D14 – DELIVERABLE 8.6.2

Project Acronym: **OpenUp!**

Grant Agreement No: 270890

Project Title: **Opening up the Natural History Heritage for Europeana**

[Second] Report on outreach to educational sector

D14 – Deliverable 8.6.2

Revision: 2a [final]

Authors:

Jiří Frank	NM
Kamil Zágoršek	NM
Petr Daneš	NM

Project co-funded by the European Commission within the ICT Policy Support Programme		
Dissemination Level		
P	**Public**	**X**
C	Confidential, only for members of the consortium and the Commission Services	

0 REVISION AND DISTRIBUTION HISTORY AND STATEMENT OF ORIGINALITY

Revision History

Revision	Date	Author	Organisation	Description
1	2013-01-15	J. Frank, K. Zágoršek, P. Daneš	NM	First draft of the written deliverable report.
1a	2013-01-15	A. Michel and P. Böttinger (Coordination Team)	BGBM	Careful revision and comments
2	2013-01-23	J. Frank, K. Zágoršek	NM	Revision
2a	2013-01-23	A. Michel and P. Böttinger (Coordination Team)	BGBM	Editing
2a	2013-01-28	J. Frank	NM	Minor corrections (2 notes)

Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Distribution

Recipient	Date	Version	Accepted YES/NO
ODG - Outreach and Dissemination Group (AIT, BGBM, ETI, LANDOOE, MFN, MRAC, MNHN, NCBN, NM, RBGE, RBGK, UCPH, UH, UT-NHM, ZFMK)	2013-01-21	1a	
Work Package Leader WP8 (K. Zágoršek, NM)	2013-01-23	2	YES
Project Coordinator (W. Berendsohn, BGBM)	2013-01-28	2a	YES

Table of Contents

1 DESCRIPTION OF WORK

1.1 Introduction

The survey on outreach to the educational sector and its general aims were introduced and explained in the component report **"C8.6.1 – First report on outreach to educational sector",** which is annexed to this deliverable. In that component report we also provided a detailed explanation of survey questions and expected answers (annex, chapter - Explanations of provided questions and expected answers). In the present document we mainly focus on a detailed evaluation of the survey, explanations of the results and general conclusions.

The aim of the survey was to get answers from the educational sector to the following questions:

- What is the attitude of the educational sector towards multimedia content in the natural history domain and its usage?

- What is the opinion of teachers about the natural history content provided by the OpenUp! project?

- What is the opinion of teachers about the usability of the Europeana portal in education?

The survey was set up in May 2012, with its first circulation in June 2012, which provided the initial results for the component report "C8.6.1- First report on outreach to educational sector" (see annex). The main circulation was during October and November 2012. By that time, OpenUp! content was represented on the Europeana portal with more than 700,000 multimedia objects, which was a sufficient amount of content to obtain reasonable results from the survey.

Primary/elementary and secondary/high schools throughout Europe were approached in two ways: We asked project partners to use their own channels to distribute the questionnaire among schools, and we also directly contacted 2,365 primary/elementary and secondary/high schools in 9 countries: 1,802 in the Czech Republic; 324 in Germany; 54 in Austria; 50 in the United Kingdom; 42 in the Netherlands; 30 in Finland; 28 in Estonia; 23 in Belgium; and 12 in Denmark. The survey ran through the end of 2012. During this time, we received 143 responses (6 %): 121 from the Czech Republic, 15 from Germany, 2 from Austria, one from the Netherlands, and one from the United Kingdom. Three respondents did not name their country of origin. During the survey we also had several consultations with teachers and specialists from the Faculty of Education at Charles University in Prague. These consultations were very helpful for the formulation of conclusions at the end of this report. We judge that 143 responses together with the individual consultations with specialists from the educational sector are sufficient to generate a first informative result.

1.2   Survey analysis

The following sections illustrate and discuss the responses to the OpenUp! survey: Use of natural history multimedia objects in Europeana for education.

Section A

Q. 1) Are you using multimedia objects such as images, sounds (no music), or videos from the Internet for educational purposes in your classes?
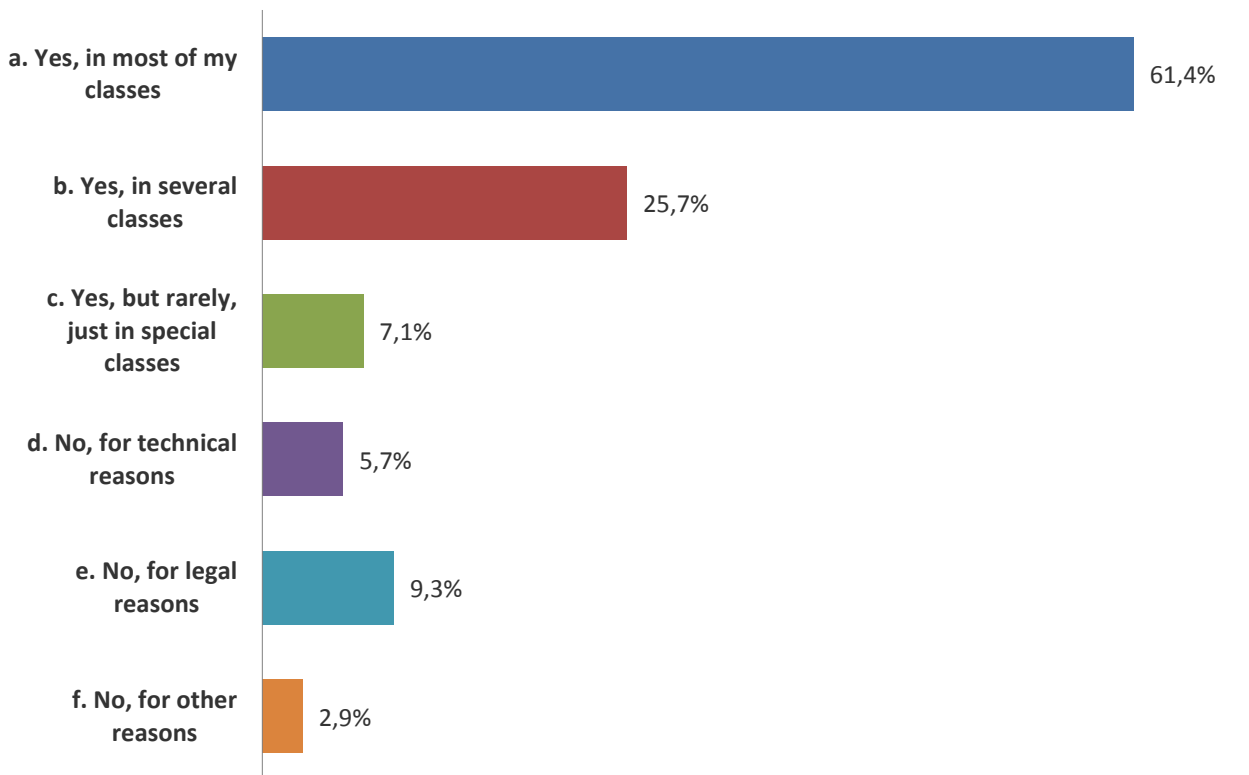

Fig. 1. Chart for Question 1.

The great majority of respondents (132 answers) use multimedia content for their educational purposes and this supports the continuous digitisation and publication of multimedia content for the educational sector. Remarkable is the relatively high frequency of legal reasons within the negative answers. Nevertheless, the amount of negative answers is low (25 answers). (The total number of answers was 157 from 140 respondents; 3 respondents skipped this question; it was possible to select multiple answers.)

Q. 2) If yes to Question 1 (a, b or c), which sources are you using when searching for multimedia content?

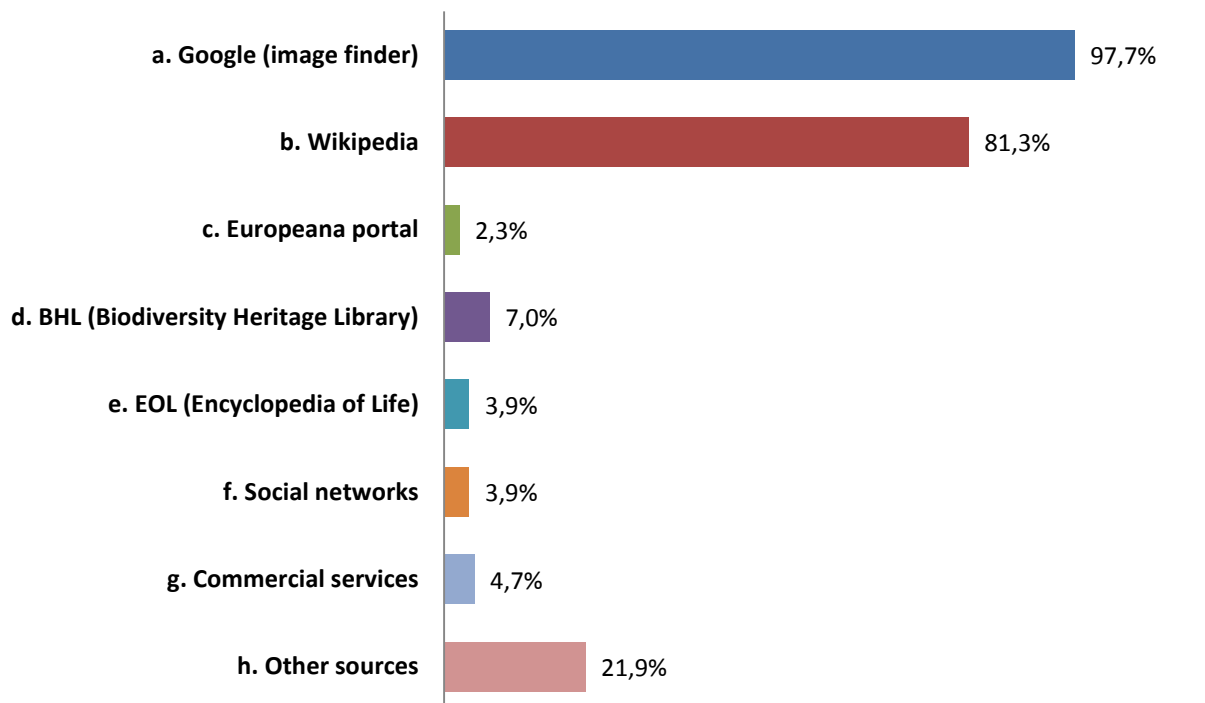|	
a. Google (image finder)	97,7%
b. Wikipedia	81,3%
c. Europeana portal	2,3%
d. BHL (Biodiversity Heritage Library)	7,0%
e. EOL (Encyclopedia of Life)	3,9%
f. Social networks	3,9%
g. Commercial services	4,7%
h. Other sources	21,9%

Fig. 2. Chart for Question 2.

The dominant sources for multimedia objects are Google and Wikipedia. The respondents mentioned an interesting diversity of "other sources" for multimedia content (see below). (The total number of respondents was 128; 15 respondents skipped this question; it was possible to select multiple answers.)

The other sources mentioned by the respondents of this survey were:

www.youtube.com

www.biolib.cz

http://wendys.cz/

high schools and universities official pages

www.wikiskripta.eu

their personal multimedia content

www.britannica.com

www.nationalgeographic.com

www.naturfoto.cz

http://rvp.cz/

http://ccl.northwestern.edu/netlogo/

www.datakabinet.cz

www.anatonomina.org

http://commons.wikimedia.org

http://biologie.webz.cz/

http://botany.upol.cz/atlasy/

http://bio1152.nicerweb.com/.

