A Survey Based Analysis on Training Opportunities

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Abstract - **This paper represents the results of a survey based analysis on training opportunities conducted under the DigCurV, a project funded by the European Commission's Leonardo da Vinci programe. The analysis of training opportunities was conducted at the start of the project with the aim to identify, document and analyze the training courses, curriculum, resources that are available for vocational training in digital curation at national and international levels.**

Keywords - Training opportunities, digital curation, vocational training, DigCurV

II. INTRODUCTION

Digital Curator Vocational Education Europe Project – DigCurV, funded by the European Commission's Leonardo da Vinci programe, was started in the beginning of 2011 with the aim to establish a curriculum framework for vocational training in digital curation. In order to support and extend the vocational training for digital curators in the library, archives, museums and cultural activities sector for the first phase of the project it was important to learn what are the existing training initiatives and possibilities. A survey based analysis was conducted and the existing training courses, curriculum, resources, good practice instances that were available for vocational training in digital curation at national and international levels were identified, analysed, classified and profiled. The results of the survey were used to establish the main DigCurV product – a curriculum framework. This paper represents the main results of the survey based analysis.

III. METHODOLOGY

In April 2011 a survey on training opportunities in digital curation and long-term preservation project was distributed. The aim of a survey 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. 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, funded by the European Commission within the Sixth Framework Programme, and other contacts. The deadline for returning completed questionnaires was the end of June 2011. In total sixty completed responses from sixteen countries were received. 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. There were 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. Only very few responses from the latter were received.

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. The structure of the questionnaire:

- Information about institution;
- Information about trainings provided by the institution:
  - Type of training;
  - Target audience and their knowledge;
  - Key topics covered;
  - Training format;
  - Trainers;
  - Learning objectives and benefits of attending;
  - Assessment;
  - Certification;
  - Evaluation;
- Information about the future plans to organize such trainings.

IV. THE RESULTS OF THE ANALYSIS

A. Population of institutions providing training opportunities

To recognize the opportunities for training in this field in general and to gather information on the current status of training worldwide institutions were asked 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. Most of the respondents (59%) who had organized training had run between 2 and 7 training courses during two years. 7 respondents had only one and 4 respondents reported more than ten (France, UK, Germany and Belgium).

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. 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.

The types of institutions participating in a survey were quite heterogeneous (Fig. 1). 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), nonprofit 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.
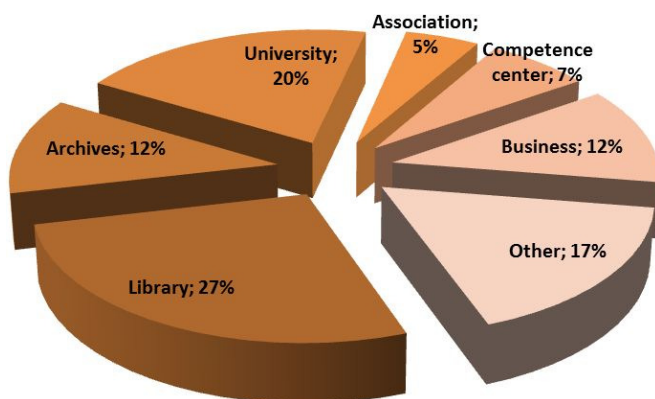

Figure 1. The population of institutions providing training opportunities

B. Trainings provided by the institutions

The next set of questions related to individual training events and key information about:

- **Accessibility of training**. 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.
- **Target audience**. 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.

