



DELIVERABLE

Project Acronym: DigCurV
 Project Number: 510023
 Project Title: Digital Curator Vocational Education Europe
 Dissemination Level: Public

D2.1 Report on baseline survey and evaluation framework

Revision: Final

Authors:

Vilma Karvelyte, Nijole Klingaite, Jurate Kupriene (Vilnius University Library)
 Laura Molloy, Kellie Snow, Ann Gow (HATII)

Contributors:

Carol Usher (MDR)

Project funded by the European Commission's Leonardo da Vinci Lifelong Learning Programme		
Dissemination Level		
P	Public	X
C	Confidential, only for members of the consortium and the Commission Services	



Education and Culture DG

Lifelong Learning Programme

Revision History

Revision	Date	Author	Organisation	Description
0.1	14/10/11	V Karvelytė N Klingaite J Kupriene	VUL	First draft
0.2	24/10/11	K Snow V Karvelyte	HATII HATII	Revised draft with analysis of the survey
0.3	05/01/12	L Molloy K Snow A Gow	HATII	Revised draft with analysis of the survey and evaluation framework
0.4	30/01/12	V Karvelyte N Klingaite L Molloy	VUL HATII	Final report

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This deliverable contains original unpublished work except where clearly indicated otherwise.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.

Table of Contents

1.	Executive Summary	4
2.	Introduction	5
3.	Analysis of the Training Opportunities Survey	6
4.	Key findings of the survey	7
	4.1. Question 1-3. Information on Survey Population	7
	4.2. Question 4-6. General information about training events	8
	4.3. Question 7-9. Organisation of the training events.....	10
	4.4. Questions 11-19. Target audience, training content and techniques	13
	4.5. Questions 20-24. Assessment, certification and evaluation	20
	4.6. Summary of the main facts and findings of the survey	25
	4.7. Conclusions from the survey	26
5.	DigCurV Evaluation Framework	28
	5.1. Background.....	28
	5.2. Structure and usage	28
	5.3. Implementing the evaluation framework when designing a curriculum	29
	Area 1: Knowledge and principles	30
	Area 2: Skills and competences	33
	Area 3: Audience/profile types.....	37
	Area 4: Part of digital curation lifecycle	42
	Area 5: Teaching methods/training delivery	43
	Area 6: Professional context.....	44
6.	Conclusions and Recommendations.....	45
7.	APPENDIX A: Questionnaire on training opportunities in digital curation	47

1. Executive Summary

This deliverable describes the work carried out by DigCurV to identify and analyse current training activities in the field of digital curation and to create an evaluation framework for a digital curation curriculum.

Section 2 outlines Work Package 2 and describes how identifying and analysing current training activities in the field of digital curation and creation of the evaluation framework relate to work package as a whole.

Section 3 presents the findings of a survey which was carried out by Vilnius University Library for the project. The aim was to identify existing training opportunities in digital curation and long-term preservation available for digital curators working in libraries, archives and museums, and then to analyse the findings and build up a profile of training opportunities. The survey focused on course content, methodologies, delivery options, assessment, certification and best practices for training and continuous professional development. Sixty completed responses were received from sixteen countries mainly from Europe but including five responses from the USA.

The survey data suggests that the training landscape is complex involving a large diversity of different types of organisations. There appear to be large gaps in training provision, particularly in languages other than English, however the distribution of the survey in English may have limited responses from other language communities. Most training provision appears to be at the introductory level although the survey found that training is being sought by those practically engaged in digital curation activity. This suggests a need for training in practical skills, tools and methods.

Less than half of the respondents indicated that they intend to organize training in digital curation during the next two years; lack of funding coupled with lack of awareness were given as the main reasons. Most of the respondents who intended to provide further training were planning in-house training corresponding to the real situation of their organisation.

Section 4 presents the DigCurV Evaluation Framework, which is based on the findings from the survey and desk-based research carried out by Work package 2 and also the findings of the survey into stakeholder needs carried out by Work Package 3.

The work to develop the Evaluation Framework for DigCurV builds on previous work in digital curation curriculum design and evaluation framework development. It is intended to be helpful to those designing, providing or assessing digital curation curricula (or individual pieces of training which may form part of a curriculum). The Evaluation Framework provides a series of structured ways to evaluate a digital curation curriculum or piece of training.

This section looks at implementation of the Framework and in particular how it will be used in DigCurV to establish the curriculum in Work Package 4.

Section 5 provides a synthesis of the various aspects which should be considered in the design of training curriculum.

This report together with the report on survey of sector training needs and report on focus group meetings (Work Package 3) will be used as a background for developing of follow-up digital curation curriculum framework.

2. Introduction

This report presents an analysis of the baseline survey on training opportunities by Digital Curator Vocational Education Europe ('DigCurV'), a project funded by the European Commission's [Leonardo da Vinci programme](#). This report constitutes project deliverable 2.1.

DigCurV aims to support and extend vocational training in digital curation for existing professionals by building a network of organisations involved in this field and analysing their approaches, methodologies and expertise as well as disseminating the results in the appropriate circles across Europe and internationally to improve the quality, visibility, and transparency of continuing vocational training.

The project work plan included a review of existing training initiatives, resources and methodologies with the aim of identifying and analysing current training activities in the field of digital curation. A companion review and analysis of sector training needs will inform the subsequent design of the DigCurV core curriculum.

Three phases of activity were planned:

- the production and analysis of a **survey of training opportunities**, to find out more about existing training courses in digital curation;
- the establishment of a structured information base which **profiles training opportunities** in digital curation that are currently available, populated with entries gained from the survey results and further desk research;
- the development of an **evaluation framework** for the DigCurV training curriculum, based on analysis of the results from the first two activities.

This deliverable presents the results of the survey of training opportunities and the evaluation framework which has been developed by the project. The information base (the profile of training opportunities) is available on the project website at: <http://www.digcur-education.org/eng/Training-opportunities>.

Start Date (Duration)	Organisation	Course	Country	Language	
10/11/2010 (21 months)	Stuttgart State Academy of Art and Design	Digital Curation (part of master's program called Preservation of New Media and Digital Information)	Germany	English German	
02/07/2012 (5 days)	Central European University	Policies and Practices in Access to Digital Archives: Towards a New Research and Policy Agenda	Hungary	English	 
Ongoing	Digital Curation Centre	Tools of the Trade	United Kingdom	English	 
Ongoing	University of Dundee Centre for Archive and Information Studies (CAIS)	Electronic Records Management	United Kingdom	English	 

Figure 1: A selection of training opportunities published on the DigCurV website

3. Analysis of the Training Opportunities Survey

In April 2011 Vilnius University Library (VUL) distributed a survey on training opportunities in digital curation and long-term preservation as part of the DigCurV project. The aim was to establish how many such opportunities were available for digital curators working in libraries, archives, museums and the cultural heritage sector during the preceding two years. The main objectives of the survey were to identify, analyse and profile the existing training opportunities as well as to establish a curriculum framework from which training can be developed in the future. The survey included basic questions about the organisation but focused on issues related to training content, methodologies, delivery options, and assessment, certification and best practices for training and continuous professional development. A copy of the questionnaire is provided in Appendix A.

A letter inviting participation in the survey was disseminated via email lists to various national and international institutions with interest and/or involvement in digital curation and preservation training activity as identified from the registry established in the [Digital Preservation Europe](#) project and other contacts. The deadline for returning completed questionnaires was 8 May 2011. The response rate was low after the first round, probably because the time of conducting the survey coincided with Easter holidays. Therefore VUL decided to conduct a second round sending individual emails and extending the deadline until the end of June 2011. In total VUL received sixty completed responses from sixteen countries including fifty-five responses from Europe and five from the USA.



Figure 2: Survey distribution map in Europe

We had no serious difficulties in getting a sufficient number of surveys completed by competence centers from Europe, but it was much more difficult to reach competence centers in the rest of the world. We received very few responses from the latter, but they were in fact sufficient to have an appropriately helpful analysis. The reasons why many selected institutions did not respond are unknown.

4. Key findings of the survey

4.1. Question 1-3. Information on Survey Population

The first three questions were related to basic data about the responding institution. Background information obtained for each respondent included location, name and type of institution.

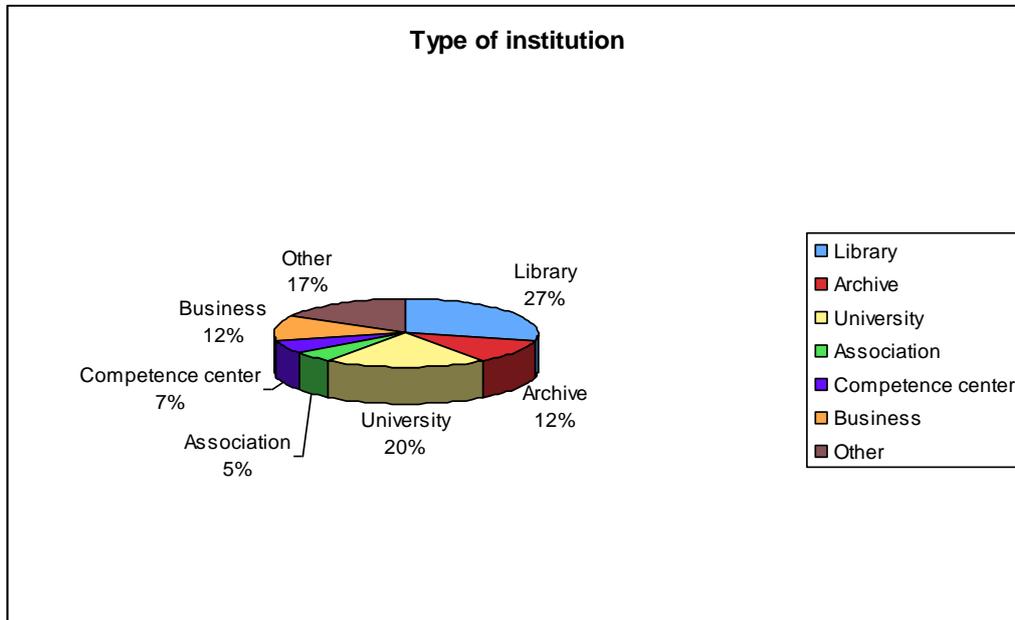


Figure 3: Type of institution

The types of institutions were quite heterogeneous. A large majority of the respondents were from libraries (17), universities (12), archives (8) and the business sector (7), as well as various competence centres (4), associations (3) and the following types of organisation: research institute (1), consortium (1), museum (1), data centre (1), state agency (1), non profit institution (1), advisory body (1), government (1) and project (1). The diversity of the institutions demonstrates that the topic is important not only to cultural organisations but also to academic, business and public sector organisations.

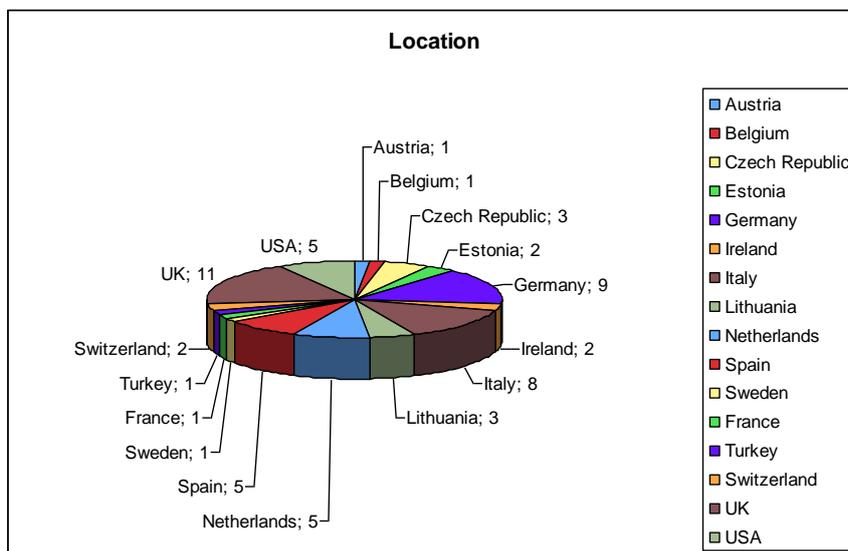


Figure 4: Location of survey respondents

The highest numbers of respondents were located in the UK (11), Germany (9), Italy (8), Netherlands (5), USA (5) and Spain (5). There were however a significant number of other European countries represented, namely Czech Republic, Lithuania, Estonia, Switzerland, Ireland, Austria, Belgium, Sweden, France and Turkey. The diversity of the locations demonstrates that the survey was efficiently promoted across Europe and the USA, but did not reach other continents.