Q. 3) If no to Question 1 (d, e or f), why do you not use multimedia content in your classes?
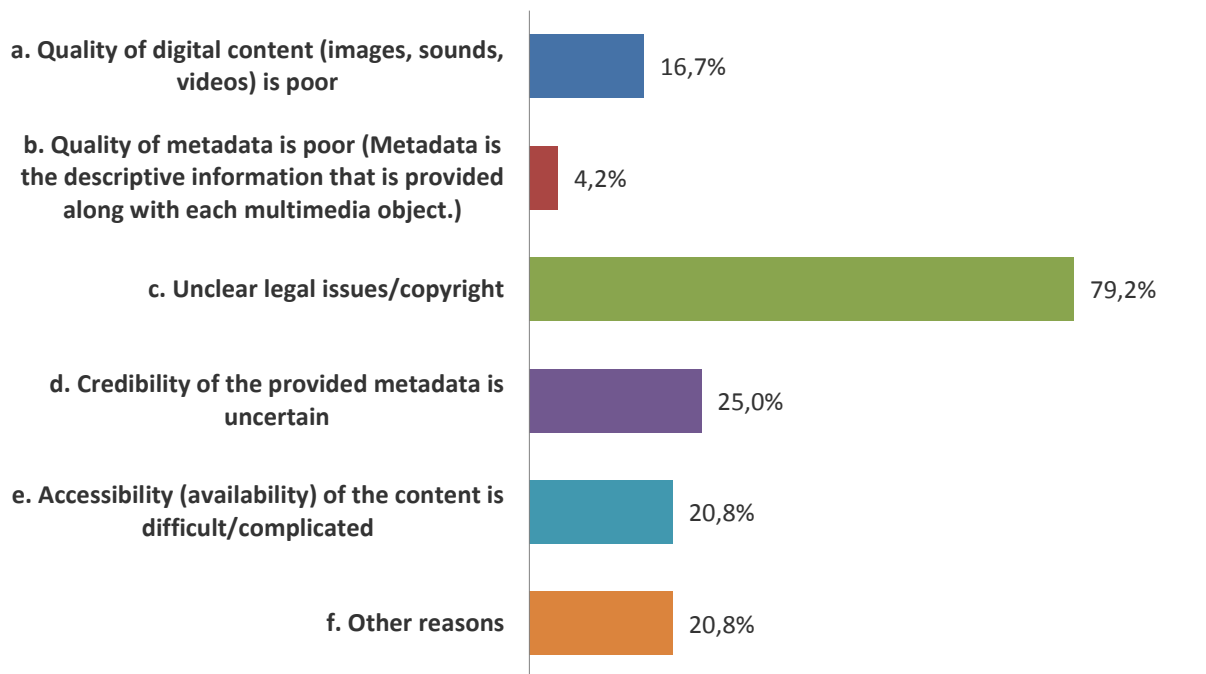

Fig. 3. Chart for question 3.

The most frequent reasons why respondents are not using multimedia content from the Internet for teaching seem to be unclear legal and copyright issues (19 respondents). One of the highest practical benefits of OpenUp! and Europeana, therefore, is their clear copyright regulations.

Uncertain credibility of the provided metadata, difficult accessibility of content, and its quality also seem to be a severe obstacle for using multimedia content in class. OpenUp! checks the quality of all data that is provided to Europeana and this is another important benefit of the OpenUp! project. In"Other reasons" technical problems with displaying content were also mentioned. (The total number of respondents was 24; 119 respondents skipped this question; it was possible to select multiple answers.)

Q. 4) Do you have any experience with Creative Commons licences (creativecommons.org/licenses/)?
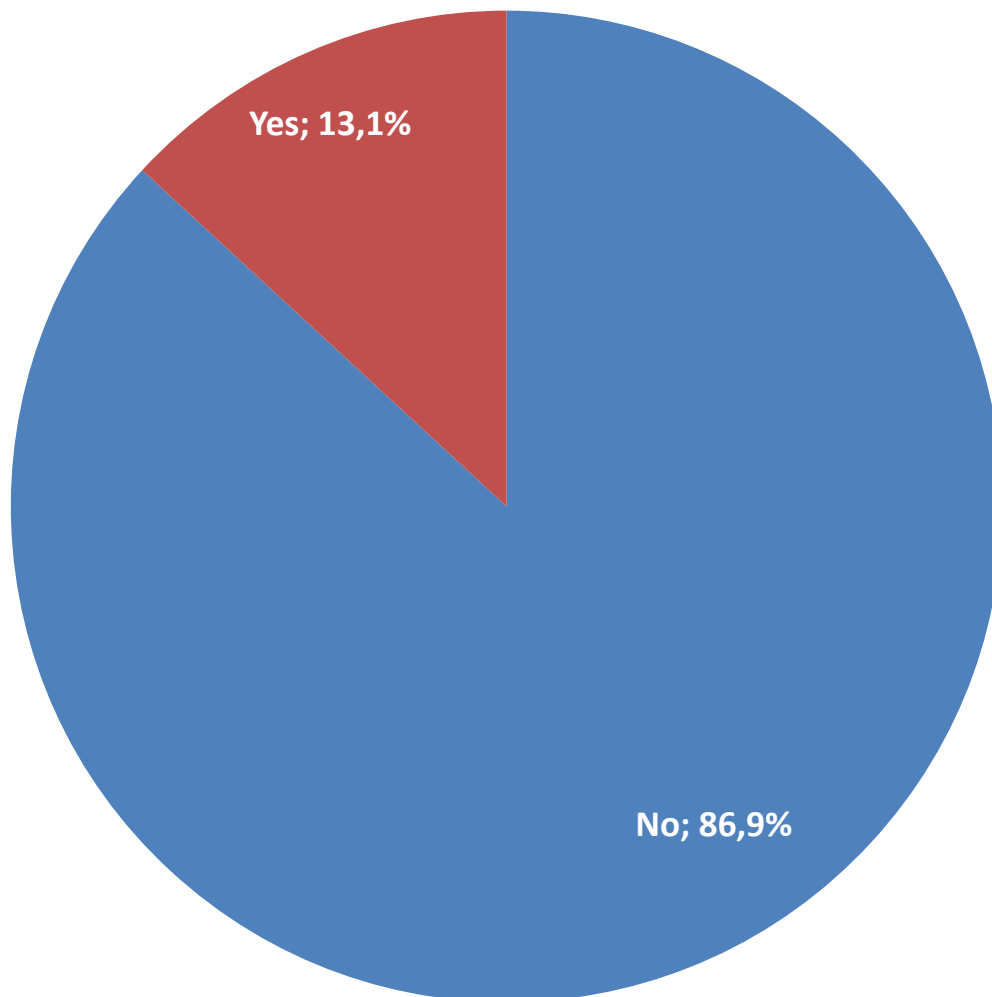

Fig. 4. Chart for question 4.

Most respondents do not have experience with Creative Commons licences (119 respondents). Respondents that have some experience (18 respondents) most frequently mentioned CC-BY (Attribution - requiring attribution to the original author) and CC-BY-SA (Attribution Share Alike – requiring attribution to the original author and allowing derivative works under the same or a similar license). The total number of respondents was 137; 6 respondents skipped this question; only one answer was allowed.)

Q. 5) The Europeana portal provides online access to multimedia objects from Europe's cultural collections including the natural history domain (www.europeana.eu/portal/). What is your opinion of this portal?

a. The search is easy to navigate
4
40
22
4
5

b. I can easily access the content
5
32
24
8
5

c. I can easily filter the result I get
3
22
39
5
3

d. The copyright statement is clearly expressed
5
19
37
5
1

e. The content quality is good
12
28
27
2
4

f. The descriptive information metadata are clear and helpful
3
30
37
3
2

g. The content can be used for education
14
41
14
5
1

■ I strongly agree ■ agree ■ neither agree nor disagree ■ disagree ■ strongly disagree
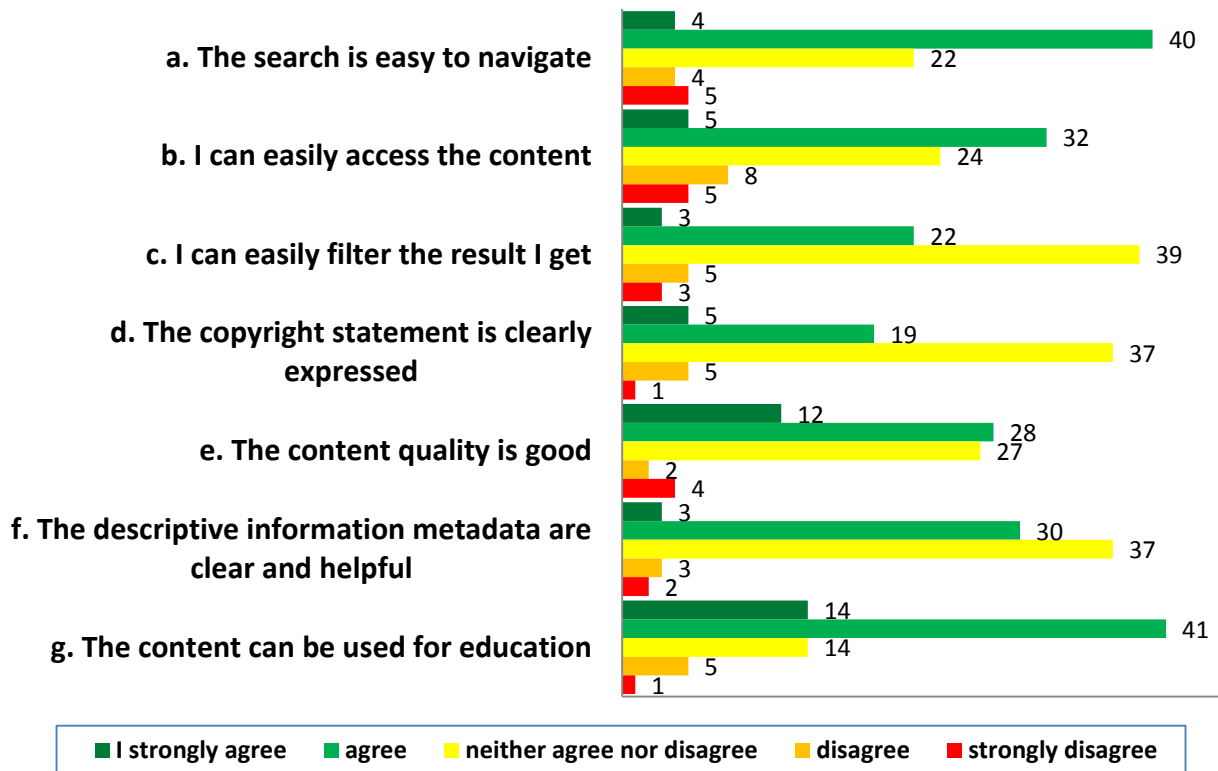
Fig. 5. Chart for question 5 (numbers in the chart reflecting the number of ratings).

