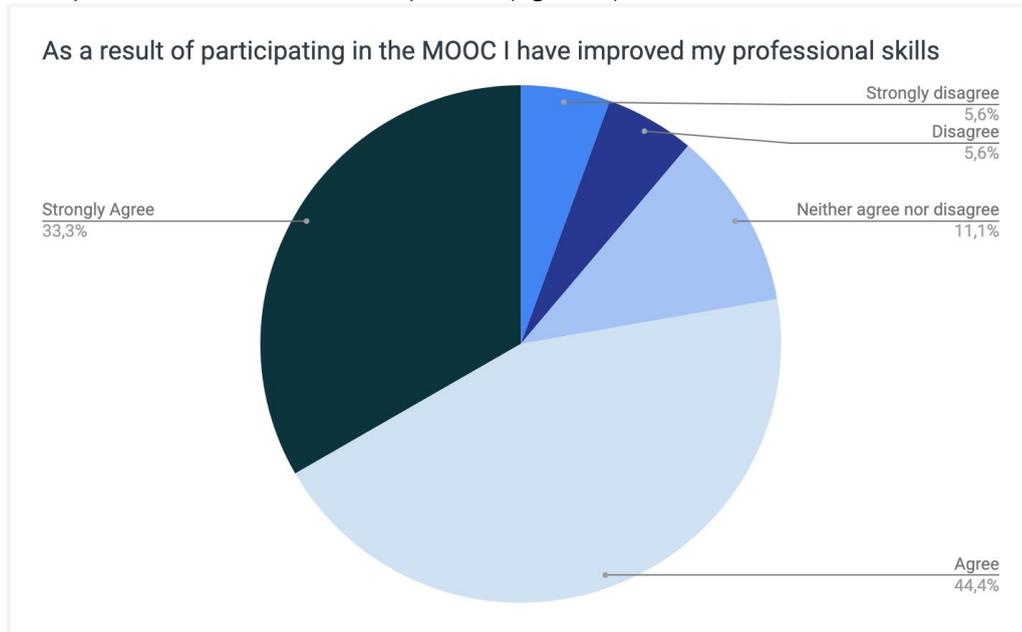


Figure 8: Answers on the statement “As a result of participating in the MOOC I have improved my professional skills”. Results from the August 2019 survey (n=36).

83% also indicates that they apply new teaching techniques in their lessons now by applying digital cultural heritage resources from Europeana (figure 9).

As a result of participating in the MOOC I apply new teaching techniques using Europeana’s digital cultural heritage resources

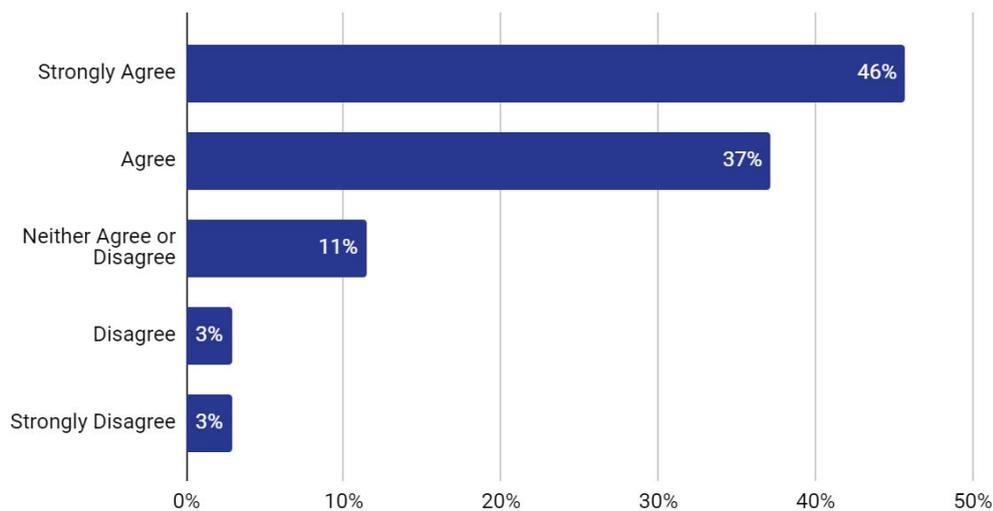


Figure 9: Answers on the statement “As a result of participating in the MOOC I apply new teaching techniques using Europeana’s digital cultural heritage resources”. Results from the August 2019 survey (n=35).

What teachers are saying

We asked teachers of examples of professional skills they have improved. A number of answers are shared below:

“More ICT technology connected with culture”

“That teaching with digital tools and digital library go in hand”

“Finding new resources, learning to cooperate and produce a new learning scenario, evaluating works of others”

4.4 Improved Job Satisfaction

What we wanted to know

We wanted to find out to what extent the MOOC contributed to the improved professional satisfaction and engagement of participating teachers. Did the tools and resources they learned during their participation in the MOOC as well as the improved access to digital cultural heritage resources make teaching more enjoyable for them?

What we asked

We asked participants the following questions:

- *“As a result of participating in the MOOC I feel more comfortable in inspiring my students”*
- *“The content of the MOOC course and the learning scenarios have made teaching more enjoyable for me”*

What we found

More than 80% of the respondents in the August 2019 survey indicated that they feel more comfortable in inspiring their students. Our assumption is that this improved confidence has a positive effect on the overall job satisfaction of participating teachers. In addition, we found that about 83% of the respondents in the August survey have indicated that they agree or strongly agree that the content of the MOOC course and that the learning scenarios have made teaching more enjoyable for them.