4.2. Question 4-6. General information about training events

Question 4. Did your institution organize training courses for digital curators during the last 2 years?

- Yes
- **No** (If possible, please indicate the reasons i.e. lacks of funds, lack of need etc.)

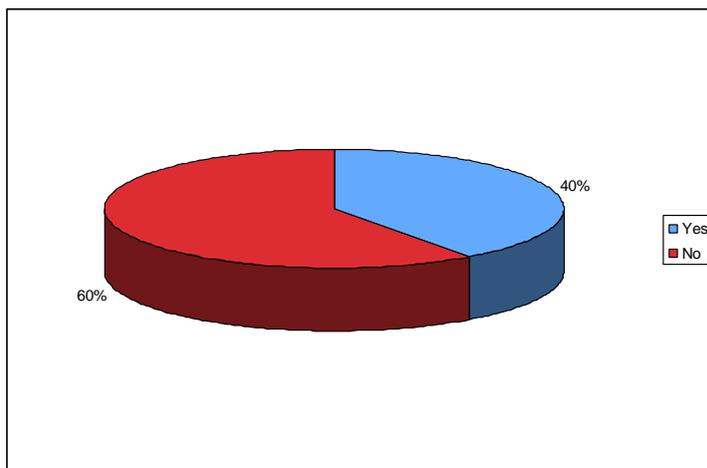


Figure 5: Training organized by respondents in last two years

To recognize the opportunities for training in this field in general and to gather information on the current status of training worldwide we asked institutions if they had organized courses for digital curators during the last two years. This time period was chosen to gather more recent information. Respondents could choose only one appropriate answer. Only 40% (24) of respondents replied that they had organized training for digital curators. Given the fact that digital curation is still a very new field in many European countries it is not surprising that only 38% of European institutions stated that they organized training courses for digital curators during the last two years. Meanwhile 60% of institutions from the USA stated that they organized courses.

Question 5. Number of courses

- 1-5
- 6-10
- More than 10

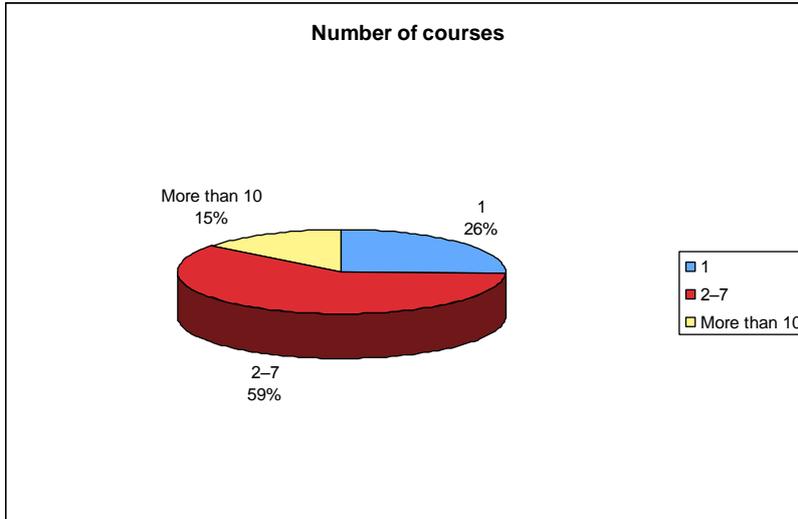


Figure 6: Number of training courses organized in last two years

Most of the respondents (59%) who had organized training had run between two and seven training courses during two years. Seven respondents had one (one of those seven events was dedicated to digitization, not curation or preservation) and only four respondents reported more than ten (France, UK, Germany and Belgium).

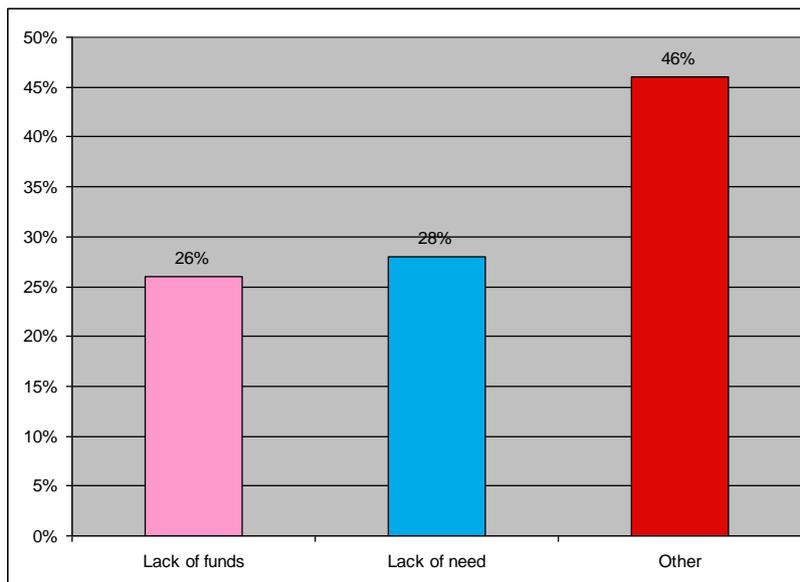


Figure 7: Reasons respondents had not organized training in last two years

Institutions indicated many diverse reasons for not organizing training events, with more than half mentioning lack of funds (10) or lack of need (9) as the main issues. Six respondents did not consider this issue as currently important, stating they did not have enough time, concern or that it was not within institutional priority or mission. One respondent noted lack of competence as the main reason and felt that it was better to receive external training. Four institutions noted that, as recently-established organisations, they either hadn't yet had the time or were not yet ready to start organizing training. Two respondents said that they didn't know why they do not organize training.

4.3. Question 7-9. Organisation of the training events

The next set of questions related to individual training events and key information about the location of training, duration of the course, language of instruction and the type of training.

Question 7. Location and dates (country and the city where course was held; start and end dates)

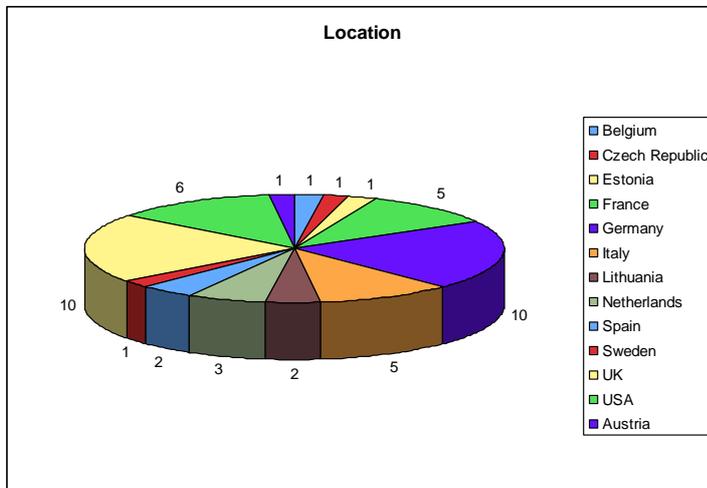


Figure 8: Location of training events organized in last two years

Forty-eight training courses were held in thirteen countries: Germany (10), UK (10), USA (6), France (5), Italy (5), Netherlands (3), Spain (2), Lithuania (2), Belgium (1), Czech Republic (1), Estonia (1), Sweden (1), and Austria (1). Survey results show that in Europe there is very little training offered in the north (i.e. the Scandinavian and Nordic countries) and south-east (i.e. Balkans) of Europe. Most events were offered in central Europe and the UK and predominantly in capital cities with the exceptions of Germany and the UK.

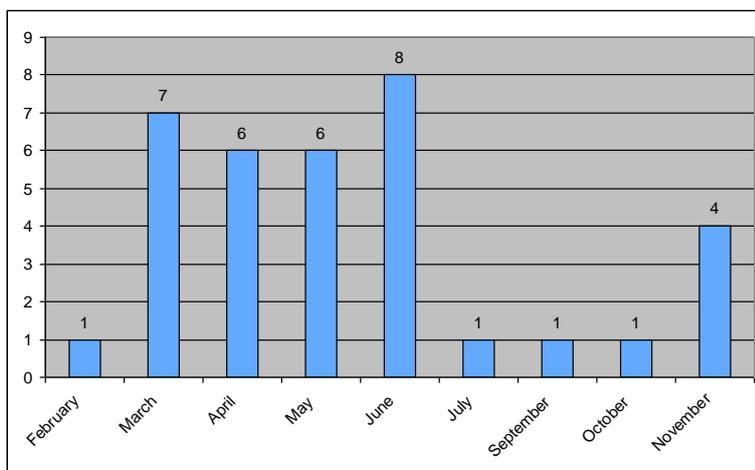


Figure 9: In which months of the year training events were offered

The survey results show that all events can be divided into two groups: short-term training and long-term training. Short-term training was mostly only one (19) or five (9) days long, with a few events at two (4), three (2) or ten (1) days long. Short-term events were mostly held in either March to June or late autumn (November). Long-term training was from one (2) to four (1) years long. The most popular duration was nine months (4), with other responses recording three months (3), four months (2), seven months (1), and eighteen months (1) long. Long-term events were mostly designated Master’s degree studies.

Question 8. Language of instruction

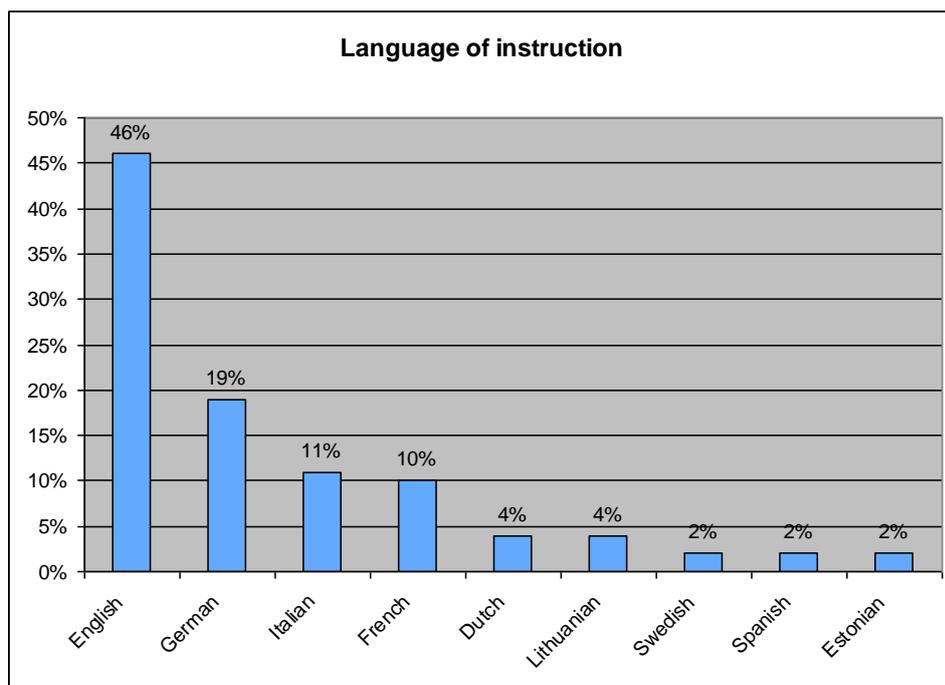


Figure 10: Language of instruction

Respondents were asked to provide the main language of instruction and a second language of instruction if the training course was held in several languages. Of the forty-eight training events about which we received information, the survey exposed that almost half of the training was held entirely in English. Whilst this may show that many courses are targeted to an international audience, it may also suggest a lack of local trainers as well as subject specialists. Other languages mentioned were: German (19%), Italian (12%), French (10%), Dutch (4%), Lithuanian (4%), Swedish (2%), Spanish (2%) and Estonian (2%). Only three events were held in two languages: a Master’s program for digital curators in German and English (2) (in Germany) and one-day workshop on Managing Research Data in English and Dutch (in the Netherlands).