The overall opinion of the Europeana portal is positive to neutral. It is important to mention that most of the respondents were seeing the portal for the first time and this is their initial reaction.

a. Most respondents rated the portal's basic search functionality **positively** (**44 positive**, 22 neutral and 9 negative ratings, from 75 respondents).

b. The content access was evaluated **mostly positively** (**37 positive**, 24 neutral and 13 negative ratings, from 74 respondents).

c. The filter question was rated **neutrally** (25 positive, **39 neutral** and 8 negative ratings, from 72 respondents).

d. Question regarding clarity of the copyright status was rated **neutrally** (24 positive, **37 neutral** and 6 negative ratings, from 67 respondents).

e. The content quality is rated by respondents mostly as **positive** (**40 positive**, 27 neutral and 6 negative ratings, from 73 respondents).

f. The clarity and helpfulness of the metadata are rated with **neutral** dominance (33 positive, **37 neutral** and 5 negative ratings, from 75 respondents).

g. Usage of content in education was the most important question, and it shows a **strong positive** rating (**55 positive**, 14 neutral and 6 negative ratings, from 75 respondents). This is a very important result for OpenUp!, since the target group of our survey was the educational sector of the natural history domain. Most of the respondents are natural history teachers (from different levels) searching terms according to their orientation/specialization.

In the rating chart was also the "I don't know/understand" rating value in case that some of the respondents did not understand the question or have no experience with the Europeana portal.

(The total number of respondents of this question was 105, 38 skipped this question altogether. The different total numbers of ratings for some questions is caused by skipping the selected ratings by several respondents. It was possible to select only one rating per answer.)

With this question, respondents also had the option to write their general opinion and comments about the Europeana portal. We received 32 comments and opinions. Following are some examples of the responses:

a. The orientation on the portal is slow, and when the teacher would like to find suitable material for teaching, it takes too much time. This reduces the potential for use of quality content on the portal.

b. Herbarium specimens are not a suitable content for education.

c. The multilingual portal is not really multilingual. For example, in the Czech language it seems that the portal is translated only in part, and the rest is still in English. Good examples are the help and navigation menus. (Note: Multilingual common names of natural history objects will be available at the end of the OpenUp! project (February 2014)).

d. Complicated or closed access for images in high resolution. Paid access for some content. According to the paid access the more valuable for the teachers are the commercial multimedia education materials.

e. The portal is not user friendly for teachers, and the quality of the content is not adequate for the time necessary to find it. It is easier to find videos on YouTube than on this portal, and of better quality and diversity. Teachers do not currently find it effective to try making use of this portal.

f. The information with the content (metadata) is very poor in comparison with Wikipedia or EOL. Just the Latin name is not enough.

(32 answers included text comments.)

Section B

Q. 6) The OpenUp! project provides Natural History multimedia content managed by specialists to Europeana, e. g., images of herbarium specimens, insect collections, paleontological and mineralogical objects, even recordings of animal sounds. This content comes from outstanding collections of European institutions like natural history museums, botanical gardens and universities. In order to investigate the success of this project and the usefulness of the delivered content for educational purposes, we would like your opinion on the natural history content in Europeana. For an overview, you can find the current status of OpenUp! content in Europeana under this link and examples of separated collections under the following links: link1; link2; link3 . The OpenUp! content is updated on the Europeana portal every two months and still continues to grow .
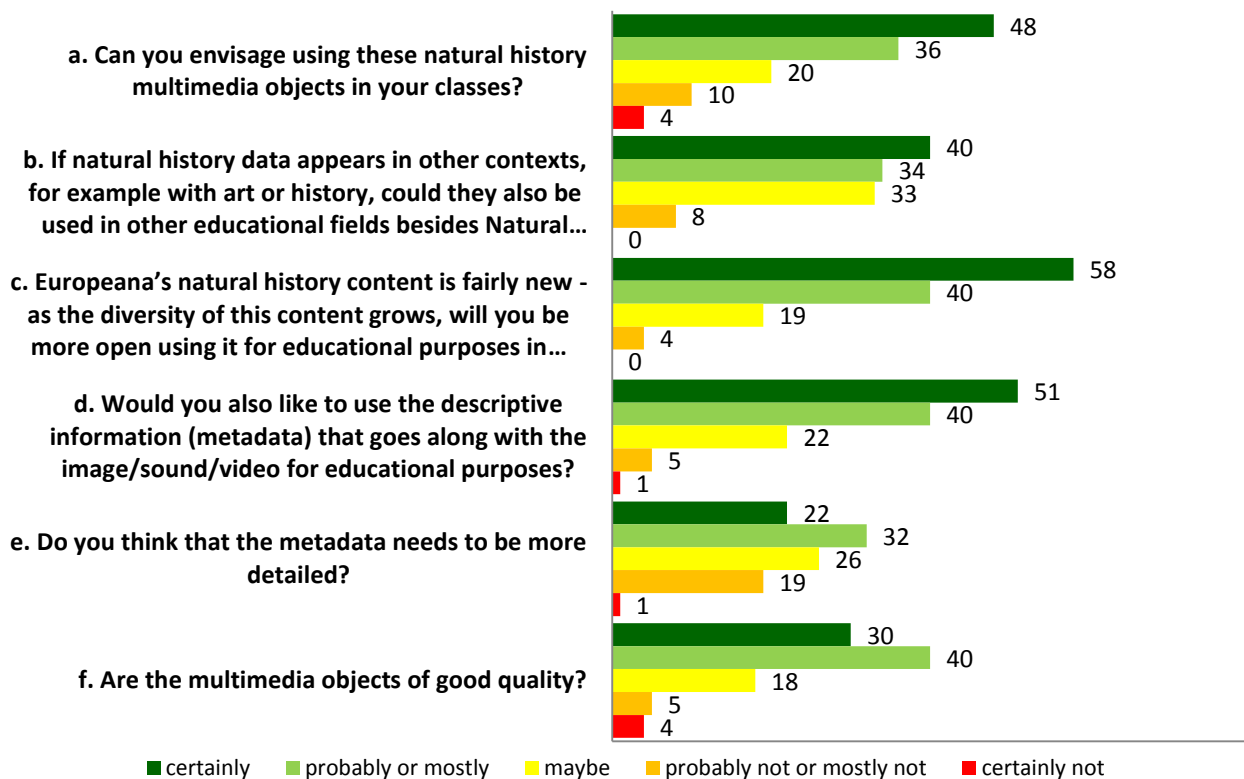

Fig. 6. Chart for question 6 (numbers in the chart reflecting the number of ratings).

Overall reactions to these most important questions were very positive. The respondents showed a positive attitude to using natural history multimedia content in education, if its diversity and amount on Europeana grows. An evaluation of individual questions follows:

a. More than two-thirds of the respondents (84 of 118 respondents) will certainly or probably use natural history multimedia objects from OpenUp! in their classes.

b. Nearly two-thirds of the respondents (74 of 115 respondents) agree that natural history content could be also used in context with other aspects, such as art or history, in other classes than natural history. This question has also a high rate of undecided responses ("maybe").

c. The majority of respondents (98 of 121 respondents) are open to use natural history content for educational purposes, if the diversity and amount of it on Europeana grows.

d. Three quarter of the respondents (91 of 119 respondents) would also like to use metadata of multimedia content for education.

e. Half of the respondents (54 of 100 respondents) would like to have more detailed metadata of the multimedia content, but an unusual high number of respondents do not (20 respondents).

f. The majority of respondents (70 of 97 respondents) agree that the multimedia objects are in good quality, but this question also includes the highest number of "I don't know/understand" answers (22 respondents).

g. The last question gave respondents the option to add a comment/opinion on usage of multimedia objects in natural history education. Eight respondents used this option and the four most relevant are listed below:

   a. The herbarium specimens are not suitable objects for education. Very valuable are the collections of insects, minerals, and palaeontology.

   b. Some of the images are in a quality too poor to be used for educational purposes.

   c. The content on the portal has a very low diversity at the moment, but I am open to use it if this status will change in the future. The most valuable for education are short videos, sounds and 3D visualizations. The metadata are very brief, it is often just the Latin name given, which is not usable for educational purposes. Common names are not included. (Note: Common names search will be available in February 2013.)

   d. The data are too complicated for use in basic schools.

In the rating chart was also the "I don't know/understand" rating value in case that some of the respondents did not understand the question or have no experience with the Europeana portal.

(The total number of respondents was 121, 22 skipped this question. Only one rating per answer was possible; 8 answers included text comments. The different total numbers of ratings for some questions is caused by skipping the selected ratings by several respondents.)

Section C

Q. 7) What additional items/tools are you using in your natural history classes?

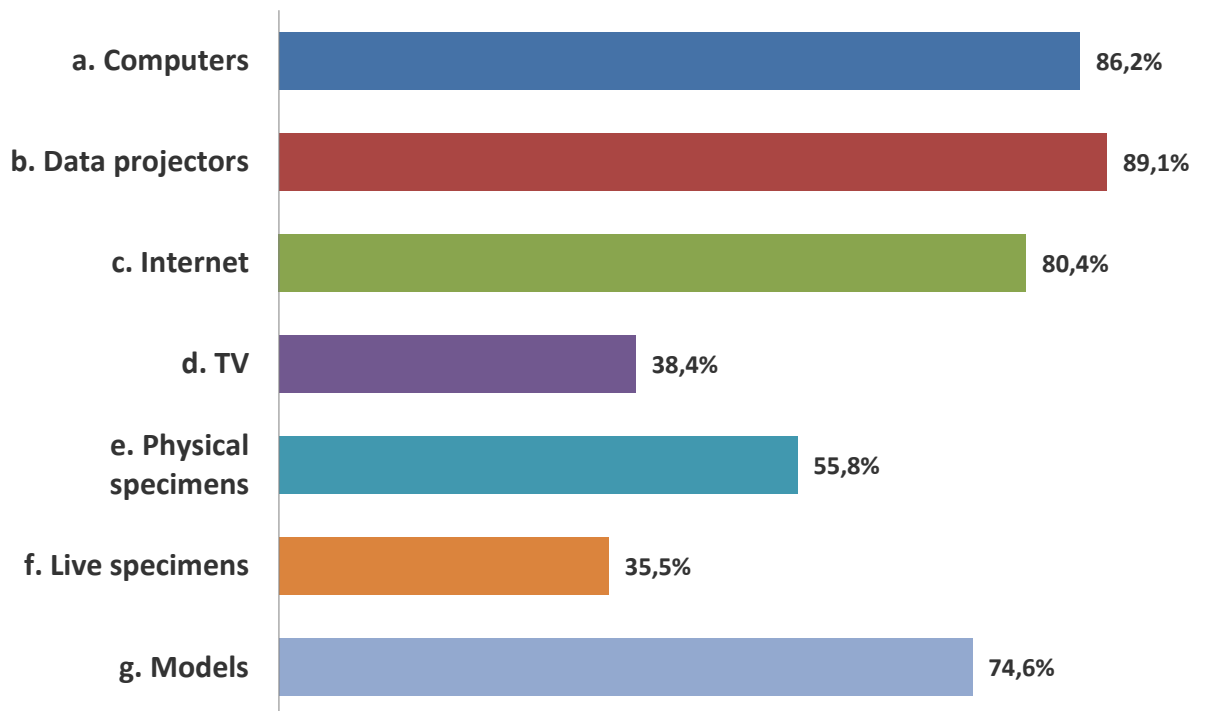|	
a. Computers	86,2%
b. Data projectors	89,1%
c. Internet	80,4%
d. TV	38,4%
e. Physical specimens	55,8%
f. Live specimens	35,5%
g. Models	74,6%

Fig. 7. Chart for question 7 (the percentage reflect the answers from the total number of respondents of this question which was 138).