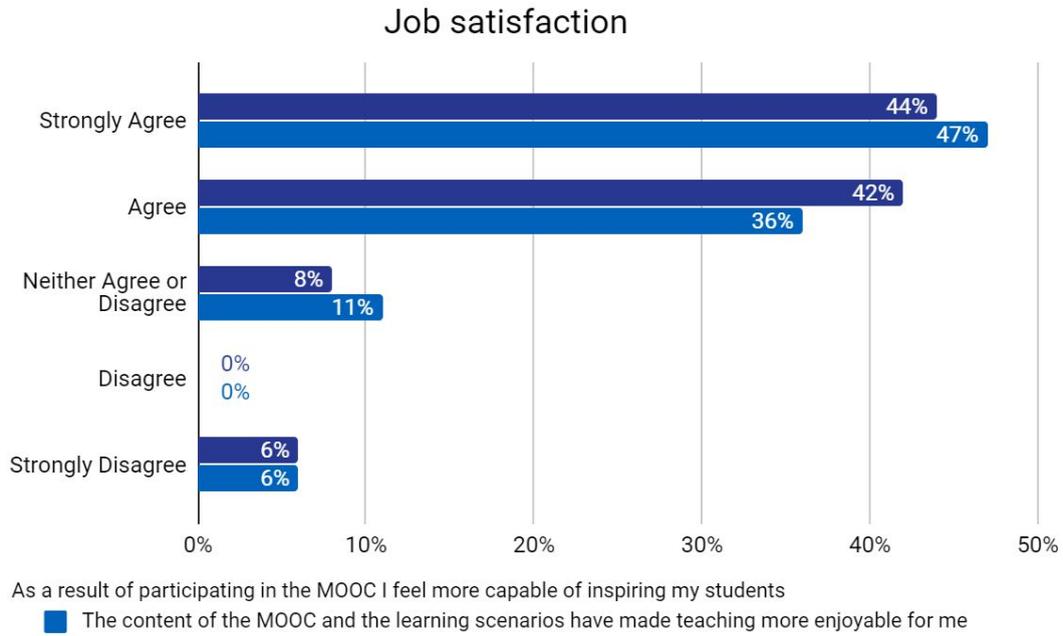


Figure 10: Answers on the statements “As a result of participating in the MOOC I feel more comfortable of inspiring my students” and “The content of the MOOC and the learning scenarios have made teaching more enjoyable for me”. Results from the August 2019 survey (N=36).

5. Calculating the SROI

This stage involves adding up all the benefits, subtracting any negatives and comparing the result to the investment. The value indicates the importance of the effects for the relevant stakeholders. Since there are a limited number of respondents, we have applied two different valuation techniques in order to estimate the social return on investment.

1. Cost-related methods (based on proxies)
2. Revealed preference methods

1. Cost-related method based on proxies

Effects were valued on the basis of proxies (estimates of values of reasonable alternatives). Within the scope and timeframe of this research, we did not manage to find a proxy for a reasonable alternative to value the outcome *improved access to digital cultural heritage*. Survey results, however, have indicated that teachers do strongly acknowledge this improved access. Therefore this effect is booked as a ⁹Pro Memoria post, meaning that the scale and value of the effect is to be decided in the longer term. This does not mean that the effect is less valuable, on the contrary.

The value of the second effect in table 3 *strengthened professional networks* was estimated by taking the price of a network course for teachers, namely €100,-. Since one cannot assume that teachers would have chosen such a course instead, the impact claim is 10%, meaning that we assume that 10% of this value is caused by participating in the MOOC. The value of the effect strengthened professional skills is thus 37 respondents * €100 * 10% = € 370. See appendix 1 for further assumptions on data and impact claim.

Finally the last effect *improved professional skills* was estimated by taking the price of a comparable professional development program for teachers with a focus on building 21st-century competencies. The program we selected as a proxy, asks a similar investment in duration (time invested) and has a similar pedagogical focus on 21st century skills development. Since one cannot fully assume that teachers would have chosen this paid course instead of participating in a freely available MOOC, we opted to be conservative in what effect we claim and therefore chose a small impact claim of 10%. Ideally this assumption will be validated with teachers during the next MOOC and following the publication of this study to underpin the assumptions made with concrete evidence and feedback.

With regard to inputs, the costs per teacher is calculated at €37 (see paragraph 3.3). Since there are 47 respondents that have taken the MOOC, the total costs amount €1,739. **When the total costs for the 47 respondents are compared to the total value of benefits (€2,666), this leads to a ratio of approximately 1.5 euro.** This means that every euro invested, to speak in terms of Social Return on Investment, is expected to yield € 1.50 in return.

⁹ Pro Memoria: denotes an effect which is relevant 'to remember' but cannot be translated into a monetary value.