Question 9. Type of training

Respondents were given the following options:

- Institutional
- Open to professional community
- Open to All (Please specify)

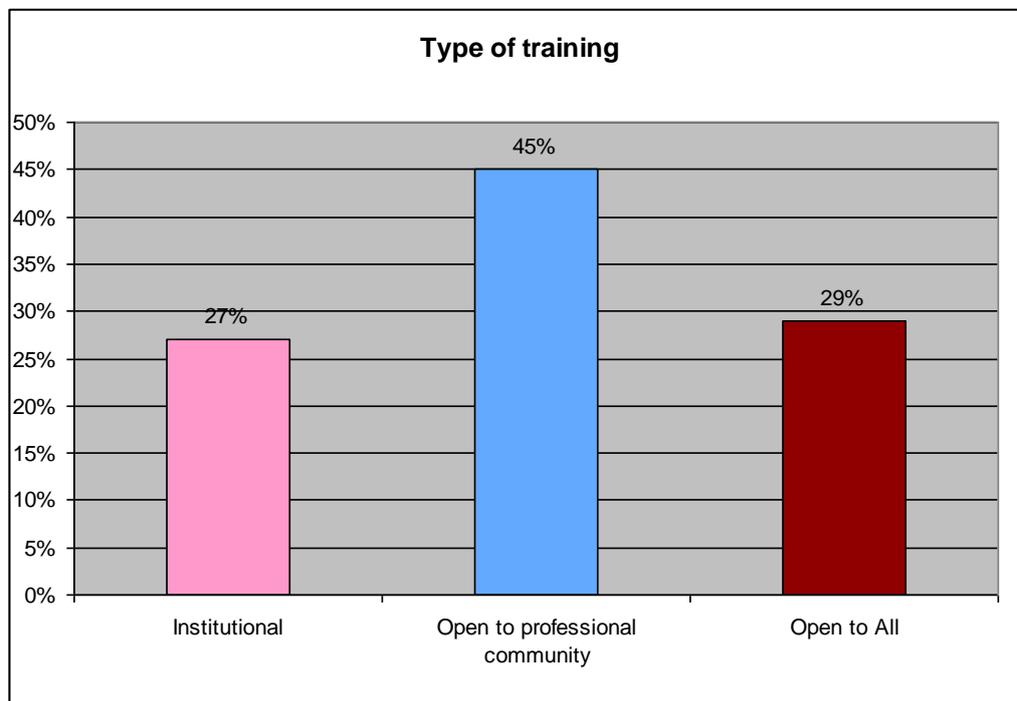


Figure 11: Type of audience(s) able to access training events

This question was asked in order to find out how accessible training courses were to various types of audience. Most of the training events were open to all (29%) and to the professional community (45%) at national and international levels. Twenty-seven percent of training was only open to the host institution.

4.4. Questions 11-19. Target audience, training content and techniques

The next nine questions intended to find out what was the target audience, if training required some experience or prior knowledge, what topics were covered, what training methodology was chosen, who lectured, what were the main learning objectives and benefits of attending, and what kind of support material was delivered before and after the course.

Question 11. Target audience

Respondents were given the following options:

- **Practitioners** (staff working within in libraries, archives, museums and the cultural heritage sector)
- **Researchers** (working in libraries, archives, museums or academic institutions who are directly involved in digital curation issues)
- **Developers** (employed by commercial vendors, but also institutional IT experts within the MLA, government and business sectors, who would be responsible for digital curation in these institutions)
- **Students** from different sectors
- **Other** (Please specify)

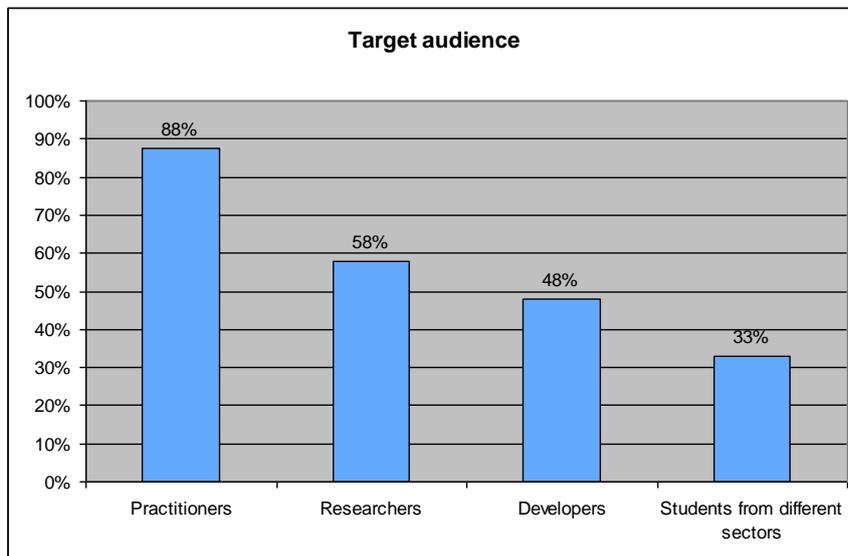


Figure 12: Audiences targeted for training events (by professional role)

Multiple answers were possible, and most courses were aimed at several target audiences. The groups with the most opportunities to improve their knowledge in the digital curation field were practitioners (88%) and researchers (58%) from archives, libraries, museums or academic institutions. Forty-eight percent of all training was also appropriate for developers employed by commercial vendors or institutional IT experts within the museums, libraries, archives, government and business sectors, who are responsible for digital curation. Finally 33% of events were targeted at students from various sectors.

Question 12. Required experience or prior knowledge of digital curation issues

Respondents were given the following options:

- No pre-knowledge required
- Some basic understanding
- Experienced data curator
- Technical knowledge
- **Other** (Please specify)

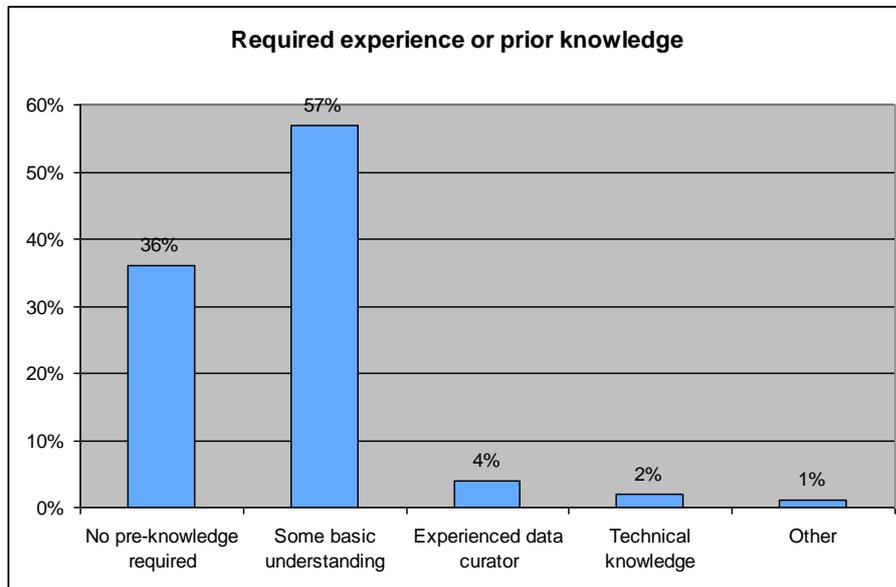


Figure 13: Prior experience or knowledge required by delegates

Institutions were asked if their training required any experience or prior knowledge from their target audience(s). Most of the forty-eight training events required only basic understanding of digital curation issues (57%) or no pre-knowledge at all (36%). One respondent commented that they generally expect that there are curation activities happening at the organisation where the person works. The rest were more specific; two courses (4%) were aimed at experienced data curators and one (2%) required technical knowledge.

Question 13. Key topics covered

Respondents were given the following options:

- **General knowledge / Basic knowledge** (for all levels of staff, provide a general introduction and explain the key needs and challenges in this area)
- **Strategic planning** (assist practitioners in identifying issues and goals necessary to plan and manage digital curation initiatives)
- **Digital curation and preservation tools** (DAF, DRAMBORA, DMP, PLATO, PLATTER etc.)
- Digital repository audit and certification
- **Technical issues** (assist in understanding and applying digital curation techniques)
- **Legal aspects/Digital curation policies** (assist in making legal decisions: copyright, freedom of information legislation, data protection requirements etc.)
- **Trusted repositories** (techniques and criteria for trusted digital repositories)
- Digital curation standards (metadata, OAIS etc.)
- **Other** (Please specify)

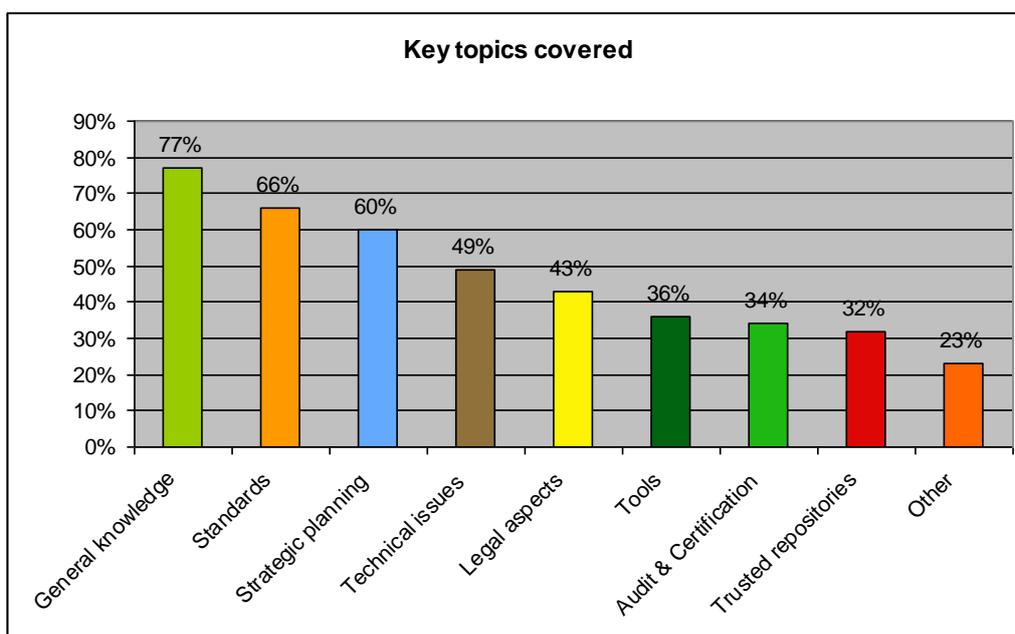


Figure 14: Key topics covered in training events

Respondents were asked to tick all appropriate answers, so multiple answers were possible. The survey results show that a variety of topics were covered in training courses. General knowledge (77%) about key needs and challenges in this area, as well as digital curation standards (66%) and strategic planning (60%) were particularly popular topics, showing these topics are especially valuable and provide useful knowledge to take back to individual institutions. Other topics were also well-covered: technical issues were taught in twenty-three courses (49%), legal aspects in twenty courses (43%), digital curation and preservation tools in seventeen (36%), digital repository audit and certification in sixteen (34%), and trusted repositories in fifteen (32%). Twenty-three percent of courses also proposed other topics, including file formats, risk assessment, terminology of digital curation, digital curation life cycle model and web archiving.