Results of this question are positive in one sense, that most respondents are using computers (86 %), data projectors (89 %), and the Internet (80 %), which is the necesseary equipment for effective usage of multimedia content. This is good news; that the educational sector, at least in our group of respondents, is equipped to use the OpenUp! multimedia content. Response h was a blank text box for naming other sorts of equipment, which 17 respondents filled in. The most frequently used equipment was: microscopes, laboratories, interactive boards and literature. (The total number of respondents was 138; 5 respondents skipped this question; it was possible to select multiple answers.)

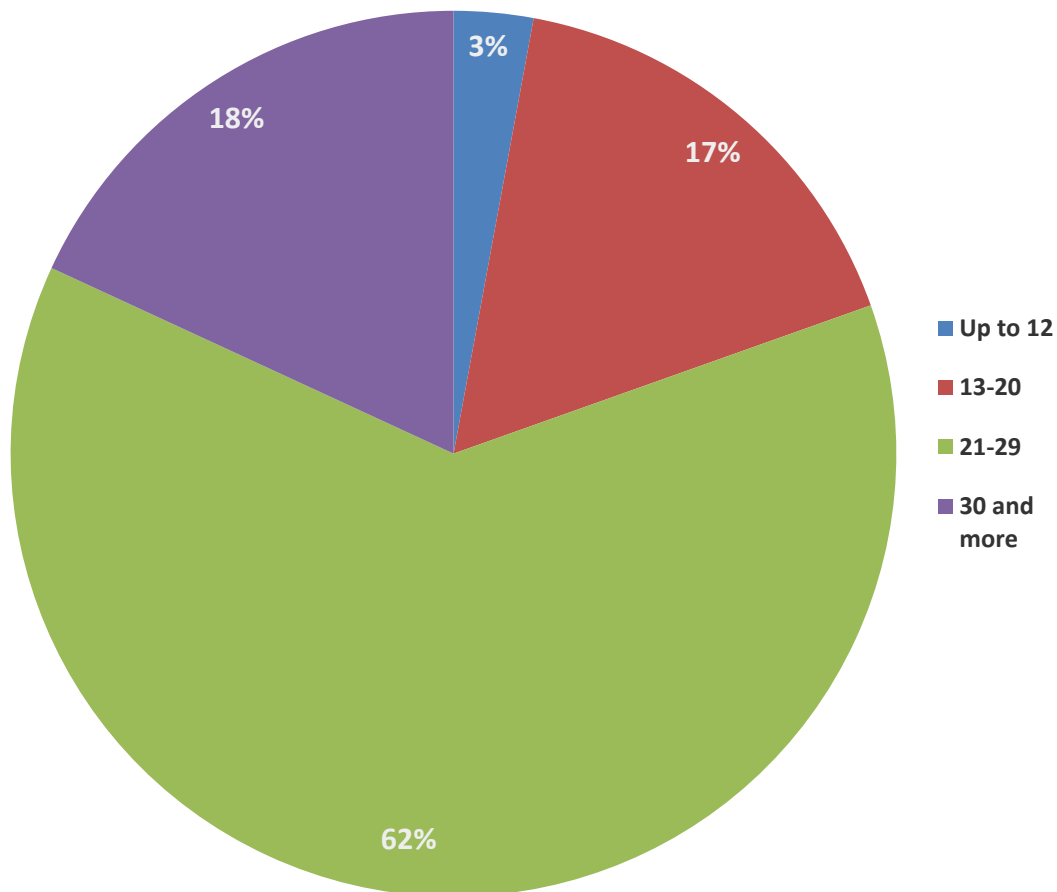**Q. 8) What is the average number of students in your class(es)?**

Fig. 8. Chart for question 8.

The most frequent size of classes is 21-29 students (62 %). (The number of answers for this question was 138; it was possible to select only one answer.)

Q. 9) Which country are you from?

The total number of respondents were 143:

121	Czech Republic
15	Germany
2	Austria
1	Netherlands
1	United Kingdom

Three respondents did not answer this question.

Q. 10) How old are you?

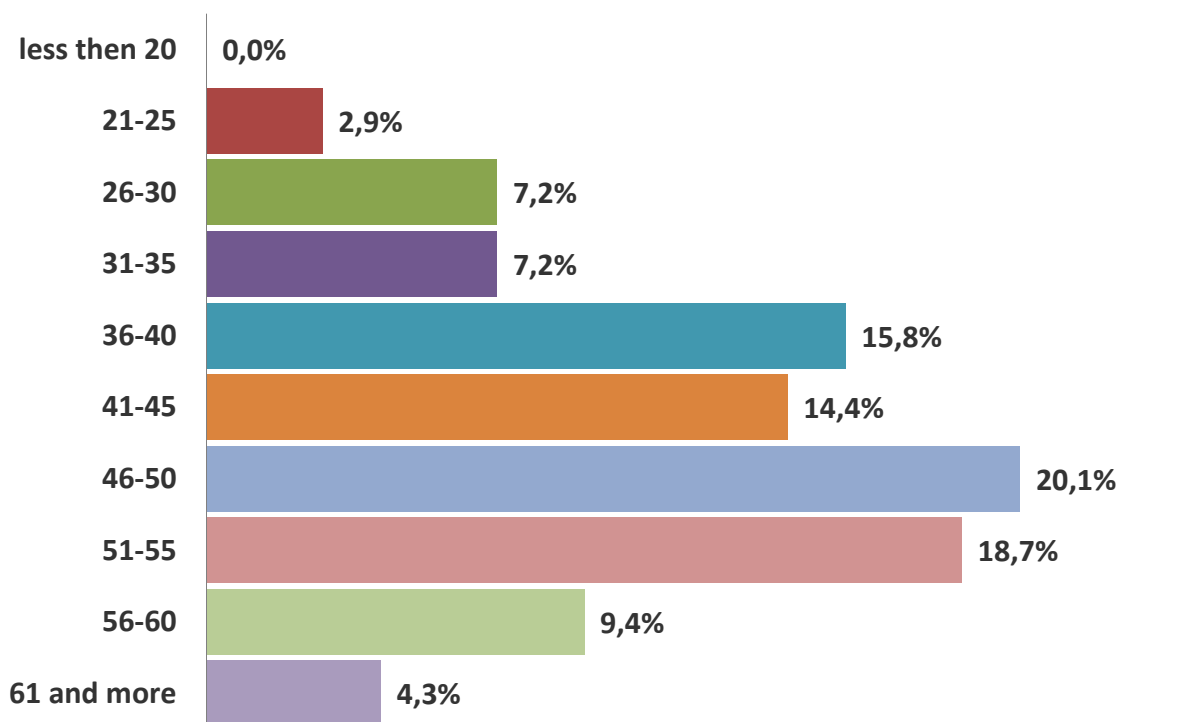|	
less then 20	0,0%
21-25	2,9%
26-30	7,2%
31-35	7,2%
36-40	15,8%
41-45	14,4%
46-50	20,1%
51-55	18,7%
56-60	9,4%
61 and more	4,3%

Fig. 10. Chart for question 10 (the percentage reflect the answers from the total number of respondents of this question which was 139).

Half of the respondents (73 respondents) are 46 years and older with the most frequent age of the respondents being between 46-50 years (28 respondents). We expected that the use of newer technology would be limited in higher age groups, and it is a pleasant surprise to see that this is not the case (please refer to Q7). (The total number of respondents was 139 respondents; 4 respondents skipped this question; it was possible to select only one answer.)

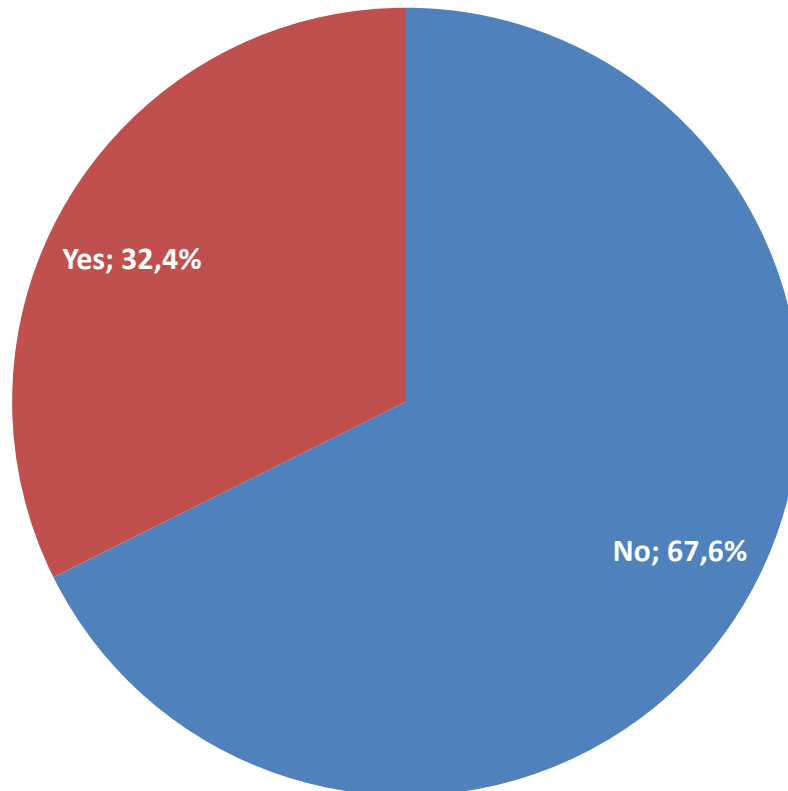**Q. 11) Do you have experience with any EU (educational) projects?**

Fig. 11. Chart of question 11 (the percentage reflect the answers from the total number of respondents of this question which was 136).

One third of the respondents (32 %) have experience with EU (educational) projects, whereas two thirds (68 %) have not. For positive answers, we had a text box in which to name concrete projects with which the respondents have experience. We collected 40 responses, with almost the same number of projects. Such diversity in project participation is excellent news and shows a wide range of interest on the part of our respondents. The most common projects mentioned were Comenius: Europe in the classroom and the Leonardo da Vinci programme for vocational training. (The total number of respondents was 136 respondents; 13 respondents skipped this question; only one answer was allowed.)

1.3 Conclusions

1. What is the attitude of the educational sector towards multimedia content in the natural history domain and its usage?

Very good news from the survey is that the majority of the respondents (88 %) actively use multimedia content in their classes (Q1) especially when considering the rather high average age of the respondents with more than half being 46 years or older (Q10). This result is also supported by the fact that the majority of respondents' classes (>80 %) are equipped with technology that allows easy display of multimedia content, like computers, data projectors and Internet connections (Q7). With a relatively high average number of students in classes - between 25 and 29 students (Q8), it is also easier to hold students' attention with interactive and multimedia tools than with individual tools and physical objects like specimens.

The great majority of respondents use Google (98 %) and Wikipedia (81 %) as their primary means of locating multimedia objects and data (Q2). Google's highest rated links often point to Wikipedia. This result can be interpreted to mean that another robust source is needed or that Google is going to also index Europeana content in the future, thus providing access to this content via its search option. But the main message is probably that teachers have not much experience with copyright or licensing of content (Q4), which they naturally use just for educational purposes. This result is supported by the low number of negative answers in Q1, even if the main reason was the unclear legal issues.