Scenario 1: input per teacher vs. value of effects based on financial proxies of alternatives				
Input	#	Value (€)	Impact claim (%)	Price for respondents
Costs for MOOC	47	€ 37	N/A	€ 1,739
Effects	#	Value (€)	Impact claim (%)	Total value (€)
Improved access to digital cultural heritage	44*			PM
Strengthened professional networks	37	€100	10%	€370
Improved professional skills	28	€820	10%	€2,296
Total				€2,666
Social Return on Investment:				1.5

* based on 93% of 220 respondents from the post-course surveys (English, Spanish, Portuguese) 2019.

Table 3: Scenario 1 : input per teacher vs value of benefits based on financial proxies of alternative courses per effect.

Note that the ratio is likely to be higher in a scenario where the ultimate effect of improved access to digital cultural heritage is monetized. Secondly, one should note that these proxies are based on research and on the assumptions of the researchers. At this time these proxies have not been verified with the stakeholders to substantiate these values. These valuations should therefore be regarded as guidelines for measuring and monitoring future value for stakeholders. It is essential that the assumptions are continued to be verified by the stakeholders. Lastly, we have preferred a conservative approach to prevent overclaiming, following one of the key principles of SROI (do not overclaim). In case the impact claim is changed to 15% for both effects, which is still rather conservative, the ratio would amount 2.3.

2. Revealed preference method

For the second valuation method, participants were asked how they would compare the value of their participation in the MOOC to prices of market-traded goods (revealed preference). When asked how participants would compare the value of their participation in the MOOC, a little over 30% compared it to buying a smartphone, 60% compared it to a book, whilst the remaining 10% compared it to buying a magazine.

If you had to compare the value of your participation in the MOOC to something else, what would it compare to? Buying a..

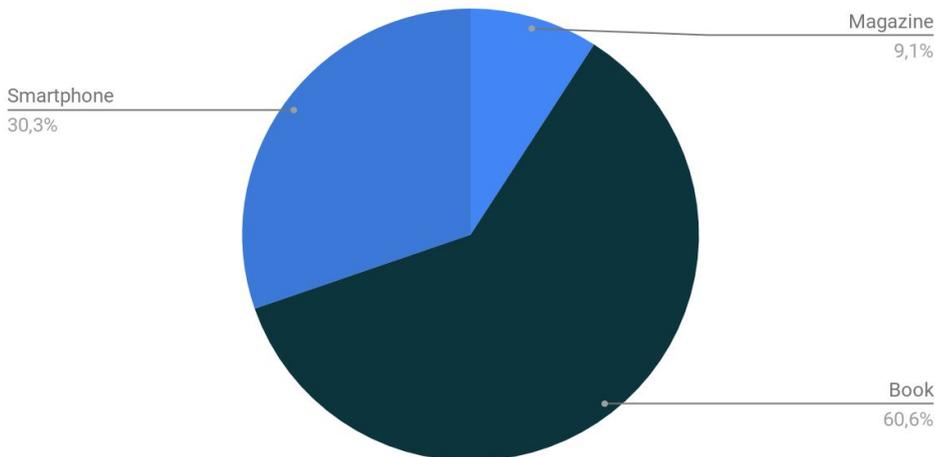


Figure 11: Answer to the question: “If you had to compare the value of your participation in the MOOC to something else, what would it compare to?” Answer from the August 2019 survey (N=36).

In 2019, the average cost of a smartphone in Europe is €373 based on data from Statista.¹⁰ The average cost of a book varies across different European member states, mainly as a result of different tax regimes and whether or not a country has a fixed book price. In this publication we decided to work with € 13.53, the average book price in the Netherlands.¹¹ Based on a search of data on prices of international magazines that are available across Europe, we came to an average magazine cost of €6.

In this scenario we have compared the costs per teacher of the MOOC (see paragraph 3.3) with the value of goods that teachers thought the MOOC could be compared to. The benefit of this approach is that it is the value from the stakeholders perspective. Moreover, the teachers have been asked to reflect on the value of the MOOC as a whole, rather than on separate outcomes.

Scenario 2: input per teacher vs. value of benefits per teacher based on revealed preference (Smartphone, book or magazine)				
Input	#	Value (€)	Impact claim (%)	Price for respondents
Costs for MOOC	47	€ 37	N/A	€ 1,739
Benefits	#	Value (€)	Impact claim (%)	Total value (€)
Comparative value of participating in the MOOC	33	€131	80%	€3,458
Social Return on Investment:				2.0

¹⁰ <https://www.statista.com/statistics/283334/average-smartphone-price-by-region/>

¹¹ Source: KVB-Boekwerk/GfK



When the total costs for the 47 respondents € 1,739 are compared to the total value of benefits € 3,458, this leads to a ratio of approximately 2 euro. This means that every euro invested, to speak in terms of Social Return on Investment, is expected to yield €2.00 in return.

The SROI of the MOOC "Europeana in your classroom"

Based on two different valuation methods one can conclude that the expected Social Return on Investment of the MOOC "Europeana in your classroom" is in the range of €1.50 and €2.00 for the analyzed group of respondents.

Interpretation of the results

In the cost-related methods based on proxies of reasonable alternatives, the primary effect *Improved Access to Digital Cultural Heritage* is booked as PM, which means that the value of this effect is relevant but will only be known in a later stage and is not expressed in monetary terms. Moreover, we have decided to follow the principle of SROI 'do not overclaim' and to take a conservative approach in deciding the impact claim for each of the effects in this report. As a result of these two factors, it can be assumed that the ratio could be even higher than reported in this analysis.