Question 14. Training format

Respondents were given the following options:

- In person; large group workshop, mixture of lectures and practical exercises
- In person; small group hands-on training, focused on practical activities
- Online training; “webinar”
- Online training; self-paced courses
- Blended training
- **Other** (Please specify)

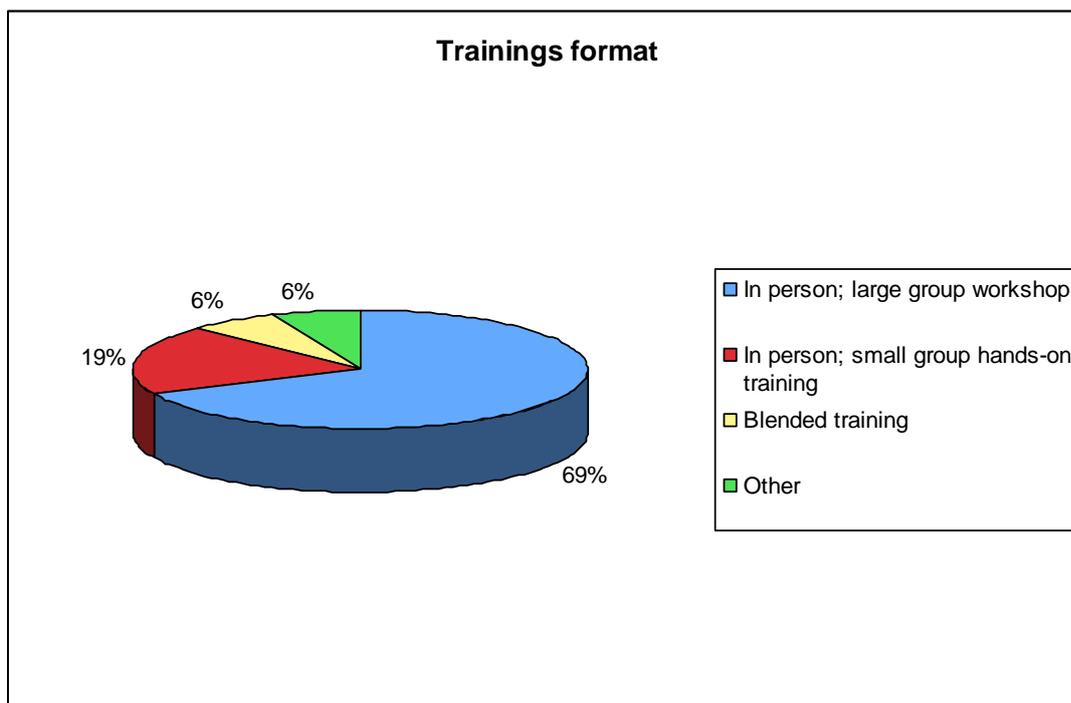


Figure 15: Format of training

Respondents could choose only one appropriate answer. The survey results showed that most digital curation courses were delivered in traditional format: large group workshops, a mixture of lectures and practical exercises (69%) and small group hands-on training, focused on practical activities (19%). Only three events (6%) were delivered in blended format, with one respondent explaining that it was a small group hands-on training together with online self-paced courses. One respondent also mentioned that they deliver a regular academic course, taught synchronously via an online system. Two others noted that they deliver a small group seminar, mixture of lectures and practical exercises and large group workshop.

Question 15. Trainers

Respondents were given the following options:

- In house: training professionals
- External: subject specialists
- External: training professionals
- Online course developers
- Other (Please specify)

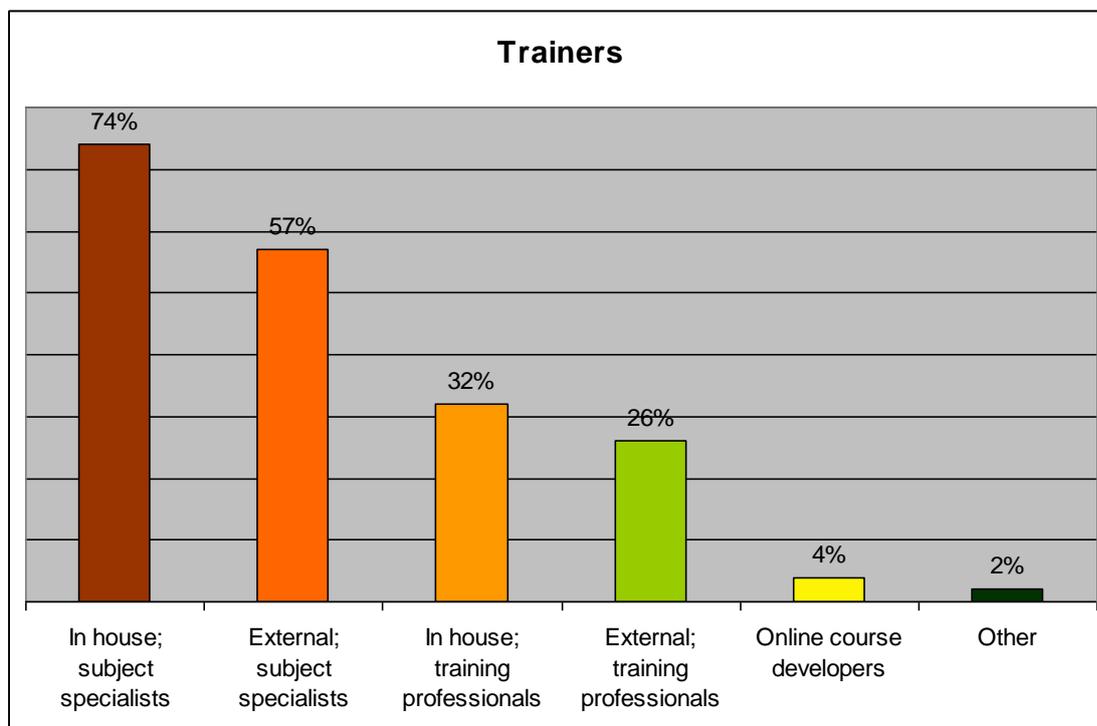


Figure 16: Type of trainer(s) used

Again, multiple answers were possible. Most trainers were practitioners – in-house (74%) or external (57%) subject specialists. Several courses were delivered by in-house (32%) or external (26%) training professionals and two respondents also mentioned online course developers (4%) and one an academic faculty (2%).

Question 16. Learning objectives

Respondents were asked to list up to five objectives of the training course. For this question we received information about thirty-eight training events out of a possible forty-eight. The majority of objectives highlighted understanding of the main areas of digital curation: increasing awareness of the critical challenges and trends in the emerging data curation field; latest developments in managing digital information; and requirements for data curation in different organisational, technological, legal, cultural, and business environments. A significant number of respondents also mentioned policy and technical aspects as important objectives: ensuring capacity in developing internal policy for organisations involved in data curation; getting to know the standards applied; providing knowledge about some of the most up-to-date digital preservation methods and differences between them; data management planning; and learning essentials on data repository systems, web archiving and file formats. Some organizers highlighted partnership with designated communities, broad knowledge of current networks, trends and projects and learning best practice for digital curation activities as important objectives. Creating awareness in the private sector between developers and

preparation of government staff to deal with digital records were also indicated as learning objectives by two institutions. Other answers included the ability to lead others and communicate knowledge, develop critical thinking and raise morale.

Question 17. Benefits of attending

Respondents were asked to list up to five benefits for having attended the course. For this question we received information about thirty training events out of the possible forty-eight. Most respondents listed two or three benefits. The majority highlighted various competences and capacities which attendees will gain during the course: ability to make choices between short, medium and long-term digital preservation; becoming able to define strategy and planning in the field; understanding of the preservation planning process and its benefits to overall digital preservation strategies; acquiring competence on the main tools and standards; capacity to dynamically interpret rules and legislation; knowledge of the role and use of metadata and representation information needed for preservation; and knowledge of web archiving and implementation of existing software etc. A significant number of respondents also mentioned networking and the ability to exchange knowledge as an important benefit. Some respondents mentioned the opportunity to encounter experienced national and international experts as a good benefit of attending. Two respondents indicated the benefit of credits. One respondent noted the importance of training for dissemination of digital culture. The remaining answers included empowering delegates, for fun, to realise specific products, and encouraging thinking proactively instead of fixing things afterwards.

Question 18. Were any supporting materials or pre-course exercises made available before the course?

- Yes (Please specify what kind of material)
- No

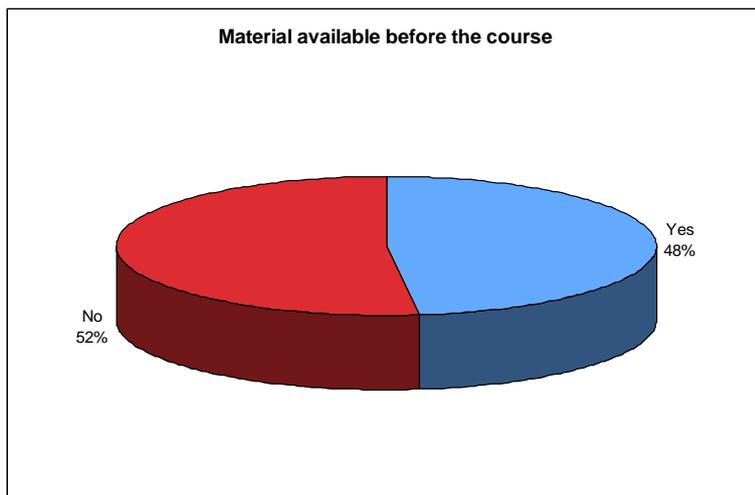


Figure 17: Materials available before the training course

Question 19. Were training materials available after the course?

Respondents were given the following options:

- Yes (Please specify where and for whom)
- No

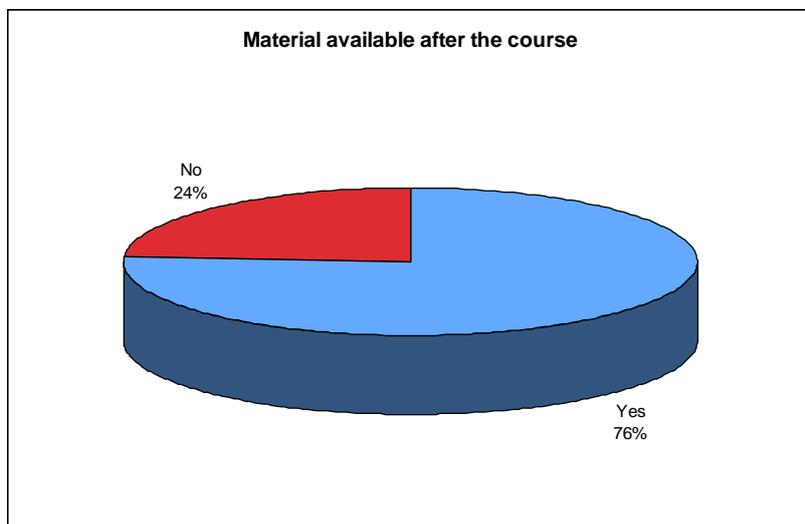


Figure 18: Materials available after the training course

In questions 18 and 19, respondents were asked if any supporting materials or pre-course exercises were delivered before and after the course. We received information about forty-two training events (88%) and almost half (48%) of them noted that they provided pre-course supporting material. More than half (76%) provided training material after the course. Before the course, most organizers provided PowerPoint presentations, introductions to particular topics (OAIS, TDR, METS, DCC lifecycle model) and other course materials prepared by teaching experts. Respondents also mentioned biographies of trainers, lists of recommended readings, location information, schedules and lists of topics. Some organizers also delivered surveys to find out outcomes and expectations of delegates. The bulk of materials provided after the courses were arranged as PowerPoint presentations as well as other supporting material (literature, leaflets etc.). Supporting material was available on training or organizing institution websites, the Moodle course management system or internal wikis. Only fourteen respondents specified for whom training material was available, with 71% of them noting that it was accessible only for attendees of the course and 29% that it was accessible for all.