2. What is the opinion of teachers about the natural history content provided by the OpenUp! project (Q6)?

Overall, the answer to this question is that the respondents showed a positive attitude towards the use of natural history multimedia content and its metadata in education if its diversity and amount on Europeana grows. Unclear legal issues and copyright are the reason for 19 from 24 respondents who do not use multimedia content in class (Q3). This supports the conclusion of question Q1.

Another important result is that some collection types are not viewed as suitable in education, like herbarium specimens. But some collection types are very welcome, mainly from entomology, geology and zoology. This certainly depends on the interests of the user. The answers on the quality of the content and metadata vary and point to inconsistency of satisfaction with content quality, content accessibility and amount of metadata. Cited complaints include low image quality with restricted data, missing thumbnails, paid access and varying, sometimes complicated ways to get to the original image. These are serious issues that decrease the usability of OpenUp! content by the educational sector. Some of these issues will be tackled before the end of the project.

3. What is the opinion of teachers about the usability of the Europeana portal in education (Q7)?

To be effectively and frequently used in education, especially in the natural history domain, the Europeana portal needs to meet several basic teachers' needs: locate content quickly and easily; provide the content in sufficient quality; provide sufficient information about the content to confirm its credibility; and provide easy access to the content.

These conditions are closely bound to the portal user interface, and services that effectively help the user. The search option has a good rating, but many users also commented that they were not able to find their request even after several minutes, and it was the reason why they left the portal. This was probably caused by the fact that the amount of natural history content on Europeana is still limited. The web services, like search by common names or synonymy, are not implemented yet but will be in March 2013. The

multilingual interface is also not yet available; for example, the Czech translation is only partially implemented. The reaction on copyright status of the content is predominantly neutral.

Still, the respondents agree that the content can be used for education, mainly if the main teachers' criteria (see above) are met. It is important to note that the educational sector is not Europeana's primary target audience, and natural history is not its main content topic. Also important is that the survey presents the usability of the portal as it is at the moment with the ESE schema. Conversion to the EDM model will likely change the usability, especially for the educational sector. If EDM is implemented in the near future, the change in responses will be shown in our last (third) report **"C8.6.3 Final report on outreach to educational sector"** that is due in M34 (December 2013). Europeana will release its new user interface at the end of January 2013.

ANNEX –

COMPONENT C 8.6.1 – FIRST REPORT ON OUTREACH TO EDUCATIONAL SECTOR

One of the primary overall tasks of the OpenUp! project is to provide natural history content to Europeana. This content has excellent potential to be used by scientists and academics. We also see potential for this content to be used in the educational sector, since it offers metadata curated by specialists, and clear copyright/licensing terms.

How can we reach the educational sector? One possibility could be a massive PR campaign in European countries using media like TV and radio, but this would be complicated and quite expensive. Our chosen strategy is to use options like social media (Facebook, Twitter, Blog), sharing these media via project and Europeana partners. We are also providing propagation materials like leaflets, flyers, posters and newsletters, running virtual exhibitions and the project website, and present the project during international conferences and meetings. To better understand how teachers and students might use OpenUP! content, we prepared a survey in the form of an online questionnaire distributed to basic and high schools and universities.

This document explains the survey, the questionnaire and provides a first evaluation on a small sample of respondents.

General aims of the survey

The survey is addressed to natural history teachers from primary and secondary schools throughout Europe, and to university students and teachers from faculties of education. Its main purpose is to advance and explore the use of Natural History multimedia objects provided by the OpenUp! project to Europeana. A questionnaire is usually the most effective tool to get feedback from a target audience. We chose an online questionnaire via the professional web service www.surveymonkey.com and intend to continue in this survey, to get more feedback in the future as the amount of OpenUp! content on the Europeana portal grows.

When this survey started (in May), there was a minimal amount of OpenUp! content on the Europeana portal available (cca. 200,000 images, mainly from botany), and by the time the second Europeana content harvest (in June) expanded the amount to something usable (cca. 585,000 images and sounds covering geology, palaeontology, zoology and botany). When the first circulation was run (due to the expanded content on the Europeana), summer holidays had commenced, where most schools are closed. We believe that is why we have received such a limited number of responses, but we expect significantly more when school season resumes this fall. In this document, we focus primarily on the explanation of the questionnaire itself and on short evaluations of the responses to date. Nevertheless, we will continue in the survey and expand the audience in the future to get more feedback, as the amount of OpenUp! content and its diversity on the Europeana portal increases.

Currently, three language versions of the questionnaire have been prepared:

English: www.surveymonkey.com/s/OpenUp_questionnaire

German: http://www.surveymonkey.com/s/OpenUp_survey_German

Czech: www.surveymonkey.com/s/OpenUp_questionnaire_Czech

Explanations of provided questions and expected answers

The introductory e-mail gives a short introduction of the project and the Europeana, together with an explanation what we intend by outreaching to the educational sector, and it also provides the link to the questionnaire.

The questionnaire itself is divided into three sections: The first section (A) consists of five questions that are focused on general information and introduction to the Europeana portal. The second section (B) consists of a single question, focused on the OpenUp! project itself and its provision of images, sounds and videos from the Natural History domain for use in the educational sector. The third section (C) consists of four questions and is focused on getting information about responding schools/institutions for objective evaluation of the questionnaire. We chose these divisions for simpler overview and evaluation, and for better orientation of the respondents within the questionnaire.

The introduction, invitation letter and actual questionnaire are distributed in three languages: English, German and Czech.

We expect that the time for completion will be about 15 minutes, but it is necessary for the respondent to have at least some experience with the Europeana portal.

Section A

1) **Are you using multimedia objects such as images, sounds (no music), or videos from the Internet for educational purposes in your classes?**

   a. Yes, in most of my classes

   b. Yes, in several classes

   c. Yes, but rarely, just in special classes

   d. No, for technical reasons

   e. No, for legal reasons

   f. No, for other reasons

This is one of the most important questions, and so it is placed at the beginning of the questionnaire. Since the entire concept is built on online multimedia content, it is important to know if the respondent has any experience with its usage. The answer to this question affects the selection of subsequent questions. The question has 6 possible answers, 3 positive and 3 negative, and only one answer is allowed. From this question we get a better overview of the user's general position on online multimedia objects.

2) **If yes to Question 1 (a, b or c), which sources are you using when searching for multimedia content?**

   a. Google (image finder)

   b. Wikipedia

   c. Europeana portal

   d. BHL

   e. EOL

   f. Social networks

   g. Commercial services

   h. Other sources [text field]

We would like to know which source(s) the respondents use frequently, or if there are some special sources we need to consider. We list as permissible answers the most common online sources of multimedia content, and a text field for other sources. Naturally, one of the possible choices is the Europeana portal.

3) **If no to Question 1 (d, e or f), why do you not use multimedia content in your classes?**

    a. Quality of digital content (images, sounds, videos) is poor

    b. Quality of metadata is poor (Metadata is the descriptive information that is provided along with each multimedia object.)

    c. Unclear legal issues/copyright

    d. Credibility of the provided metadata is uncertain

    e. Accessibility (availability) of the content is difficult/complicated

    f. Other reasons [text field]

If the answer to question 1 is negative, this question follows. We would like to know the most common reasons why users are not using online multimedia content. Within the answers, we listed those that seemed the most likely candidates to us, and again included an option for a text answer.

4) **Do you have any experience with Creative Commons licences (creativecommons.org/licenses/)?**

    a. No

    b. Yes

    c. If yes, please specify which one? [text field]

We would like to know if respondents have any experience with copyright licences, especially Creative Commons which are used by Europeana and are related to OpenUp! content. Because the Creative Commons are quite variable, we would like to know with on which one users have experience, and if they are familiar with CC-By or CC-0 licences. Unclear definition of the content copyright is often an important reason why an audience does not trust online content resources.

5) **The Europeana portal provides online access to multimedia objects from Europe's cultural collections (www.europeana.eu/portal/). What is your opinion of this portal?**

[I strongly agree, agree, neither agree nor disagree, disagree, strongly disagree,
I don't know/understand]

- a. The search is easy to navigate
- b. I can easily access the content
- c. I can easily filter the result I get
- d. The copyright statement is clearly expressed
- e. The content quality is good
- f. The descriptive information metadata are clear and helpful
- g. The content can be used for education
- h. General opinion/comments [text field]

This is a very complex question with 8 answers and a rating system of values. Such complex questions are suitable for surveys questionnaires seeking to restrict the number of questions, by combining much information into one question. Every answer represents a specific experience with the Europeana portal functionalities, and the respondent can agree or disagree. Because it is often difficult to answer just yes or no, we provided a scale of values. There are 6 options for rating values. Two are positive, two negative, one neutral and one is an escape answer. This is a typical scale for evaluation answers like this one. From this question, we would like to ascertain the user's opinion of the Europeana portal functionalities. For an objective answer, it is necessary to spend some time with the Europeana portal and try out its functions on several cases. If the user finds the Europeana portal functionally awkward or not user-friendly, we cannot expect a positive impact on OpenUp! content usage. This question additionally provides a good opportunity to introduce the Europeana portal and its functionalities to respondents who are not yet experienced with Europeana. There is also an opportunity for the respondent to express his overall opinion of the Europeana portal in a textual answer.

Section B

6) **The OpenUp! project provides Natural History multimedia content managed by specialists to Europeana, e. g., images of herbarium specimens, insect collections, paleontological and mineralogical objects, even recordings of animal sounds. This content comes from outstanding collections of European institutions like natural history museums, botanical gardens, and universities. In order to investigate the success of this project and the usefulness of the delivered content for educational purposes, we would like your opinion on the Natural History content in Europeana. For an overview, you can find the current status of OpenUp! content in Europeana under this link and examples of separated collections under the following links: link 1, link 2, link 3.**

[certainly, probably or mostly, maybe, probably not or mostly not, certainly not, I don't know/understand]

   a. Can you envisage using these natural history multimedia objects in your classes?

   b. If natural history data appears in other contexts, for example with art or history, could they also be used in other educational fields besides Natural History (e. g. art, history, geography)?

   c. Europeana's natural history content is fairly new - as the diversity of this content grows, will you be more open using it for educational purposes in your classes?

   d. Would you also like to use the descriptive information (metadata) that goes along with the image/sound/video for educational purposes?

   e. Do you think that the metadata needs to be more detailed?

   f. Are the multimedia objects of good quality?

   g. Additional comments/opinions on usage of multimedia objects in Natural History education. [text field]

This second complex question is focused mainly on introduction of the OpenUp! project, and offers modelling sub-questions to discover the respondent's opinions and needs. There is also an option for additional comments/opinions on usage of multimedia objects in Natural History education. The scale of rating values is almost the same as in question 6, just with different formulations. The

questions are mainly focused on content itself, quality of content, metadata and its usage in education. This question, which is also in a separate section, is very valuable in getting direct feedback from respondents on the usage of Natural history content in education, which is the overall aim of the entire questionnaire.

Section C

7) What additional items/tools are you using in your natural history classes?

a. Computers

b. Data projectors

c. Internet

d. TV

e. Physical specimens

f. Live specimens

g. Models

h. Other [text field]

Questions in this section are mainly focused on the respondent's information, to help objectively evaluate their answers. This question allows multiple answers and helps investigate how the respondent is dealing with innovations, and what the possibilities are in his institution. For example, classes with a wide variety of available tools and materials will probably have less need of additional online multimedia resources. However, we expect that classes with fewer such resources, but at least equipped with computers and Internet connectivity will be significantly more receptive to using OpenUp! content.