One of the key principles of SROI is to involve stakeholders. The principle states that evaluators first need to identify who those affected are and then maintain them as active participants throughout the SROI process. Ideally, a SROI analysis is a process in which all important stakeholders are represented from the beginning to the end. In this case, this was unfortunately not possible, for three main reasons:

- 1) Due to the nature of the MOOC, the main stakeholders of this MOOC are not located in one place. Participating teachers are from all over Europe and project partners such as European Schoolnet and Ministries of Education are also based across member states.
- 2) The last MOOC was offered in March 2019 and the next course is scheduled to run in 2020. This limited our current ability to optimally engage our key stakeholder, the teacher, while conducting this assessment during the summer of 2019. We had therefore just missed the opportunity to optimally engage teachers directly after they had experienced the MOOC course content
- 3) Finally the time period for this research fell right within the summer school holidays, which made it more challenging to engage teachers. However, we did our best to engage them through interviews and gather their feedback through a survey.

Because of these reasons, the involvement of stakeholders in this research was not as strong as we would have preferred. Therefore, the findings presented in this research have to be interpreted with care.



Recommendations

Following the experience with conducting a SROI analysis for one of Europeana's projects, there are a few recommendations we encourage to take into consideration for future work.

1. To improve overall alignment with the principles of SROI, it is recommended to increase the involvement of stakeholders where possible throughout the design of an SROI analysis. More practically we suggest that stakeholders are involved in the selection and validation of the outcomes to ensure that we work from their perspective as much as possible on:
 - a. What gets measured
 - b. How things get measured and valued and to what extent this is in line with stakeholders perspective
 - c. The impact claim
2. It is recommended that Europeana asks more outcome related questions as part of a general data collection activities across the organization in order to maximise the potential for data collection and move towards a deeper understanding of impact in the organisation (in, for example, surveys that are designed to collect data for purposes other than impact assessment). Working from a clear set of organisation wide outcomes can help to define which outcome related indicators to use across different projects within europeana.
3. In order to be able to monetize the value of improved access to digital cultural heritage, it is recommended that Europeana asks stakeholders directly how they value this improved access to digital cultural heritage. This question can for example be designed on a willingness to pay method: (what) would people be willing to pay for europeana services if it had a price? We suggest this method because selecting proxies to assess the value of digital cultural heritage proved to be very complex. It is therefore preferable to ask stakeholders this question directly.



Appendix 1. Data and Assumptions

Descriptions of the data and assumptions used in the calculation of the SROI are provided in the table below. These descriptions are provided so that the rationale behind the SROI is transparent and all inputs can be verified.

This analysis was based on the following data sets:

- Course registration and participation (started/completed) data - collected and analyzed by European Schoolnet
- Data collected via 2 surveys completed voluntarily before pre and after post the English (rerun), Spanish, Portuguese MOOC - collected and analyzed by European Schoolnet
- Data collected in August 2019, through a survey distributed through the facebook participants group

	Description	Value	Rationale	Source
Improved access to digital cultural heritage resources				
			We booked this outcome as Pro-Memorie	
Strengthened professional networks				
Proxy	Cost of attending a networking course	€100 per teacher	In the MOOC participants do not see each other physically and course is not primarily focused on networking. On the other hand: participating teachers work together quite intensively during the coursework and arguably have prolonged interaction with peers, as compared to a course solely focussed on networking.	http://www.european-net.org/training-course-digital-creative-methods/http://www.european-net.org/training-course-digital-creative-methods/
Impact claim	We decided to opt for a conservative impact claim of 10%.	10%	Teachers did not choose to participate in the MOOC in order to improve their professional networks. Therefore it cannot be assumed that teachers would have chosen a networking course as an alternative to participating in the MOOC. As a result approximately 10% of the value of this outcome can be attributed to Europeana providing the central course theme, content and providing a space for teachers to connect with peers and strengthen their networks.	

Improved professional skills				
Proxies	Cost of attending a professional development program for teachers with a focus on building 21st-century competencies	€820 per teacher	Market price for a comparable professional development course that teachers could have chosen to develop their 21st century skills	https://www.teacheracademy.eu/course/21st-century-teaching-competence-based-education-soft-skills-and-creativity/
Impact claim		10%	A course with a primary objective of supporting teachers in their pedagogical development has a higher effect on skills development than the MOOC which has the objective to improve the access to the content of Europeana.	



Appendix 2: Relevant Sources

Reich, Justin and José A. Ruipérez-Valiente. "The MOOC pivot." *Science* 363 (2019): 130-131.

Khalil, Hanan & Ebner, Martin. (2014). MOOCs completion rates and possible methods to improve retention-A literature review. World Conference on Educational Multimedia, Hypermedia and Telecommunications

<https://ec.europa.eu/education/sites/education/files/document-library-docs/volume-2-2018-education-and-training-monitor-country-analysis.pdf>

https://ris.utwente.nl/ws/portalfiles/portal/5146421/NC8010244ENC_002.pdf

MOOC

[Effectiveness MOOC framework:](#)

Gamage, D., Perera, I., & Fernando, S. (2015, August). A Framework to analyze effectiveness of eLearning in MOOC: Learners perspective. In 2015 8th International Conference on Ubi-Media Computing (UMEDIA) (pp. 236-241). IEEE.