4.5. Questions 20-24. Assessment, certification and evaluation

The next five questions aimed to find out how and by whom students were assessed, if they received any credits or certification, and how training events were evaluated.

Question 20. How were students assessed?

Respondents were given the following options:

- **No assessment**
- **Exam** (written exercises, oral questions or practical tasks)
- **Test** (multiply choice questions)
- **Other** (please specify)

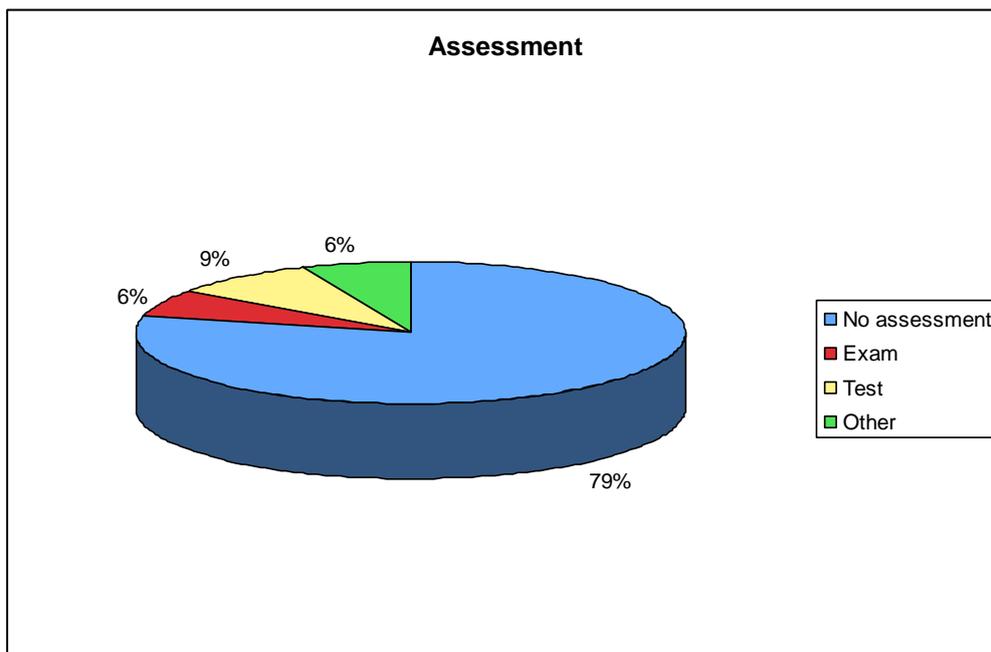


Figure 19: How the training was assessed

For this question we received information about forty-seven training events. The majority of organizers (79%) didn't offer any assessment, 9% offered tests, and 6% exams (written exercises, oral questions or practical tasks). One respondent replied that they used all the above-mentioned options. One set a group assignment based on a use-case scenario. Finally, one required students to complete short written assignments, a term project and a presentation.

Question 21. By whom were students assessed?

Respondents were given the following options:

- By training provider
- By external bodies (*please specify*)

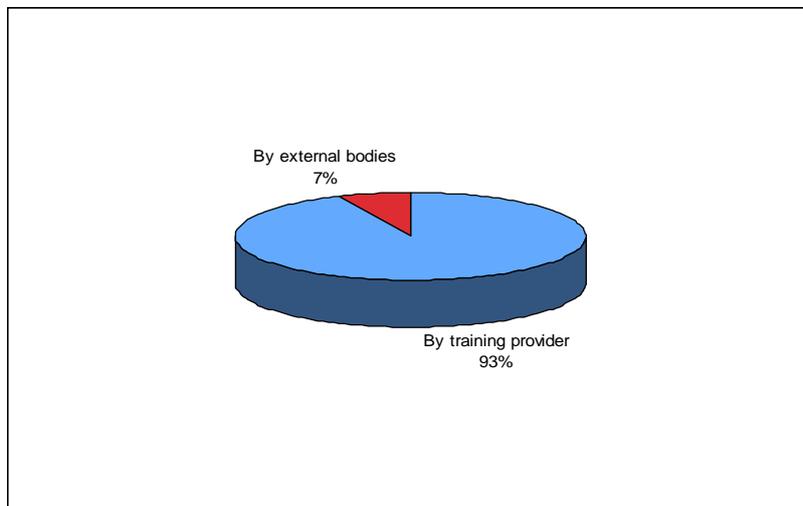


Figure 20: Where training assessed, by whom it was assessed

Respondents were asked by whom students were assessed – by training provider or by external bodies. Here we received information about fifteen training events. Only one event was assessed by an external body (a commission of specialists in the field); all the rest were assessed by the training provider.

Question 22. Did attendees receive certification as a result of the course?

Respondents were given the following options:

- Yes (Please specify: academic, vocational etc.)
- No

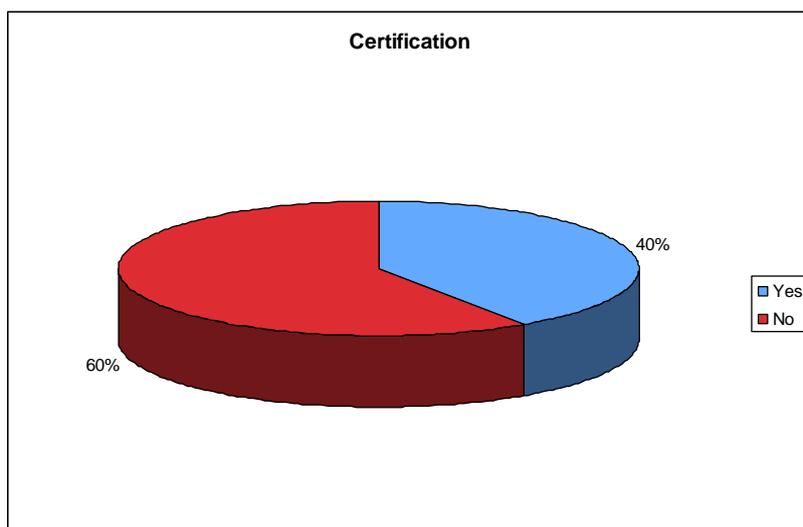


Figure 21: Whether certificates were issued after the training course

Respondents were asked if attendees received certification as a result of the course. We received information about forty-seven training events for this question. The results showed that 40% of all training provided attendees with certificates as result of the course. Some courses (3) did not provide any certification even when there was student assessment. Some respondents specified the type of certification and results received show that 42% of those certificates were vocational and 32% academic.

Question 23. Did you provide credits for the attendees of your sessions?

Respondents were given the following options:

- Yes (Please specify)
- No
- Additional comments

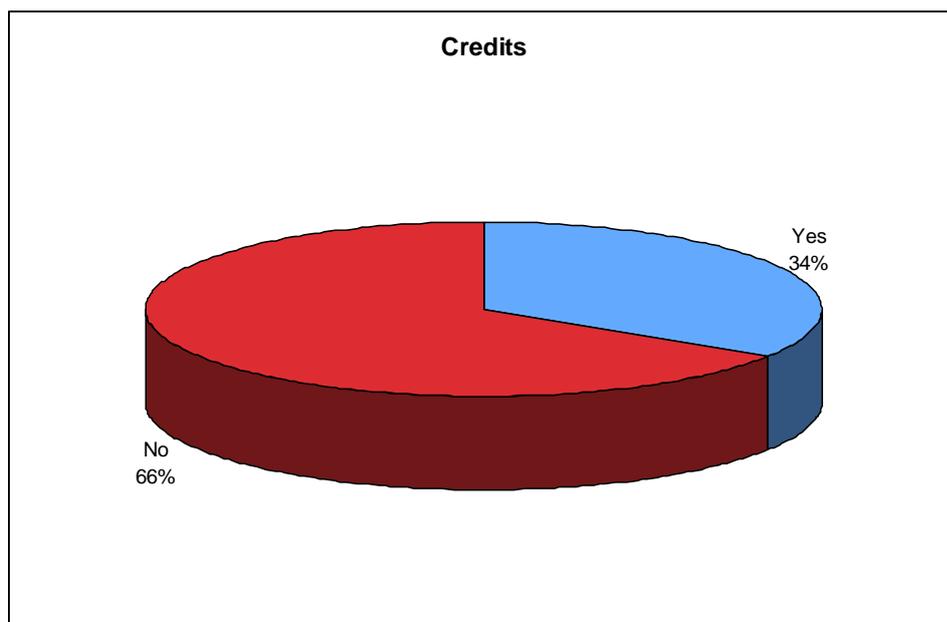


Figure 22: Whether credits were provided for delegate attendance

Respondents were asked if they provided credits for the attendees of their sessions. Of the forty-seven training events covered, the results show that 34% (16) of all training provided credits. Three mentioned that they give two ECTS credits for attendance at their course, two respondents noted that they give four ECTS credits for attendance, and some respondents commented that it depends on university rules, work done and the time spent.

Question 24. How did you evaluate your training event?

Respondents were given the following options:

- No evaluation
- Feedback questionnaires
- Follow-up questionnaires
- Other (Please specify)



Figure 23: How training courses were evaluated

Respondents were asked if they evaluated their own training events and if so, how. For this question we received information about forty-six training events. Only one answer was possible. The results showed that most organizers (83%) use feedback questionnaires as their training evaluation method. One organizer noted that they use feedback questionnaires at the end of the course and then follow-up questionnaires after several months. The other organizers use follow-up questionnaires (4%) or no evaluation at all (9%). One respondent reported that they obtain feedback by discussion with the students rather than by using a questionnaire.

Question 25. Are you planning to organize such training events during next two years?