8) What is the average number of students in your class(es)?

a. Up to 12

b. 13-20

c. 21-29

d. 30 and more

This question is related to question 8 and the aim is to get an objective overview of the size of respondent's class. In classes with a high number of students, it is sometimes difficult to develop innovative methods, but such large classes might be better served by online presentations, as opposed to small classes, where the teacher can have much more individual contact with students.

9) **Which country are you from?**

a. Austria

b. Belgium

c. Czech Republic

d. Denmark

e. Estonia

f. France

g. Finland

h. Germany

i. Greece

j. Netherlands

k. Slovakia

l. United Kingdom

m. Other [text field]

This is just an informative question to know from which region is the respondent. Different states throughout Europe often have very different educational methods at the national level. This information could also help us to understand their approach to online multimedia objects and possibly unfamiliar (to us) methods used in education.

10) **How old are you?**

a. less-20

b. 21-25

c. 26-30

d. 31-35

e. 36-40

f. 41-45

g. 46-50

h. 51-55

i. 56-60

j. 61-more

This information helps us understand the respondent's approach to innovative methods in education by age group. Usually young people are much more open to new technologies and innovations.

11) **Do you have experience with any EU (educational) projects?**

a. No

b. Yes

c. if yes please explain which one and in which position [text field]

This question provides information about the respondents' attitude towards European projects, what are their experiences and if they are more open to collaborate with them.

First evaluation of answers from educational sector

The survey preparation started in April 2012, was set up in May and officially launched in June, when the second harvest of OpenUp! content was running, and we were sure that the respondents had enough data available on the Europeana portal to be able to fill out the questionnaire. (Probably) due to the summer holidays, we received a rather small number of responses, 17 in total from several hundred. We expect many more responses when starting in September, and we will keep running the survey throughout next year. We have set up monitoring and evaluation milestones every other month from September onward, to keep track of the answers according to the growing amount and variability of OpenUp! content on Europeana.

Detailed and objective evaluation of a larger number of respondents will be the part of the next deliverable, due in month 23 of the project. Each question is evaluated separately.

Section A

1) **Are you using multimedia objects such as images, sounds (no music), or videos from the Internet for educational purposes in your classes?**
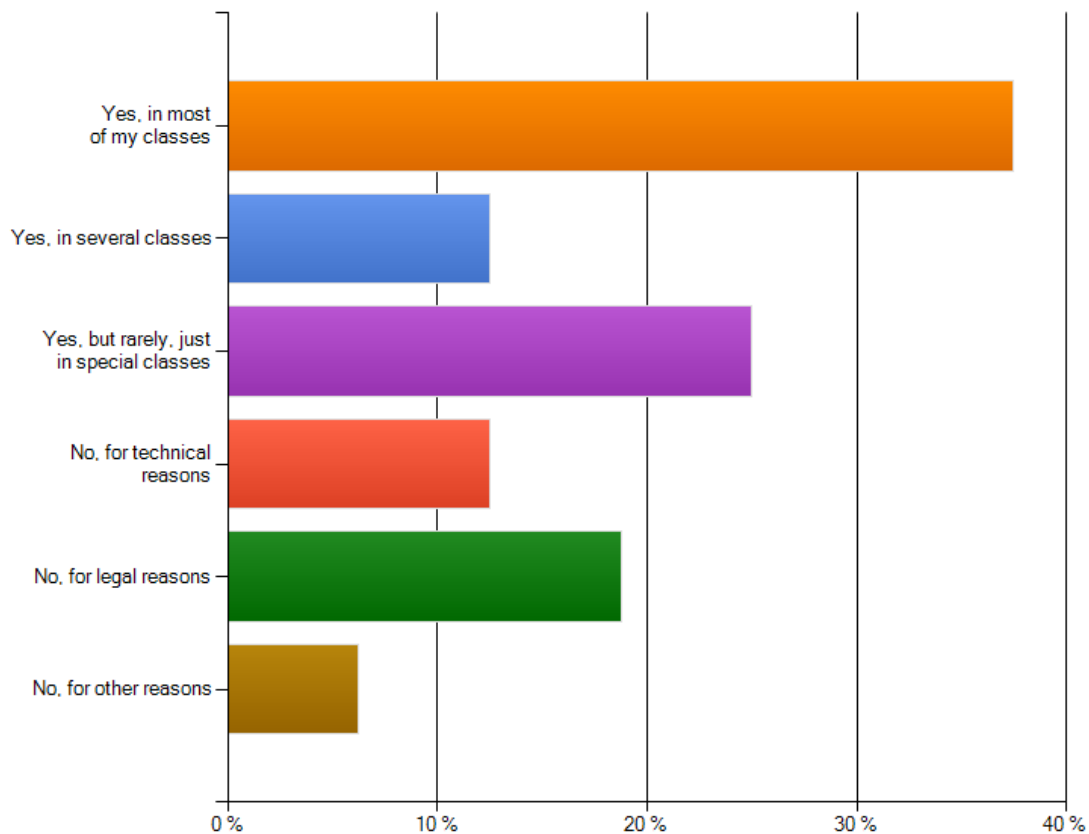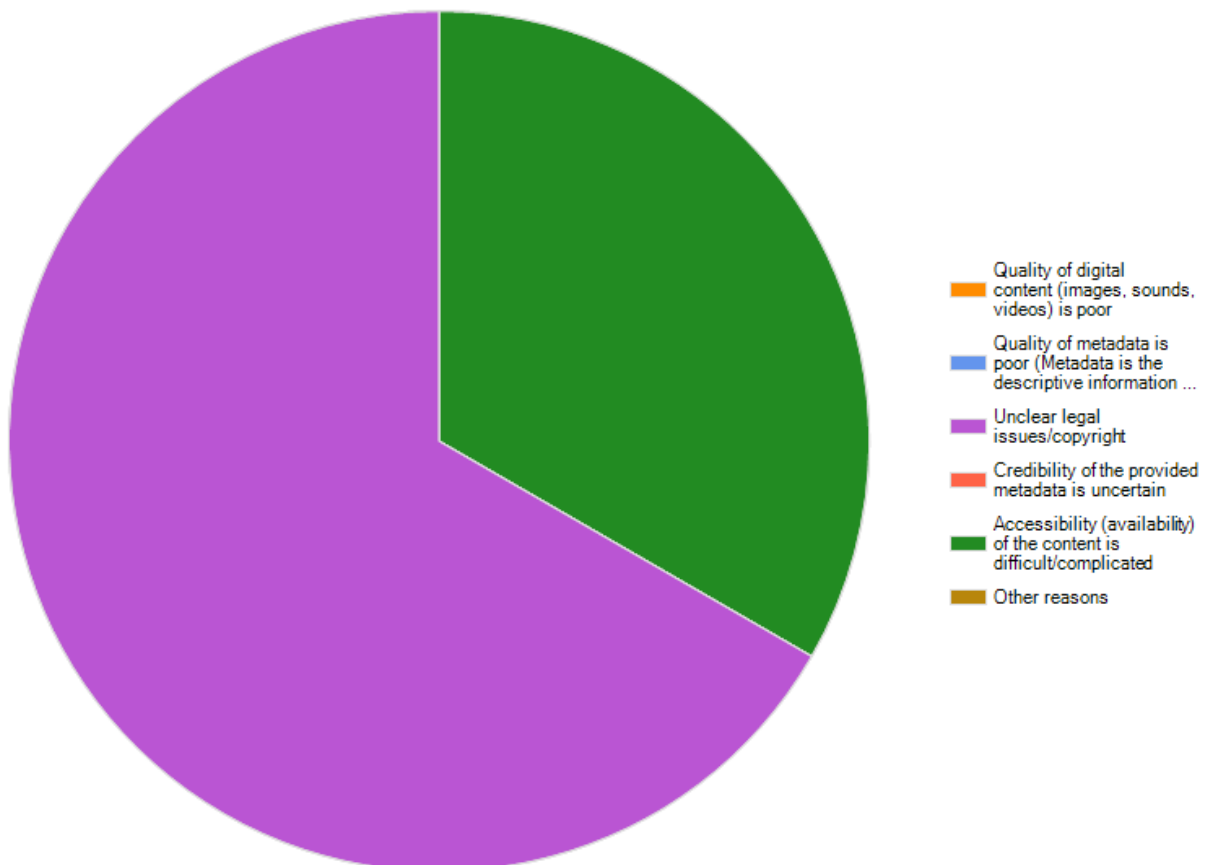

From this answer, it is obvious that most respondents are using multimedia objects from the Internet in their classes. The most frequent answer from other respondents which are not using online multimedia content is for legal reasons.

2) If yes to Question 1 (a, b or c), which sources are you using when searching for multimedia content?
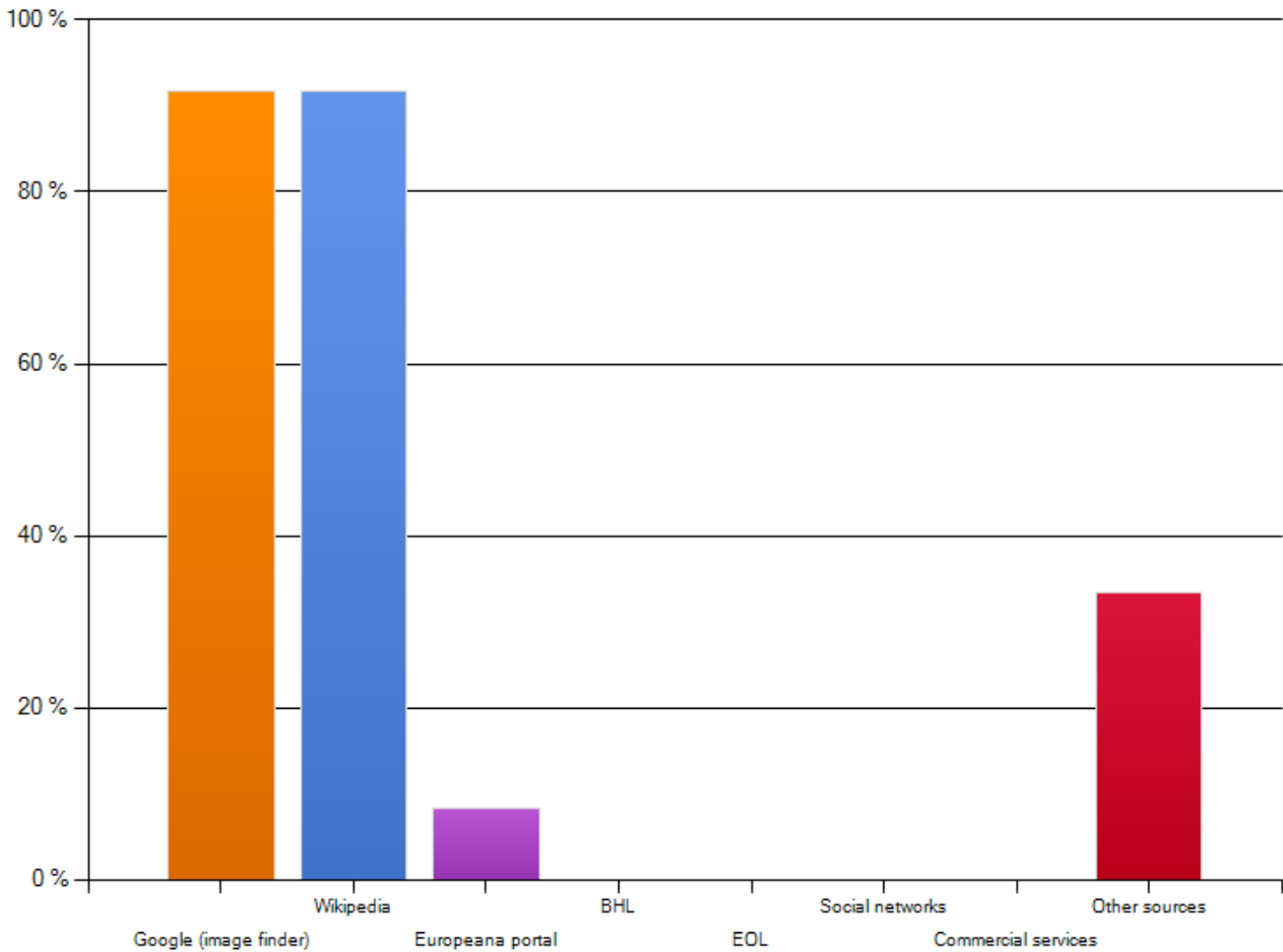

According to this question, the most frequent sources of multimedia content for respondents are Google (image finder) and Wikipedia. The rest were other sources and once the Europeana portal. In other sources, respondents mentioned schools, university portals and Landesbildungsserver Baden-Württemberg.