[Learning retention of MOOCs:](#)

Hone, K. S., & El Said, G. R. (2016). Exploring the factors affecting MOOC retention: A survey study. *Computers & Education*, 98, 157-168.

[Differences in MOOC learning experience between learners with high and low self-regulated learning ability:](#)

Littlejohn, A., Hood, N., Milligan, C., & Mustain, P. (2016). Learning in MOOCs: Motivations and self-regulated learning in MOOCs. *The Internet and Higher Education*, 29, 40–48.

[Wider benefits for MOOC learners and reasons for engaging with the course:](#)

Petronzi, D., & Hadi, M. (2016). Exploring the factors associated with MOOC engagement, retention and the wider benefits for learners. *European Journal of Open, Distance and e-Learning*, 19(2), 112-129.

Teachers professional development

[Continuing Professional Development \(CPD\) Framework for teachers:](#)

British Council. (2015). Continuing professional development (CPD) framework for teachers.

[Professional Development Framework for Educators:](#)

Health Education England. (2017). Professional Development Framework for Educators

[Teachers' Professional Development Model \(TPDM\) for effective teaching and learning in schools:](#)

Ravhuhali, F., Mashau, T. S., Kutame, A. P., & Mutshaeni, H. N. (2015). Teachers' Professional Development Model for Effective Teaching and Learning in Schools: What Works Best for Teachers?. *International Journal of Educational Sciences*, 11(1), 57-68.

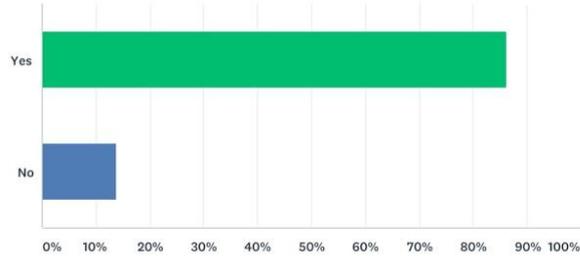


Appendix 3: Survey questions and results



Q1 Have you taken the “Europeana in your classroom” online course?

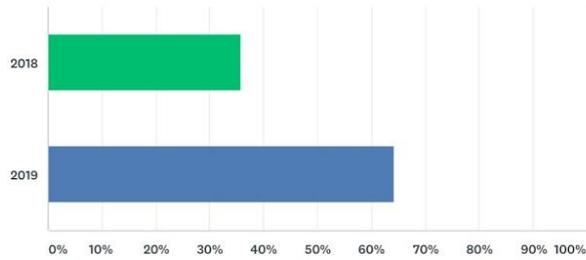
Answered: 58 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	86.21%	50
No	13.79%	8
TOTAL		58

Q2 In which year did you participate in the course?

Answered: 56 Skipped: 3



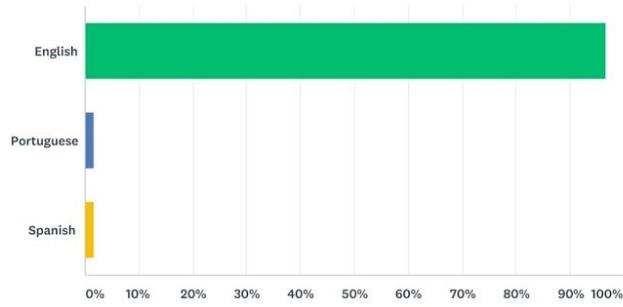
ANSWER CHOICES	RESPONSES	
2018	35.71%	20
2019	64.29%	36
TOTAL		56

Q3 In which language did you follow the course?

Answered: 58 Skipped: 1



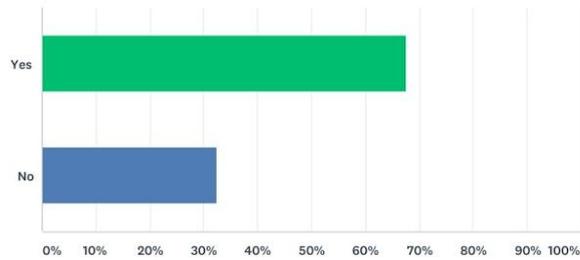
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ANSWER CHOICES	RESPONSES
English	96.55% 56
Portuguese	1.72% 1
Spanish	1.72% 1
TOTAL	58

Q4 Did you complete the course and did you receive a certificate?

Answered: 34 Skipped: 25



ANSWER CHOICES	RESPONSES
Yes	67.65% 23
No	32.35% 11
TOTAL	34

Q5 What was your motivation to participate in the MOOC?

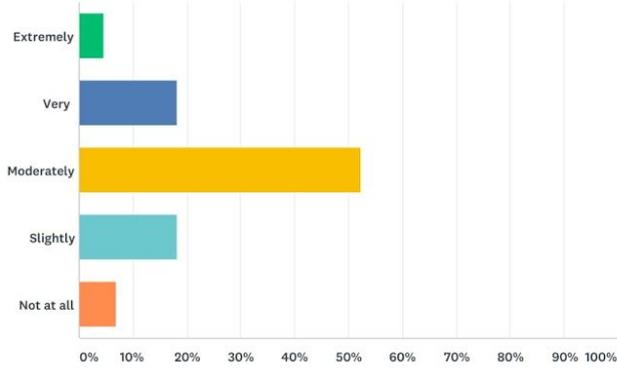
Answered: 39 Skipped: 20

Q6 How familiar were you with digital cultural heritage before participating in the MOOC?