Respondents were given the following options:

- Yes (please provide short description (topics, learning outcomes, format etc.) and/or web address of them)
- No
- Maybe

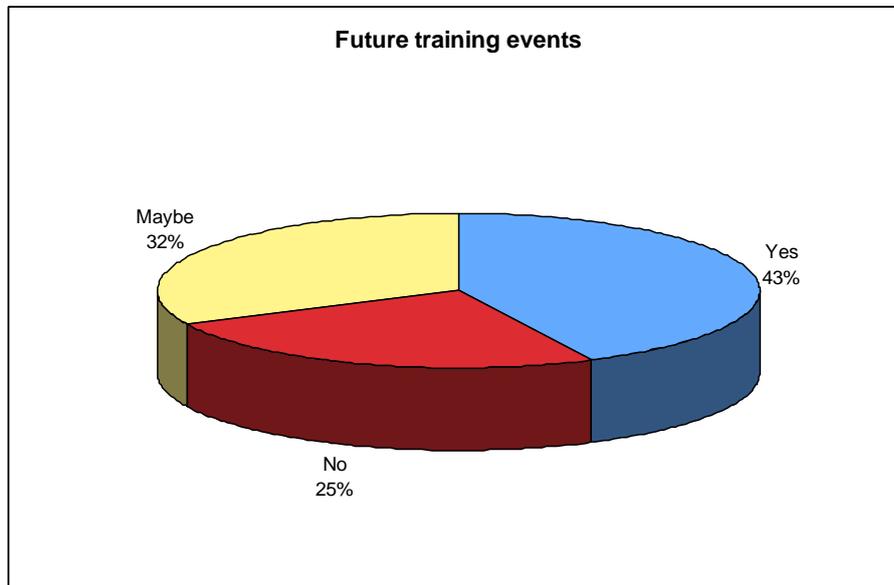


Figure 24: Future training events planned

The last part of the questionnaire focused on future plans. For this question we received fifty-six answers. The results showed that almost half (43%) of respondents are planning to organize such training events during next two years, 32% may organize and 25% are not planning to organize. All respondents who are planning to organize training events during the next two years provided short descriptions on possible topics, learning outcomes and/or format. Respondents named very diverse topics, but several mentioned a general introduction to digital preservation (5). Others noted attributing metadata, evaluating the format of digital resources, checking an OAIS-compliant ingest plan, data archiving of scientific data sets and management of photo archives. Several respondents (5) mentioned various topics related to digitization, suggesting that the definition of 'digital curation' is still not clear for some practitioners. With regards to learning outcomes, these included raising awareness about digital preservation and existing tools, learning about current developments in the field, understanding the risks associated with storing existing information for future access, and understanding the implication of business need in accessing older information. One respondent mentioned a very practical outcome based on the needs of their specific institution – preparing staff for using and administrating a particular digital preservation system. Again, one respondent mentioned digitization, specifically knowledge which helps users to digitize their collections, as one of the main learning outcomes.

Responses received show that most training events will be aimed at practitioners from the cultural heritage sector: museum professionals, library personnel and other digital curators working with digital materials. A few respondents are planning to provide internal training that addresses specific in-house requirements. Some respondents also provided comments on the duration of future courses, and as with the response to delivered events there are planned short-term (one to five days long) events or long-term (two years long) Master's programmes. All the information received shows that training courses planned during the

next two years are similar to those that are being organized now. They cover many of the same topics (general principles) and learning outcomes, are of a similar duration, and have the same target audiences. However some more specialised themes are starting to emerge, according to the needs of particular institutions, sectors or for a particular kind of data (scientific data, photo archives).

Question 26. Please feel free to make any additional comments or provide recommendations

At the end of the survey, respondents were asked to make additional comments or provide recommendations. For this question we received twenty answers. Most respondents commented on their current situation, problems they are facing and the needs they have. Most institutions acknowledged the need for a systematic and continuous approach in teaching experts to handle more and more data. They are keen to learn more and ready to assist others. A few respondents expressed the need for more online training and instruction material. One institution highlighted that they have the foundation for training in digital preservation and are discussing with other institutions the development of a joint curriculum for this domain but focussing on education rather than training. One institution mentioned that they want to continue providing training but with the support of external organisations. One noted that training would be useful, but staff members are not qualified enough to run courses. We also received several recommendations: that sharing pan-European experience of digital curation between teachers, professionals and experts is really necessary and some co-ordination of different training opportunities could be useful. One respondent recommended using the TAPE project approach.

4.6. Summary of the main facts and findings of the survey

Background information obtained for each respondent showed the large diversity of institutions related to digital curation and long-term preservation. Less than half of respondents stated that they organize training in the digital curation field, though the remaining number had organized between two and seven training courses during the last two years. The main reasons for not organizing any courses were indicated as lack of funds and a lack of need.

All training events can be divided into two groups: short-term training and long-term training. The main language used to deliver courses is English. Almost 70% of the courses were open to all or to the professional community at national and international levels and were aimed at several target audiences. However the largest target group is practitioners.

More than half of the courses required only basic understanding of the topic, and more than one third did not require any pre-existing knowledge at all. The most popular formats for digital curation courses were the most traditional – large group workshops, or a mixture of lectures and practical exercises. They were delivered mostly by in-house practitioners or external subject specialists.

Amongst the various objectives of the training courses, the most frequent were: understanding of the main areas of digital preservation (increasing awareness of the critical challenges and trends in the emerging data curation field), latest developments in managing digital information, and requirements for data curation in different organisational, technological, legal, cultural and business environments.

Half of the training courses offered pre-course material (PowerPoint presentations, introductions to particular topics etc.), which in most cases were available after the course as well. The majority of courses had no assessment of any kind, though 40% provided attendees with certificates as result of attending the course. One third of all training provided credits for the attendees of their sessions.

Less than half of respondents stated that they intend to organize training in the digital curation field during the next two years. This corresponds to the statement above that the main reasons for not organizing any courses were lack of funds and lack of need or awareness. As a priority most respondents mentioned in-house training corresponding to the real situation and needs of their organisation.

4.7. Conclusions from the survey

The purpose of this survey was to question organisations which had delivered vocational training in digital curation during the last two years and to identify the existing training opportunities. Amongst other questions, the survey aimed to answer:

- what kinds of organisations carry out appropriate training?
- what is the target audience?
- what kind of abilities or competences are developed?
- what is the methodology suggested?
- what is the length of the training program?

It was important to find out the geographical context of existing training opportunities as well as target audiences and training content offered.

The survey was disseminated via emails to various national and international competence centres in Europe and around the world (identified from the registry established in the DPE project¹ and additional contacts identified by partners).

Most of the vocational training courses offered our survey respondents took place in the United Kingdom, Germany, Italy, Netherlands and the USA.

France and Belgium are also active in delivering training, but we did not receive as many survey responses from these countries. There may be less activity in France and Belgium, or there may have been a low response rate from these countries for other reasons. Digital preservation activities are diffused across diverse professional communities and organisations. However, not all organisations which perform information management see digital preservation as an integral part of their activities.

In most cases the main language of the training courses is English. However, we also received descriptions of courses in German, Italian and French. Although almost one third of the training courses were targeted towards a national audience, the majority were accessible to participants from other countries as well. So it can be concluded that although in some countries appropriate training courses are not offered frequently or do not exist at all, there are widespread opportunities to attend a course in another country. Survey results indicated a variety of languages were used in training courses across Europe.

The analysis of the survey shows that the target audiences of the courses were diverse. Training is mostly meant for specialists working in libraries, archives or museums, though often researchers from memory or academic institutions working in the field of digital curation are invited, as well as developers (private companies, IT specialists etc.) and students. It can be concluded that there is a demand for professionals of different profiles in digital preservation and in spite of differences in scope and nature of tasks between these professionals they all have one similarity – the need to get oriented, learn quickly and make judgments in ambiguous and constantly changing environments.

Taking into account that only some basic understanding of the subject or even no prior knowledge is required, it can be concluded that in most cases training is organized to

¹ www.digitalpreservationeurope.eu

introduce participants to digital curation in general and to attract attention to essential aspects of the work in this field, rather than to develop practical abilities to perform certain tasks or actions in everyday work in the digital curation field. This last statement can be supported by the fact that the main objectives set by organisations are to increase awareness of the target audience about digital curation, introduce critical challenges and trends, and highlight main requirements for proper and effective digital curation. Training is also focused on recommendations for handling the policy and strategy aspects of digital curation and suitable standards and methods to be applied in practice. The analysis of topics discussed in training events reveals the general orientation of training towards addressing urgent needs of professional communities involved in digital preservation. However, there are still not many training events informing attendees about specific technical digital preservation practices. Major topics address the most urgent needs to launch and manage digital preservation initiatives, but lack a broader perspective of the change brought by digital preservation and possible future consequences of digital preservation activities, such as data loss and associated salvation techniques like digital archaeology.

The analysis of plans for future training show that though the current training focus is mostly on general topics of digital preservation, organisations express the need to gain more specific information relating to their particular concerns from future courses. However some respondents still do not acknowledge the difference between digitization as a process and digital preservation. That shows a significant difference of awareness in this field between different organisations.

An overview of responses from organisations which did not deliver any training courses in the digital curation field in the last two years offers the following conclusion: organisations which can be identified as potential coordinators of training courses in the digital curation field do not see the need to offer such courses, as mostly they lack funds for this activity or do not recognise this field as an important one. It is worth mentioning that one of the possible reasons for not delivering training courses is a lack of specialists working in the field, and in many cases those that do exist are not yet ready to deliver training.

Though we succeeded in reaching a sufficient number of European organisations with the survey, it was more difficult to contact institutions in countries throughout the rest of the world. Therefore it can be said that results of this survey mostly reflect the European context. In future it would be appropriate to repeat the dissemination of the survey in the countries with a low response rate as it is known that some of them are very active in delivering training in the digital preservation field: ideally, we would attract responses from the US, Canada and Australia where there is much digital preservation research activity currently underway. Also it must be mentioned that various mailing lists of a respective country as well as personal contacts should be used for dissemination of this survey in future. Another aspect to consider is the use of major languages other than English for the survey: the lack of this may have been a significant factor in the lack of responses from, for example, the Francophone countries in responses to the survey.

5. DigCurV Evaluation Framework

5.1. Background

The DigCurV Evaluation Framework builds on various pieces of previous work in digital curation curriculum design and evaluation framework development. The layout is based on the matrix format of the DigCCurr Matrix of Digital Curation Competencies and Knowledge (Version 13, 17 June 2009²). Other models drawn upon include the Digital Preservation Outreach and Education initiative's training audiences pyramid³, the Research Information Network's Researcher Development Framework – taxonomy for information literacy, Version 3⁴, and the Digital Curation Centre lifecycle model⁵.

The structures of, and approaches to, the Evaluation Framework have been suggested by these models. The content of the Evaluation Framework has been supplied by the findings from the training opportunities survey (section 4 above) and a companion survey by DigCurV of training needs. Together they show the various aspects that need to be considered for each part of any digital curation curriculum which is being developed or being assessed.

The DigCurV project aims to develop a Curriculum for vocational training in digital curation and this Evaluation Framework provides groundwork for this development. The DigCurV Curriculum will indicate core digital curation competences and pathways of skills progression through these. The Evaluation Framework described here will be of practical use in this development work by being applicable to existing curricula, and by acting as a critical tool applied to progressive iterations of the Core Curriculum, to aid its development.

5.2. Structure and usage

The Evaluation Framework is intended to be helpful to those designing, providing or assessing digital curation curricula (or individual pieces of training which may form part of a curriculum). The Evaluation Framework provides a series of different ways to view and evaluate a digital curation curriculum or piece of training. These different ways are described as Areas and numbered from 1 to 6. Taking a structured approach to consideration of a curriculum or piece of training can help those developing training to assess what is already available, and to clarify which potential approaches, audiences and skills may need to be addressed. For those assessing training, the Evaluation Framework provides a structure to which training offerings can be mapped. This serves to clarify where provision is ample and which approaches, audiences or skills are scarcely served in existing training. Mapping can also provide a benchmark to allow comparison of different training offerings against each other.

² <http://www.ils.unc.edu/digccurr/digccurr-matrix.html>

³ http://www.digitalpreservation.gov/education/documents/DPOE_handout.pdf

⁴ http://www.rin.ac.uk/system/files/attachments/RDF_taxonomy_for_IL_-_v3.pdf

⁵ <http://www.dcc.ac.uk/resources/curation-lifecycle-model>

5.3. Implementing the evaluation framework when designing a curriculum

To get the fullest benefit from the Evaluation Framework, those developing or assessing a curriculum should consider each Area of the Evaluation Framework in turn, and check that at least one category from each Area fits to each part of the curriculum they are examining. This will ensure that each aspect of the curriculum has been carefully considered and can be justified from a variety of viewpoints.