3) If no to Question 1 (d, e or f), why do you not use multimedia content in your classes?


Legend:
- Quality of digital content (images, sounds, videos) is poor
- Quality of metadata is poor (Metadata is the descriptive information ...
- Unclear legal issues/copyright
- Credibility of the provided metadata is uncertain
- Accessibility (availability) of the content is difficult/complicated
- Other reasons

According to this question, the main reason why the respondents are not using online multimedia content is unclear legal issues or copyrights. Another reason for some respondents is difficult/complicated access of the content.

4) Do you have any experience with Creative Commons licences

(creativecommons.org/licenses/)?
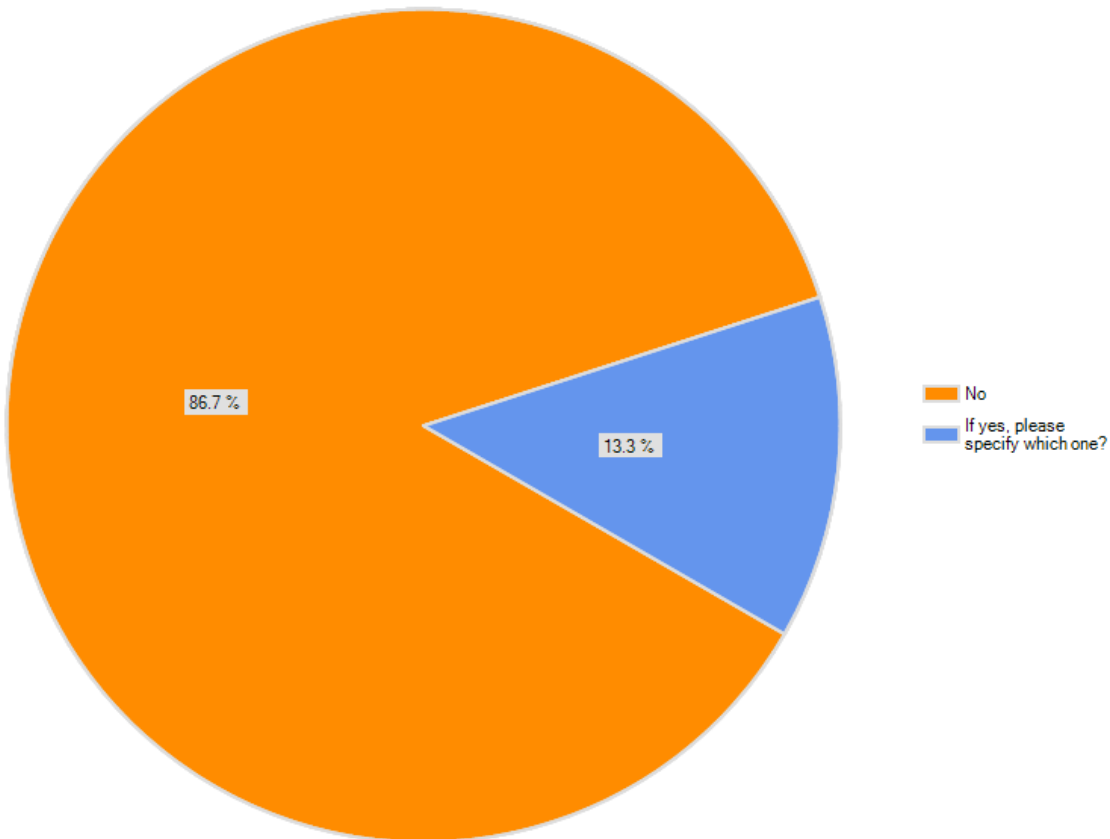
According to this question, most of the respondents do not have experience with Creative Commons licences. Just two respondents answered positively. One has experience with CC-By during creation of images for presentations and another respondent has experience with CC from Wikipedia and Flickr.

5) **The Europeana portal provides online access to multimedia objects from Europe's cultural collections (www.europeana.eu/portal/). What is your opinion of this portal?**
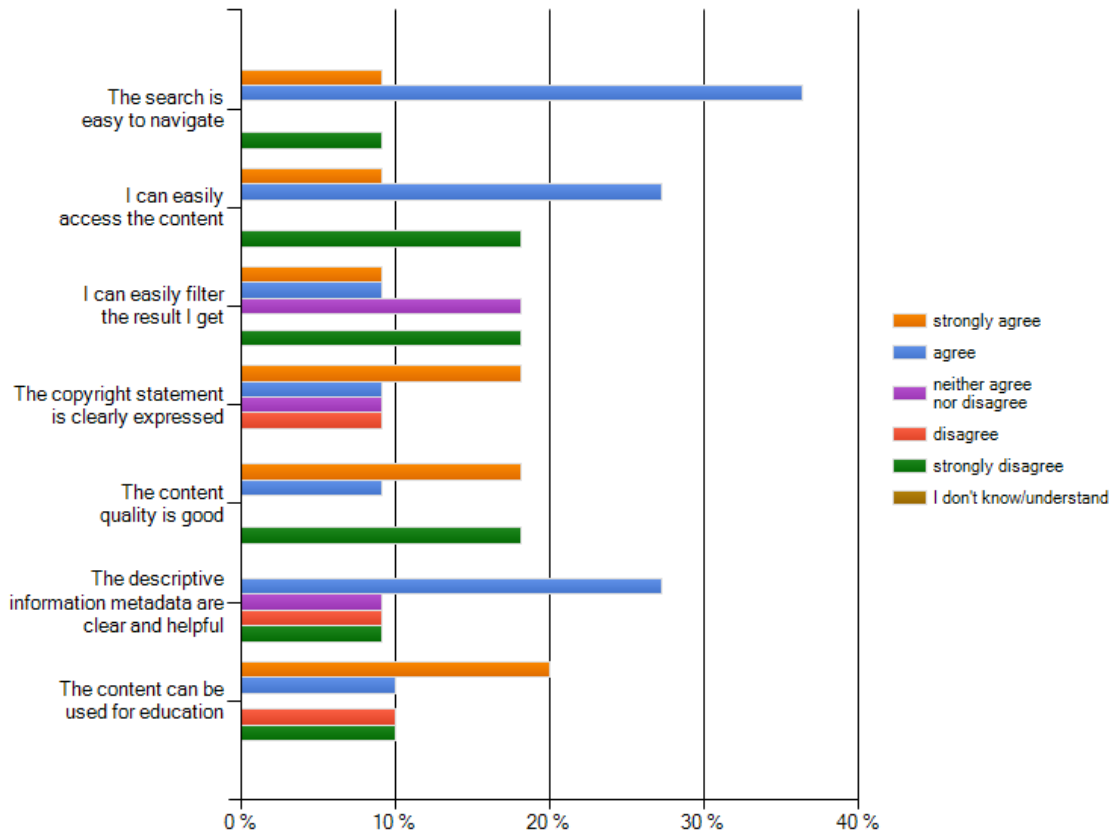

The overall opinion of the Europeana portal functionality is positive, especially the search functionality, visibility and expression of copyright statements. What is important is that the respondents reacted positively on using the content in education. Unfortunately, half of the respondents did not understand the question because they have no experience with the Europeana portal. We filtered these responses from the graph to show only answers from users with experience.

This question included a text field in which it was possible to express a general opinion of the Europeana portal. We collected several interesting comments which were neutral or negative, but will evaluate them when we have more responses

.

Section B

6) **The OpenUp! project provides Europeana with Natural History multimedia content managed by specialists, e. g, images of herbarium specimen, insect collections, and paleontological and mineralogical objects and even animal sounds. This content comes from outstanding collections of European institutions like natural history museums, botanical gardens, and Universities. In order to investigate the success of this project and the usefulness of the delivered content for educational purposes, we would like your opinion on the Natural History content in Europeana. For an overview, you can find the current status of OpenUp! content in Europeana under this link and examples of separated collections under these links: link 1, link 2, link 3.**
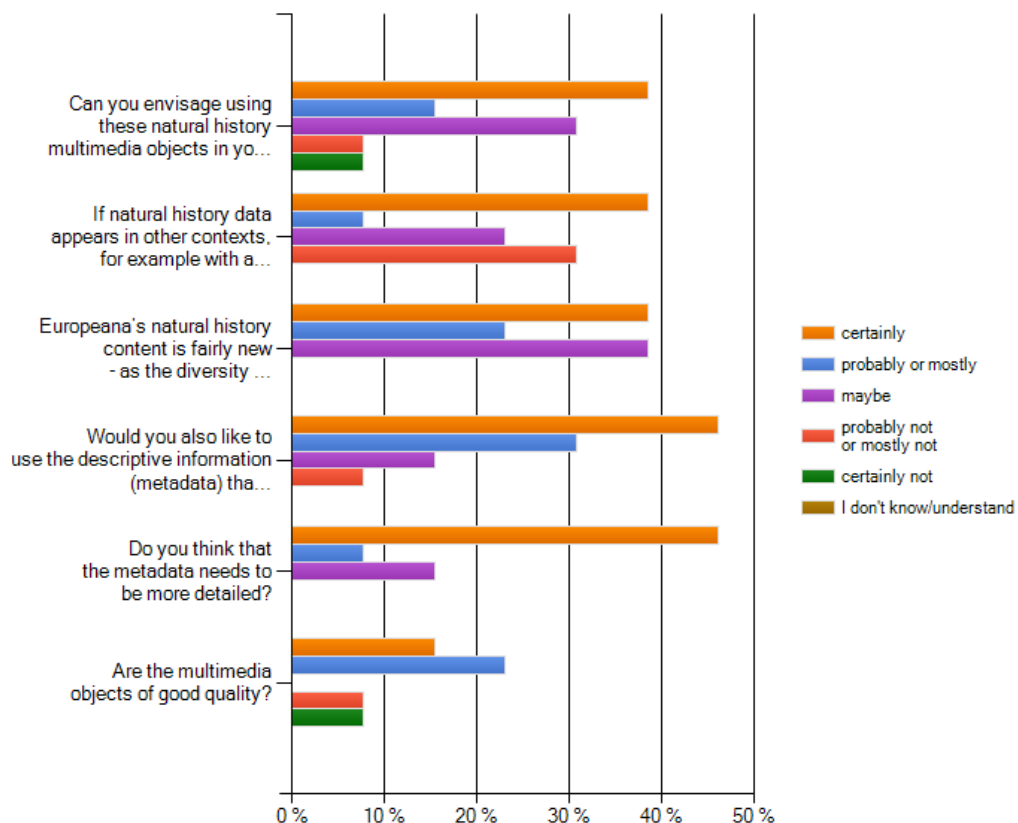
All answers to this complex question were highly positive, which is pleasant feedback. Respondents are open to using the content and metadata in education. There is also a clear signal to have the metadata more detailed to extend their usability in education. Only a few respondents answered neutrally and we filtered those out of the graph