- **Required experience**. Institutions were asked if their training required any experience or prior knowledge from their target audience(s). Most of the 48 training events required only basic understanding of digital curation issues (57%) or no pre-knowledge at all (36%) (Fig. 2). 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.
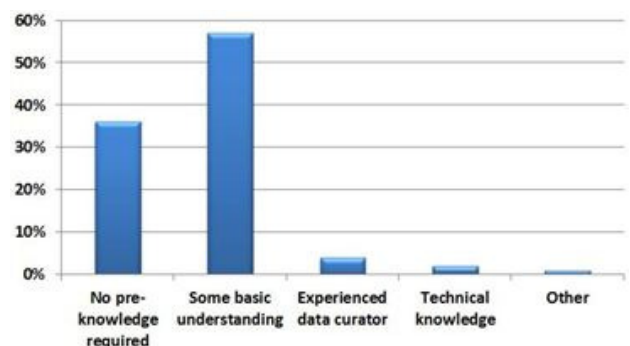

Figure 2. Prior experience or knowledge required by delegates

- **Key topics covered**. The survey results show that a variety of topics were covered in training courses (Fig. 3).
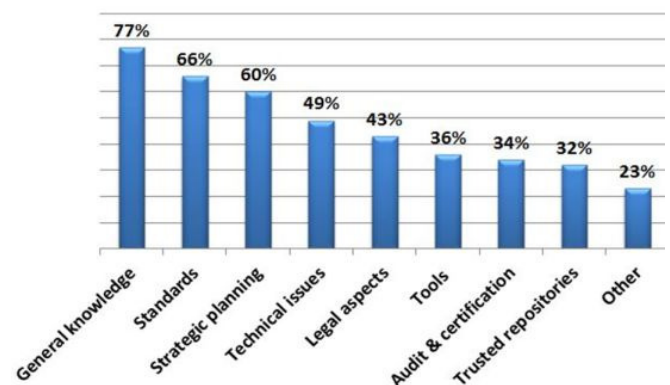

Figure 3. Key topics covered in training events

- **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.

- **Training format**. 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.

- **Trainers**. 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%) (Fig. 4).
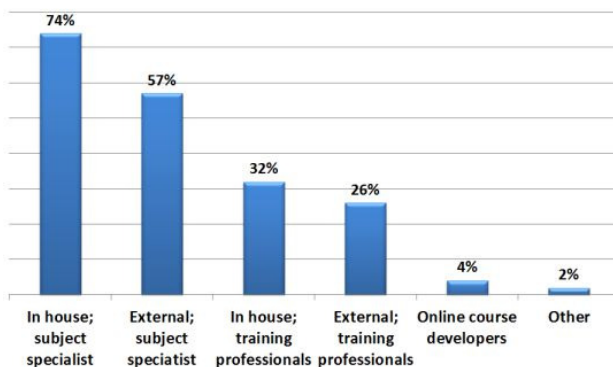

Figure 4. The trainers for the training events

- **Learning objectives**. Respondents were asked to list up to 5 objectives of the training course. For this question we received information about 38 training events out of a possible 48. 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.

- **Training materials**. Almost half (48%) of respondents 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.

- **Benefits of attending**. 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.

- **Assessment, certification, credits**. The majority of organizers (79%) didn't offer any assessment, 9% offered tests, and 6% exams (written exercises, oral questions or practical tasks). 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. 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.

- **Evaluation**. Respondents were asked if they evaluated their own training events and if so, how. The results showed that most organizers (83%) use feedback questionnaires as their training evaluation method (Fig. 5). 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.
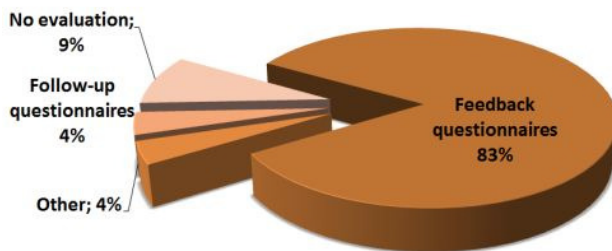

Figure 5. The evaluation methods of training events

C. Future plans of institutions providing training events

The last part of the questionnaire focused on future plans. The results showed that almost half (43%) of respondents were planning to organize such training events during next two years, 32% may organize and 25% were not planning to organize. All respondents who were planning to organize training events 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. 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.

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 were planning to provide internal training that addresses specific in-house requirements. 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).

V. CONCLUSIONS FROM THE SURVEY

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.

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.

- 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.

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 synthesize 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.

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.

References

This paper cites the deliverable of the DigCurV project:

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