Answered: 44 Skipped: 15



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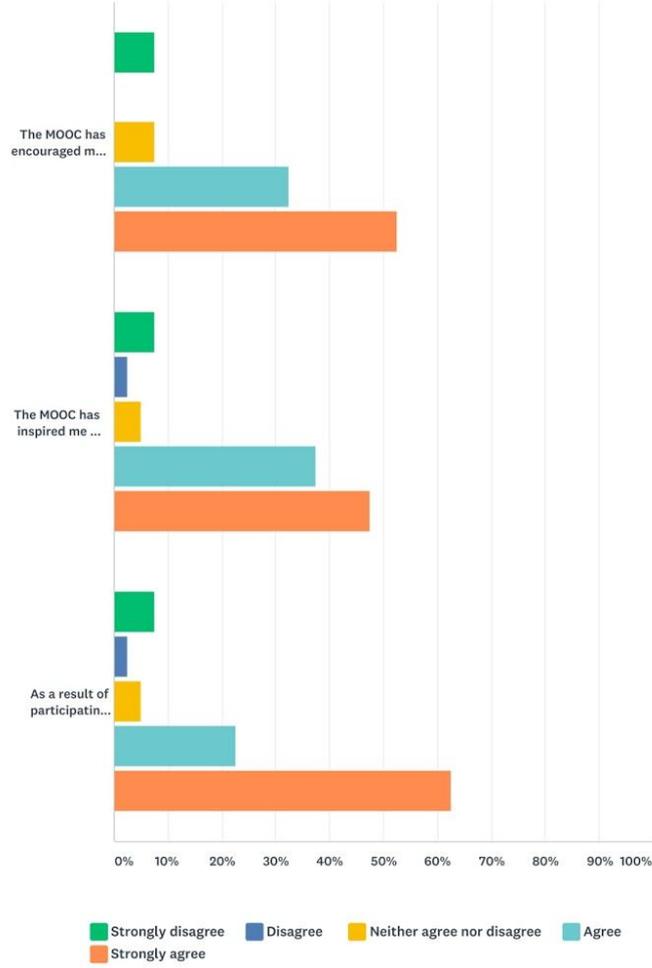


ANSWER CHOICES	RESPONSES	
Extremely	4.55%	2
Very	18.18%	8
Moderately	52.27%	23
Slightly	18.18%	8
Not at all	6.82%	3
TOTAL		44

Q7 Please indicate to what extent you agree with the following statements:

Answered: 40 Skipped: 19

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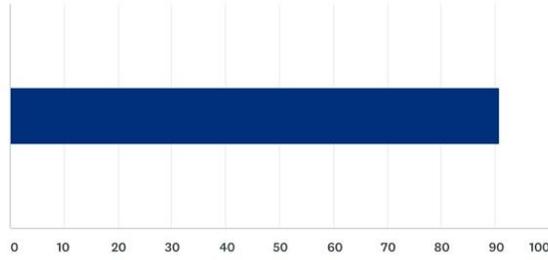
	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
The MOOC has encouraged me to learn more about digital cultural heritage	7.50% 3	0.00% 0	7.50% 3	32.50% 13	52.50% 21	40	4.22
The MOOC has inspired me to integrate digital cultural heritage in the classroom	7.50% 3	2.50% 1	5.00% 2	37.50% 15	47.50% 19	40	4.15
As a result of participating in the MOOC, I have gained more access to digital cultural heritage resources	7.50% 3	2.50% 1	5.00% 2	22.50% 9	62.50% 25	40	4.30

Q8 According to you, on a scale from 1 (not important at all) to 10 (very important), how important is it that Europeana exists?

Answered: 21 Skipped: 38



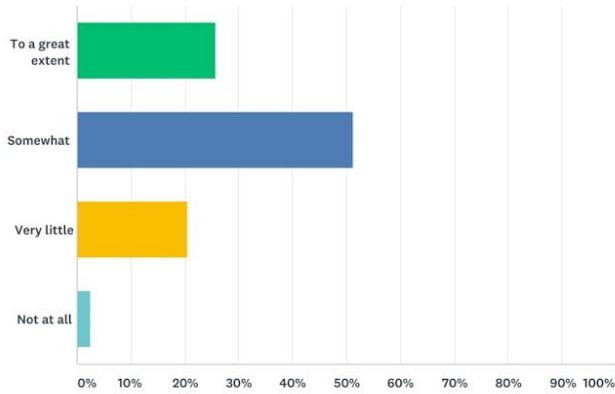
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ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	91	1,908	21
Total Respondents: 21			

Q9 Were you able to connect with peers during and following your participation in the MooC?