For example, a particular training module might be identified by the training provider or assessor as corresponding to the following:

- Area 1: Knowledge and principles: Repositories/management systems
- Area 2: Skills and competences: Knowledge base, subject knowledge, practical level
- Area 3: Profile types: Library Manager, Data Manager
- Area 4: Part of lifecycle: Ingest
- Area 5: Teaching method(s): Lecture with one small group exercise
- Area 6: Disciplinary context: Digital art conservation; Institutional or organisational context: National library of art.

(Additional contextual information may be gathered, where relevant and available, in Area 6, 'Professional context'.)

This analysis would allow training providers to group modules or parts of the curriculum being examined into clear areas; this allows users of the curriculum to pick and choose aspects relevant to them based on their requirements from each Area of the Framework.

Area 1: Knowledge and principles

Area 1: Knowledge and principles

This area is taken from topics identified in the [training opportunities registry](#) and DigCurV survey work, and lists the knowledge and principles required for digital curation, which could be reasonably expected by an employer recruiting to a post in this field. Clearly different job roles will require different knowledge: the aim of this list is to establish the core knowledge and principles currently used in digital curation.

- Access and reuse. Examples include:
 - Providing controlled access to digital assets
 - Encouraging reuse of digital assets
- Audio/audiovisual material. Examples include:
 - Specific requirements and techniques for successful curation of digital audio and audiovisual objects
- Audit and certification. Examples include:
 - Trusted digital repositories
 - National and international standards
- Digital archives. Examples include:
 - Principles and planning for successful set-up and management of a digital archive
 - Digital collection/content management. Examples include:
 - Planning
 - Content management software selection
 - Preservation workflows
 - Collection policy
 - Ingest
 - Disposal
- Digital curation lifecycle. Examples include:
 - Digital curation centre lifecycle model
 - Applying a lifecycle model to the institution
- Digital images. Examples include:
 - Specific requirements and techniques for successful curation of digital images
- Digital preservation workflows.
- Digitisation. Examples include:
 - Management of digitisation projects
 - Workflow

- Significant properties and parameters
- Electronic records management. Examples include:
 - Legal requirements including freedom of information legislation
 - Providing controlled access to electronic records
 - Version control
- File formats. Examples include:
 - File format identification,
 - Characteristics and best use of various file formats,
 - File format selection for digital preservation
 - Identifying significant object properties
- Legal. Examples include:
 - Intellectual property rights
 - Licensing
 - Copyright
 - Freedom of Information
- Metadata. Examples include:
 - Standards
 - Use
 - OAIS model
- Policy. Examples include:
 - Institutional policy
 - Funder requirements
- Preservation approaches. Examples include:
 - Migration
 - Emulation
- Preservation planning.
- Project management for digital preservation. Examples include:
 - Fundraising
 - Planning
 - Monitoring
 - Evaluation
- Repositories/management systems. Examples include:
 - Software system characteristics and selection
 - Best practice

- Embedding in institution
- Research data management. Examples include:
 - Good research practice in data gathering and storage
 - Secure storage
 - Data sharing
 - Institutional policy
 - Funder requirements
 - Informed consent and rights management
- Risk management. Examples include:
 - Risks to longevity of digital holdings
 - Legal challenges to ownership / right of access
 - Disaster recovery planning
- Security. Examples include:
 - Secure storage and transit of digital assets
 - Controlled access to digital assets
- Tools of a project/organisation. Examples include:
 - DAF
 - AIDA
 - PLATO
 - Planets Testbed
 - DRAMBORA
- Web archiving. Examples include:
 - Workflow
 - Scoping
 - Storage
 - Legal issues

Area 2: Skills and competences

This area is based on the [RIN Researcher Development Framework Information Literacy Taxonomy v3](#), published by RIN, May 2011, and populated with results of training needs survey and focus group findings. The 'Skills Area' and 'Descriptor' columns are those in the RIN Taxonomy which are applicable to digital curation. We are considering how practical, managerial and executive roles in digital curation map to each Descriptor. These skills encompass not just technical knowledge and duties as covered in Area 1, but widen out to encompass personal attributes, attitudes and behaviours, further helping to define the approaches that a curriculum should encourage in individuals to shape them for success in digital curation professions.

Skills Area (domains, sub-domains based on RDF arrangement)	Descriptor (RDF and RIN taxonomy)	Practical (from DPOE audiences pyramid)	Managerial (from DPOE audiences pyramid)	Executive (from DPOE audiences pyramid)
Knowledge base	Subject knowledge	Delivers firm knowledge of subjects that data/information relates to and awareness of new developments in field.	Provides awareness of subjects in which practitioner team are currently working with data from. Covers main principles or features of these subjects. Raises awareness of main sources of further information (people, institutions).	Provides broad overview of subjects in which institutional data curation activity is currently involved. Raises awareness of main sources of further information (people, institutions).
Cognitive abilities	Evaluating	Teaches ability to evaluate if item is required for preservation and to determine most appropriate curation actions to be performed.	Delivers ability to prioritise collections in terms of their value to institution and the current level of risk facing them, to make case for funding of preservation activity.	Supports ability to identify institutional priorities for funding and select requests for funding accordingly.
Creativity	Inquiring mind	Encourages engagement with developments in both subject/domain and in digital curation; supports continuously seeking new developments in both.	Encourages awareness of, and appetite for, new or innovative practices in subject/domain and in digital curation practice that could improve efficiency of workflows.	Engenders interest in new or innovative processes or practices employed elsewhere in the sector.

Creativity	Innovation	Stimulates willingness and ability to use new information to inform curation practice when available.	Stimulates willingness to find out more about new developments in curation practice and consider their deployment.	Confirms value of new developments in sector and encourages deployment when they can improve institutional performance / profile.
Personal qualities	Integrity	Teaches understanding of good research practice and recognition of malpractice e.g. fraud or plagiarism in datasets. Encourages setting and application of high standards to own work and attention to detail when engaged in digital curation activity.	Encourages expectations of high quality performance from practitioner team and responsibility for effectiveness and quality of curation/preservation function. Supports transparent decision-making.	Encourages leadership in quality and transparency of work and decision-making.
Self-management	Responsiveness to change	Encourages awareness of new / emerging developments in field and their practical applications to digital curation practice; and uptake of new methods where appropriate.	Encourages finding out more about new developments in curation practice and considering their deployment.	Provides a sense of new directions or moods in the field or sector. Encourages recognition of value of new developments in sector and willingness to authorise deployment when they can improve institutional performance / profile.
Professional conduct	Ethics, principles and sustainability	Delivers understanding of need to manage, share and curate information/data ethically; awareness of rights of data creators, depositors and any named parties in curated data/information. Highlights importance of familiarisation with relevant institutional policies.	Provides understanding of need to manage, share and curate information/ data ethically. Ensures familiarity with ethical practice. Delivers ability to implement workflow to manage rights of those connected to data/information. Supports contribution to useful and applicable institutional policy development informed by realistic view of practical implementation.	Presents ethical and sustainable work practices as central to business of institution. Supports ability to initiate/approve institutional policy development accordingly. Sets expectation to take public responsibility for failures in these areas.

Professional conduct	Legal requirements	Provides understanding of obligations/ requirements from relevant legislation such as data protection and freedom of Information, and the concomitant actions to apply in practice. Highlights importance of familiarisation with relevant institutional policies.	Provides understanding of obligations/ requirements from relevant legislation such as data protection and freedom of Information, and the concomitant actions to apply in practice. Supports useful and applicable institutional policy development informed by realistic view of practical implementation.	Clarifies organisational responsibilities under relevant legislation and role of senior staff to ensure application in their areas of responsibility. Supports ability to initiate/approve sound institutional policy development. Sets expectation to take public responsibility for failures in these areas.
Professional conduct	IPR and copyright	Delivers understanding of information/data ownership, and by extension the implications of copyright and licensing. Provides good practice in handling copyright throughout preservation / curation activity to minimise unnecessary infringement. Highlights importance of familiarisation with relevant institutional policies.	Delivers understanding of information/data ownership, and by extension the implications of copyright and licensing. Supports ability to contribute to useful and applicable institutional policy development informed by realistic view of practical implementation.	Explains legal principles of information/data ownership, and by extension the implications of copyright and licensing. Supports ability to initiate/approve sound institutional policy.
Professional conduct	Attribution and co-authorship	Explains relevance of citation and bibliometrics, and the importance of ensuring that, where possible, data / information is findable, understandable and citable.	Supports leadership of practitioner team in familiarity with importance of data /information being curated in such as way as to be findable, understandable and citable. Supports development of curation / preservation strategies and workflows to ensure such data remains findable, understandable and citable.	Supports ability to provide leadership in best practice in this area. Sets expectation to take public responsibility for failures in these areas.

Research management	Project planning and delivery	Teaches planning for start of a project re. how information/data will be managed. Delivers ability to identify and communicate data management requirements to other stakeholders. Teaches how to provide wider public access to and long-term preservation of data.	Teaches effective project management through the setting of team goals, intermediate milestones and prioritisation of activities.	Supports ability to provide definition of institutional objectives, milestones and priorities.
Research management	Risk management	Delivers ability to assess risk level currently faced by item and identify necessary steps to mitigate.	Delivers ability to assess risk level currently faced by collections and prioritise curation/preservation action across collections.	Provides expertise on organisational risk capture and analysis, prioritisation and risk management measures.
Communication and dissemination		Delivers ability to articulate extent of knowledge both to peers and to other staff groups.	Engenders responsibility for dissemination of curated/preserved information/data and collections.	Supports consistent promotion of excellence in institutional practice across the sector and to other stakeholders.

Area 3: Audience/profile types

These are being identified by through the findings of the DigCurV survey of training needs, focus groups and by analysis of job descriptions that are being collected by the project and, where appropriate, the findings from the JISC/RIN/DCC Data Management Skills Support Initiative (DaMSSI).

This Area lists the key duties of each identified Job Profile, and maps the roles to the DPOE audience levels. This is useful for assessment of curricula as well as to help training developers ensure they are meeting the training needs of established and emerging roles in digital curation.

Job profile	Knowledge, skills and competences	DPOE audience level
CEO		Executive
Library Manager		Managerial
Data Manager	<ul style="list-style-type: none"> Analysis Collaboration Communication Computer literacy Current trends in field Influencing and persuading Organising Planning Project management Relevant legislation, e.g. IPR Selection Self motivation Service user liaison and support Service development Writing data management plans 	Practical
Senior data manager	<ul style="list-style-type: none"> Analysis Collaboration Communication Computer literacy 	Practical

	<ul style="list-style-type: none">Current trends in fieldConstruction and maintenance of data filesData checking and editingData linkage checking and validatingProvision of data to usersOrganisingPlanningSelf motivationSPSS and/or STATA or programming experienceWriting documentation of proceduresWriting reportsRelevant legislation, e.g. IPR	
--	---	--

<p>Data director</p>	<p>Advising on data collection, management, analysis and protection Collaboration Communication Costing Current trends in field Directing management of large and complex datasets Influencing and persuading Organising Planning Project management Quality assurance Relevant legislation, e.g. IPR Resource planning Strategy and policy development Supervising team Writing funding proposals</p>	<p>Managerial</p>
<p>Data librarian</p>	<p>Cataloguing and metadata standards Collaboration Communication Current trends in field Digital curation knowledge – standards, systems, tools Data discovery and retrieval Metadata Organising Planning Project management Quality assurance Relationship building Service evaluation Service promotion and development Service user liaison and support Supervising team</p>	<p>Practical, Managerial</p>

	<ul style="list-style-type: none"> Training others User requirements research Writing data management plans Writing service user guidance 	
Digital archivist	<ul style="list-style-type: none"> Archival / information management experience Budget monitoring Collaboration Communication Computer literacy Current trends in field Digital curation knowledge – standards, systems, tools Implement standards Organising Planning Project management Quality assurance Self motivation Service promotion and development Supervising team Writing reports 	Practical
Digital curation officer	<ul style="list-style-type: none"> Collaboration Communication Service user liaison and support Training others User requirements research 	
Digital resources officer	<ul style="list-style-type: none"> Creativity Collaboration Communication Computer literacy Data checking and editing Data discovery and retrieval Data ingest 	

	<p>Database construction Librarian, archiving or information management experience Metadata Organising Self motivation Service development and promotion Service user liaison and support Training others User requirements research Webpage construction Writing documentation of data file content Writing service user guidance</p>	
--	--	--

Area 4: Part of digital curation lifecycle

The Digital Curation Centre lifecycle model is available at <http://www.dcc.ac.uk/resources/curation-lifecycle-model>.