Section C

7) What additional items/tools are you using in your natural history classes?
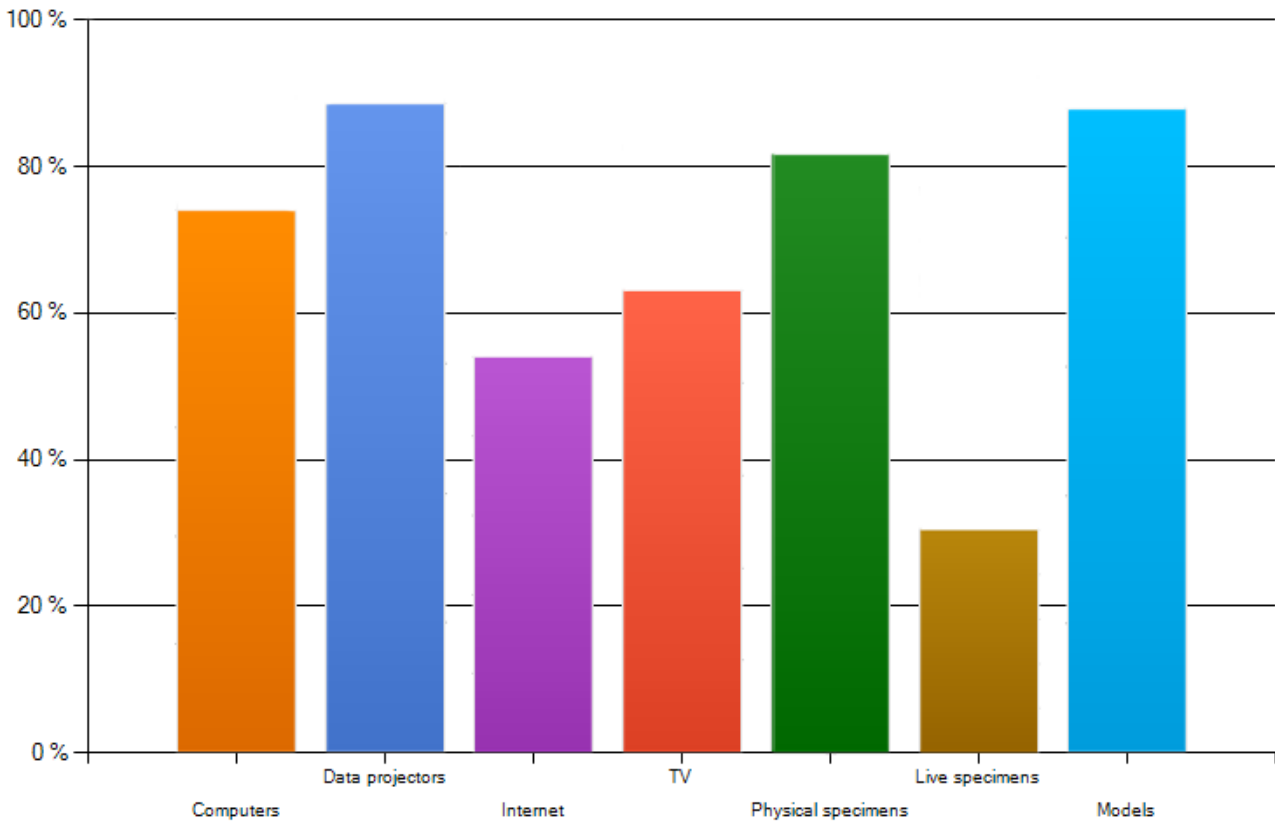
The mostly frequent items/tools in respondents' classes are data projectors, live specimens, TV and computers. Computers and data projectors can be used to view OpenUp! multimedia content, online or off-line, so the proliferation of such equipment is a good sign that OpenUp! content is likely to grow more useful and see greater utilization as awareness of it increases.

.

**8) What is the average number of students in your class(es)?**
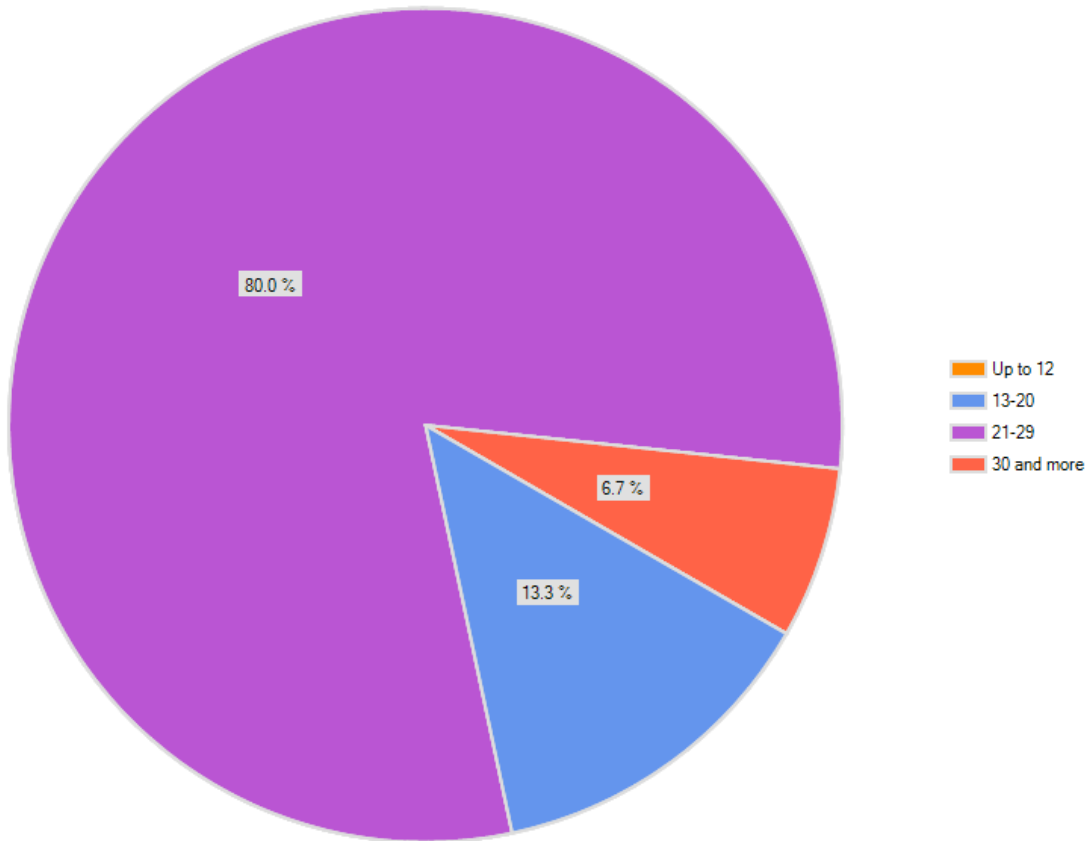
According to this answer, the most frequent number of students in classes is 21-29. Classes with more students are more suitable for group presentations on data projectors, where OpenUp! content could be presented. Smaller classes are more suitable for individual and interactive education, but much of the material is usable regardless of audience size.

9) Which country are you from?

Most respondents were from Germany.

10) How old are you?
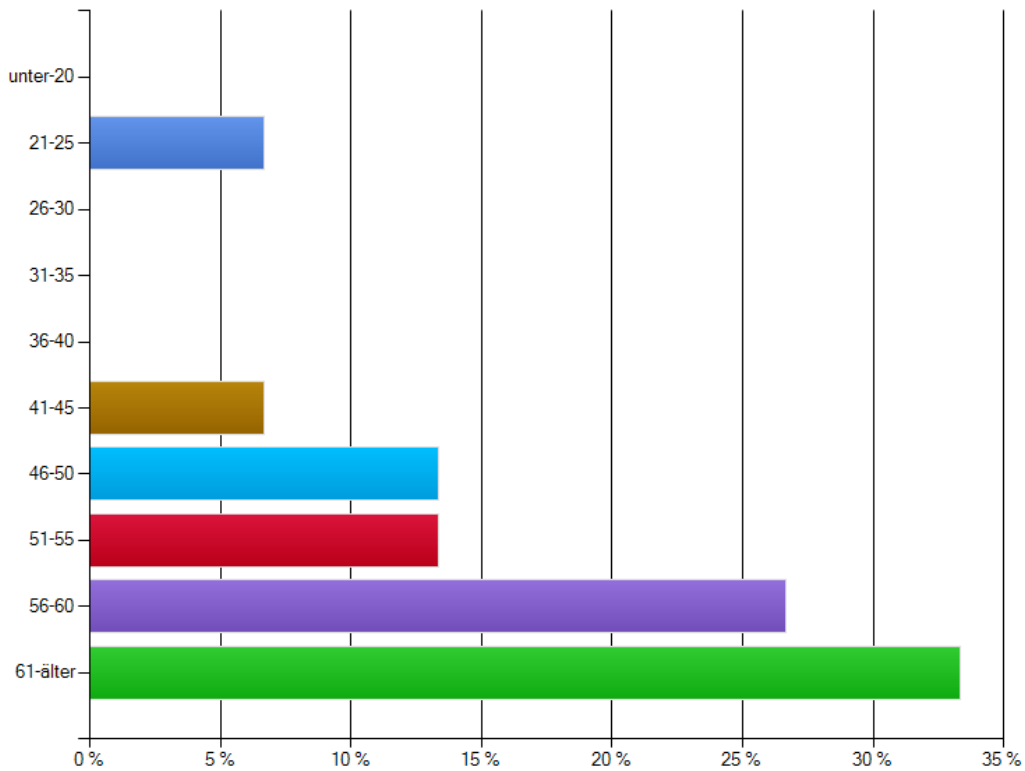
Most respondents were older than 56 years.

11) Do you have experience with any EU (educational) projects?

Most respondents have no experience with EU projects but two answered positively. One of the respondents is involved with the Open Science Resources portal and the other has experience with the Comenius project.

LIST OF REFERENCES

Biemer, Paul P., and Lars E. Lyberg (2003). *Introduction to Survey Quality*. New York: Wiley.

Fowler, F. J., Jr. (1993). *Survey Research Methods* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Krueger, Richard A., and Mary Anne Casey (2000). *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, California.: Sage Publications.

Sudman, S. and Bradburn, N. (1982). *Asking Questions: A Practical Guide to Questionnaire Design.* San Francisco, CA: Jossey-Bass Inc.

SurveyMonkey online manuals and documentation.