Answered: 39 Skipped: 20



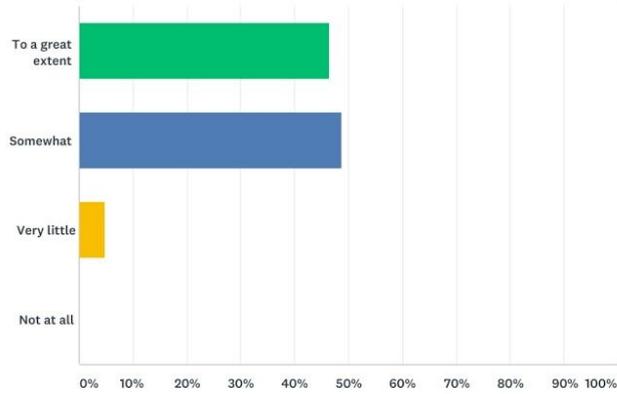
ANSWER CHOICES	RESPONSES
To a great extent	25.64% 10
Somewhat	51.28% 20
Very little	20.51% 8
Not at all	2.56% 1
TOTAL	39

Q10 To what extent do you feel that participation in the MOOC has improved your professional network?

Answered: 41 Skipped: 18



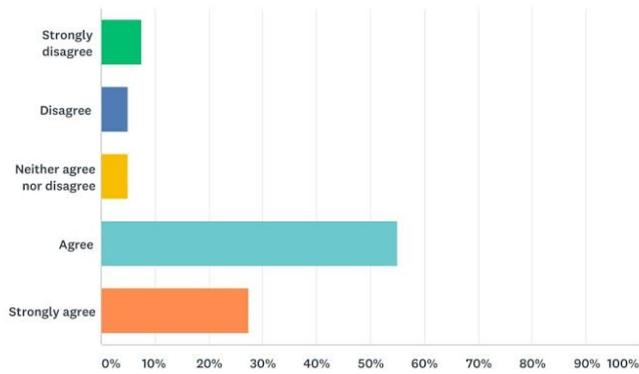
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ANSWER CHOICES	RESPONSES	
To a great extent	46.34%	19
Somewhat	48.78%	20
Very little	4.88%	2
Not at all	0.00%	0
TOTAL		41

Q11 The participation in the MOOC has helped me to improve the quality of my work

Answered: 40 Skipped: 19

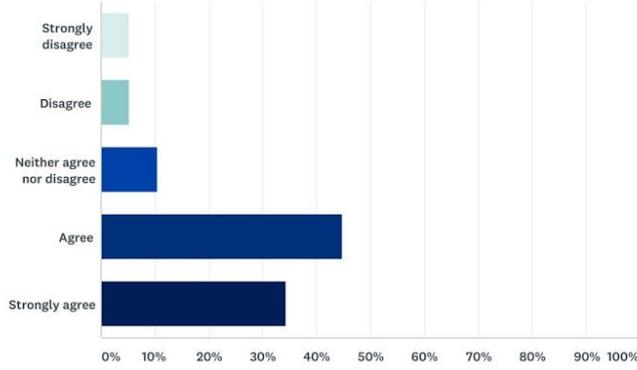


ANSWER CHOICES	RESPONSES	
Strongly disagree	7.50%	3
Disagree	5.00%	2
Neither agree nor disagree	5.00%	2
Agree	55.00%	22
Strongly agree	27.50%	11
TOTAL		40



Q12 As a result of participating in the MOOC I have improved my professional skills

Answered: 38 Skipped: 21



ANSWER CHOICES	RESPONSES	
Strongly disagree	5.26%	2
Disagree	5.26%	2
Neither agree nor disagree	10.53%	4
Agree	44.74%	17
Strongly agree	34.21%	13
TOTAL		38

Q13 What existing skills do you feel have improved from taking part?

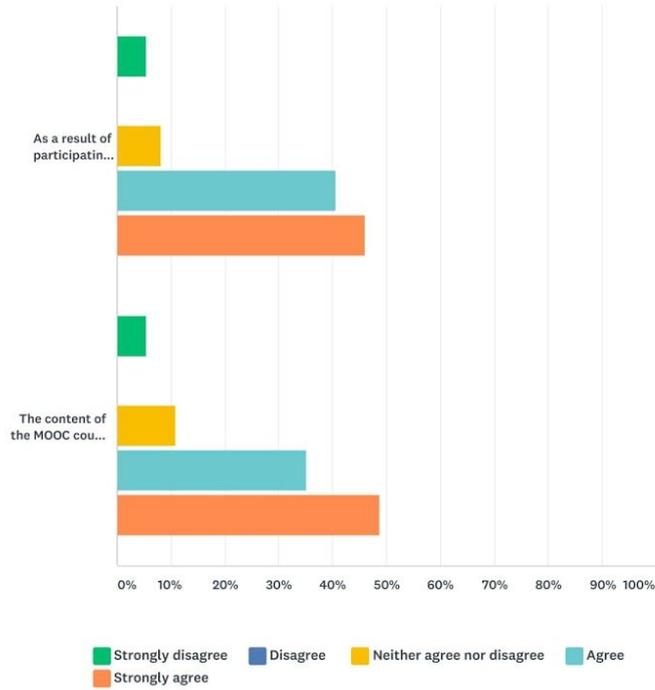
Answered: 30 Skipped: 29

Q14 Please indicate to what extent you agree with the following statements:

Answered: 37 Skipped: 22



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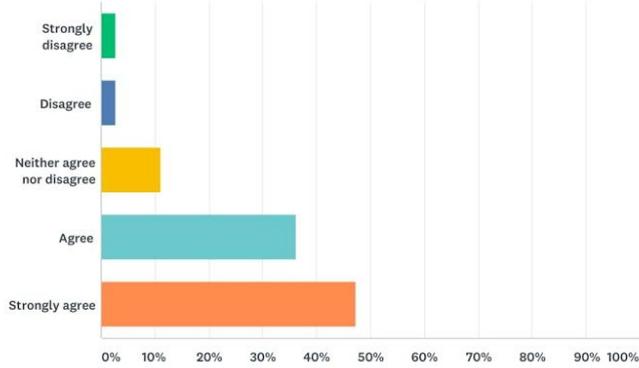
	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
As a result of participating in the MOOC I feel more capable of inspiring my students	5.41% 2	0.00% 0	8.11% 3	40.54% 15	45.95% 17	37	4.22
The content of the MOOC course and the learning scenarios have made teaching more enjoyable for me	5.41% 2	0.00% 0	10.81% 4	35.14% 13	48.65% 18	37	4.22

Q15 As a result of participating in the MOOC I apply new teaching techniques using Europeana's digital cultural heritage resources

Answered: 36 Skipped: 23



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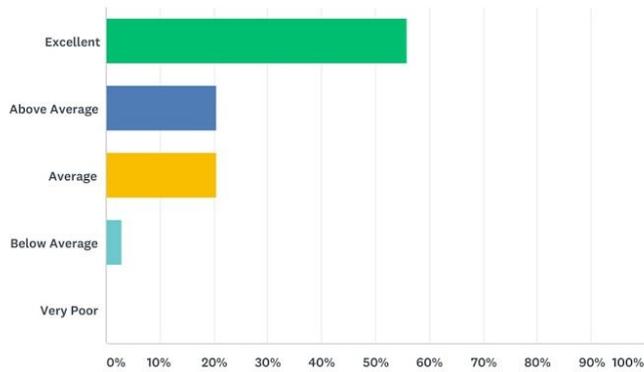
ANSWER CHOICES	RESPONSES	
Strongly disagree	2.78%	1
Disagree	2.78%	1
Neither agree nor disagree	11.11%	4
Agree	36.11%	13
Strongly agree	47.22%	17
TOTAL		36

Q16 Can you provide an example of a new teaching technique you are applying?

Answered: 27 Skipped: 32

Q17 How would you compare the course offering of the MOOC to other professional development courses you participated in?

Answered: 34 Skipped: 25



ANSWER CHOICES	RESPONSES	
Excellent	55.88%	19

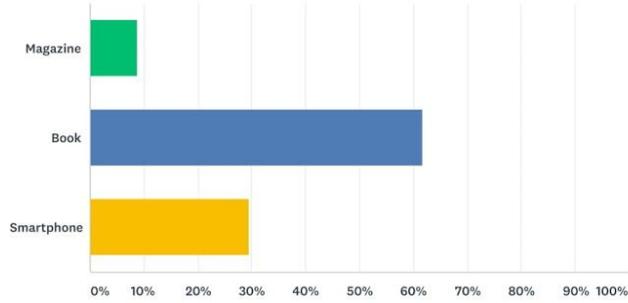


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Above Average	20.59%	7
Average	20.59%	7
Below Average	2.94%	1
Very Poor	0.00%	0
TOTAL		34

Q18 If you had to compare the value of your participation in the MOOC to something else, what would it compare to? Buying a..

Answered: 34 Skipped: 25



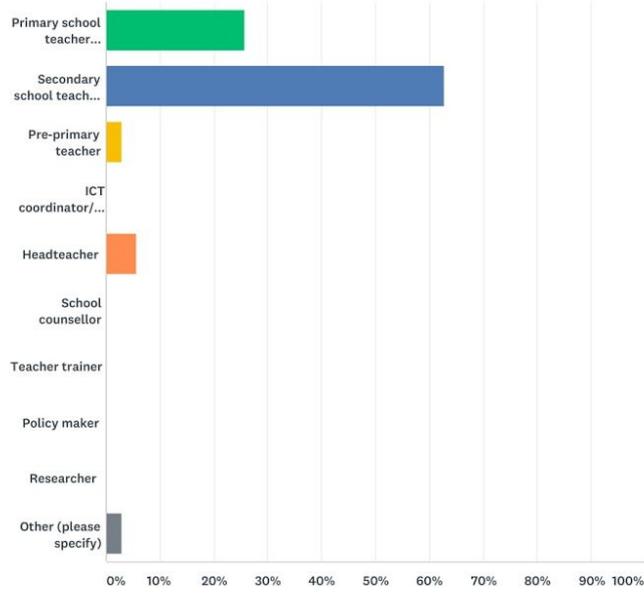
ANSWER CHOICES	RESPONSES	
Magazine	8.82%	3
Book	61.76%	21
Smartphone	29.41%	10
TOTAL		34

Q19 What is your current position?

Answered: 35 Skipped: 24



Europeana in your classroom: building 21st-century competences with digital cultural heritage - impact survey



ANSWER CHOICES	RESPONSES	
Primary school teacher (students age 5-11)	25.71%	9
Secondary school teacher (students age 12-19)	62.86%	22
Pre-primary teacher	2.86%	1
ICT coordinator/administrator	0.00%	0
Headteacher	5.71%	2
School counsellor	0.00%	0
Teacher trainer	0.00%	0
Policy maker	0.00%	0
Researcher	0.00%	0
Other (please specify)	2.86%	1
TOTAL		35

Q20 In which country are you working?

Answered: 35 Skipped: 24