Mapping to the digital curation lifecycle model is a useful way for many professionals working in the digital curation professions to understand and conceptualise how and where different training offerings fit together / intersect as this model is widely used in digital curation training both in the UK and in various other regions including the USA. This is also helpful for training developers to establish which areas of the digital curation lifecycle are currently abundantly and poorly served by current training offerings.

- Conceptualise
- Create or receive
- Appraise and select
- Ingest
- Preservation Action (migration, emulation etc.)
- Store
- Access, use and reuse
- Transform
- Preservation planning
- Description or representation information

Area 5: Teaching methods/training delivery

This Area helps training developers to make clear and appropriate decisions about the best format or method for their training offering. This builds on research already published by DPOE about effective training methods for different audiences and also draws on findings from the DigCurV training needs survey. The first five rows look at training products while the last two rows describe how an entire curriculum could be delivered.

Teaching method	DPOE audience level
Lecture	All
Small group exercise	Managerial, Practical
Online seminar ('webinar')	Executive, Managerial
Online self-paced course	Practical
Corporate briefing	Executive
Written manual	Managerial, Practical
Supervised one-to-one training by senior staff member	Practical
Workshop (hands-on training)	Managerial, Practical
Blended learning (mixture of face to face and online learning)	Managerial, Practical

Area 6: Professional context

This area is based on existing work by DigCurr, particularly their matrix, with descriptions added relevant to DigCurV findings. This may help training providers to tailor the training they're developing to a specific professional context, and become aware of challenges and behaviours or expectations specific to this specific professional context. For example, a digital art conservator will have different priorities, discipline requirements and legislation to consider than a curator working in a national library.)

This table is available under the Creative Commons license reproduced here.

It can be important to understand challenges, opportunities and characteristics of particular types of work contexts (e.g. social science data archive in a university, commercial collection of scanned page images, state archives, serving a population with specific cultural norms).

Context categories	Description
Professional context	
<ul style="list-style-type: none"> History of professional activities 	History of activities relevant to digital curation in various streams of work activity. (e.g. Care and properties of physical media; Hardware and software interoperability; Long-term management of institutional archives and personal papers; Social science data archives...)
<ul style="list-style-type: none"> Professional development 	Important elements of and strategies for actively participating in a profession and remaining aware of current state of professional principles and practices (e.g. professional associations, conferences, continuing education)
Disciplinary context	
Institutional or organisational context	
<ul style="list-style-type: none"> Characteristics of information and record keeping environments 	
Cultural context	"The distinctive ideas, customs, social behaviour, products, or way of life of a particular society, people, or period." [1]

From [Christopher \(Cal\) Lee](#), *Professional, Disciplinary, Institutional, Organisational or Cultural Context* (Dimension 3 of [Matrix of Digital Curation Knowledge and Competencies](#)) School of Information and Library Science, University of North Carolina at Chapel Hill. Draft: June 17, 2009 (Version 18).



Reproduced here under Creative Commons Attribution Non-Commercial Share-Alike 3.0 License <http://creativecommons.org/licenses/by-nc-sa/3.0/>

[1] "Culture." Oxford English Dictionary. Draft Revision. June 2009.

6. Conclusions and Recommendations

Taken together, the survey findings and Evaluation Framework synthesise the various aspects which should be considered in subsequent design of curricula for vocational training in digital curation.

The results of the training opportunities survey illustrate various pertinent points. The differing levels of awareness of the field of digital preservation are an important consideration for those engaged in curriculum design. Some institutions are just beginning to acknowledge their needs whilst others are already searching for specific solutions. Even more fundamentally, the concept of digital curation itself should be defined by training providers as some respondents appear to see no clear difference between digitization and digital preservation.

Secondly, the variety of institutions should be taken into account. The results suggest that the future curriculum framework should correspond not only to the needs of the cultural sector but also of business or public sector organisations: institutions in the cultural heritage sector embody characteristics of all three types of organisation. The differentiation of the topics required by each of these sectors should be considered. While some organisations are still taking their first steps in this field, others are facing very specific challenges such as managing a particular kind of data (for example, scientific data or photo archives). Due to the dynamic rate of development of the digital preservation field, the content of each topic should be regularly revised, to ensure the material presented reflects the emerging research and practice in the field. Training initiatives should aim to synthesise digital preservation knowledge, skills and practices into a coherent information management cycle covering the entire lifecycle of the digital object from ingest to access, use and re-use.

When planning training, the selection of appropriate training formats as well as availability of training course materials before and/or after the course should also be kept in mind. It is necessary to employ both parts of the content of the course or the entire curriculum and teaching methods to build certain competencies and capabilities that may vary depending on the digital curator profile of the intended audience, suggesting closer interaction between practice and theory. This can be developed through closer collaboration with practitioners and by learning more about the digital preservation labour market demands: using this knowledge will enhance development of understanding of the core skills of digital curation for the current labour market. These core skills can be augmented by additional sector-specific skills. Again, however, this is an aspect of any curriculum which needs to be iteratively revised over time to ensure its currency.

In addition, training courses naturally need to equip attendees with the skills to meet digital curation challenges, but there is also a need to raise awareness of why successful digital curation action is important to undertake in the first place. Such flexibility in vocational training requires collaboration between organizers of relevant courses and the ongoing exchange of teaching ideas, methods and techniques. This aspect of training – the awareness-raising or outreach level – is less affected by emerging trends in digital curation practice and so materials developed for this part of the curriculum are probably more durable, requiring less regular iterative revision.

The Evaluation Framework presented in Section 4 builds on the findings of the training opportunities survey amongst other sources, and can be considered as groundwork and a critical tool for development of the curriculum. Following on from previous research both within DigCurV and more widely, it clarifies the factors which may influence the design of a digital curation curriculum, providing those developing or assessing training with a benchmark on various aspects of the curriculum, the skills within and the audience it is intended for. This is useful to build up a view of the current training landscape as courses can be mapped to the Framework and so provides an accurate and evolving picture of which

audiences are well or poorly catered to and which skills are widely or sparsely taught, amongst other metrics. Defining the salient properties of existing training through the training opportunities survey and the clarification of the Evaluation Framework provides the groundwork for the core Curriculum Framework to be produced by DigCurV.

7. APPENDIX A: Questionnaire on training opportunities in digital curation

As part of DigCurV, we are conducting a survey of the training opportunities in digital curation and long-term preservation within Europe and internationally, which are available for digital curators working in libraries, archives, museums and the cultural heritage sector. The survey includes questions on basic data about your organisation but focuses on issues related to training content, methodologies, delivery options, assessment, certification and best practices for training and continuous professional development.

The information you provide will be used to profile the existing training opportunities and to establish a framework for evaluation of the curriculum to be developed by DigCurV. The results of the survey and the profile of training opportunities will be presented through the project website, <http://www.digcur-education.org>.

Name of Institution

Type of Institution (Please tick as appropriate):

- Library
- Museum
- Archive
- University
- Association
- Competence center
- Training center
- Business
- Project
- Other (*Please specify*) _____

Did your institution organize training courses for digital curators during the last 2 years?
(*Please tick as appropriate*):

- Yes
- No (If possible, please indicate the reasons i.e. lacks of funds, lack of need etc.)

If you answered no, go to question 24

Number of courses:

- 1-5
- 6-10
- More than 10

Further we would like to ask you to provide information about individual training . If you had more than one, at the end of this section, please press the button “Add other course” and answer questions from 6 to 23 once again (*Please choose up to 5 most successful events*)

Organisation of the training event

Title of training event:

Location and dates (country and the city where course was held; start and end dates):

Language of instruction:

Type of training (Please tick all that apply):

- Institutional
- Open to professional community
- **Open to All** (Please specify)

Web address of training event (*optional*):

Target audience, training content and techniques

- **Target audience** (Please tick all that apply):
- **Practitioners** (staff working within in libraries, archives, museums and the cultural heritage sector)
- **Researchers** (working in libraries, archives, museums or academic institutions who are directly involved in digital curation issues)
- **Developers** (employed by commercial vendors, but also institutional IT experts within the MLA, government and business sectors, who would be responsible for digital curation in these institutions)
- Students from different sectors
- **Other** (*Please specify*) _____

Required experience or prior knowledge of digital curation issues (*Please all that apply*):

- No pre-knowledge required
- Some basic understanding
- Experienced data curator
- Technical knowledge
- **Other** _____ (*Please specify*)

Key topics covered (Please tick all that apply):

- **General knowledge/Basic knowledge** (for all levels of staff, provide a general introduction and explain the key needs and challenges in this area)
- **Strategic planning** (assist practitioners in identifying issues and goals necessary to plan and manage digital curation initiatives)
- **Digital curation and preservation tools** (DAF, DRAMBORA, DMP, PLATO, PLATTER etc.)
- Digital repository audit and certification
- **Technical issues** (assist in understanding and applying digital curation techniques)
- **Legal aspects/Digital curation policies** (assist in making legal decisions: copyright, freedom of information legislation, data protection requirements etc.)
- **Trusted repositories** (techniques and criteria for trusted digital repositories)
- Digital curation standards (metadata, OAIS etc.)
- **Other** (Please specify) _____

Trainings format (Please tick as appropriate):

- In person ; large group workshop, mixture of lectures and practical exercises
- In person ; small group hands-on training, focused on practical activities
- Online training; webinar
- Online training; self-paced courses
- Blended Training
- **Other** (Please specify) _____

Trainers (Please tick as appropriate):

- In house; training professionals
- External; subject specialists
- External; training professionals
- Online course developers
- **Other** (Please specify) _____

Learning objectives (list up to 5 objectives of the course)

Benefits for attending (list up to 5 benefits for having attended the course)

Were any support material or pre-course exercises delivered before the course? (Please tick as appropriate):

- **Yes** (Please specify what kind of material) _____
- No

Were training materials available after the course? (Please tick as appropriate):

- **Yes** (Please specify where and for whom) _____
- No

Assessment and certification

How were students assessed? *(Please tick as appropriate):*

- No assessment
- **Exam** (written exercises, oral questions or practical tasks)
- **Test** (multiply choise questions)
- **Other** (please specify) _____

If you answered no, go to question 23

By whom were students assessed? *(Please tick as appropriate):*

- By training provider
- **By external bodies** (please specify) _____

Did attendees receive certification as a result of the course? *(Please tick as appropriate):*

- **Yes** (Please specify: academic, vocational etc.) _____
- No

Did you provide credits for the attendees of your sessions? *(Please tick as appropriate):*

- **Yes** *(Please specify)* _____
- No
- **Additional comments** _____

Evaluation of training events

- How did you evaluate your training event? *(Please tick as appropriate):*
- No evaluation
- Feedback questionnaires
- Follow-up questionnaires
- **Other** *(Please specify)* _____

	Add another training event
--	----------------------------

Are you planning to organize such training events during next two years? *(Please tick as appropriate):*

- **Yes** (please provide short description (topics, learning outcomes, format etc.) and/or web address of them)

- No
- Maybe

Please feel free to make any additional comments or provide recommendations

Person completing the questionnaire name and email address *(optional):*

THANK YOU VERY MUCH!