



## DELIVERABLE

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

### D6.1 Final report and Conference Proceedings

**Revision:** Final

**Authors:**

Chiara Cirrinnà (FRD)  
Kate Fernie (MDR)  
Maurizio Lunghi (FRD)

**Contributors:**

Ann Gow, Laura Malloy and Leo Konstantelos (HATII); Jurate Kupriene and Nijole Klingaite (VUL); Stefan Strathmann and Claudia Engelhardt (UGOE); Susan Scriebman, Vicky Garnet and Karolina Badzmierowska (TCD); Seamus Ross, Wendy Duff and Nathan Moles (uToronto); Rob Davies and Carol Usher (MDR).

Project funded by the European Commission's Leonardo da Vinci Lifelong Learning Programme		
Dissemination Level		
P	Public	
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				
0.2				
0.3				

#### 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This deliverable contains original unpublished work except where clearly indicated otherwise.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.....	5
2	Final report .....	6
2.1	Project Objectives .....	6
2.2	Project Approach.....	7
2.3	Project Outcomes & Results.....	7
2.4	Partnerships .....	9
2.5	Plans for the Future .....	10
2.6	Contribution to EU policies .....	11
3	Conference proceedings.....	12
3.1	Introduction to the DigCurV project.....	14
3.2	Lifelong learning: a key to professional and personal development towards qualification and employment.....	15
3.2.1	A future with no history meets a history with no future: how much do we need to know about digital Preservation, William Kilbride .....	15
3.2.2	View from across the Pond: Opportunities, Gaps, and Challenges in Digital Curation Lifelong Learning, Helen Tibbo.....	16
3.2.3	Balancing the Books. The Economics of Digital Curation Training & Education, Neil Grindley.....	17
3.2.4	Extending the Reach of Digital Preservation Practice: a program to teach practitioners in small institutions, Mary Molinaro .....	17
3.3	Session 2 - Skills for the future .....	18
3.3.1	Skills for the Future. Educational opportunities for digital curation professionals, Achim Osswald .....	18
3.3.2	DigCurV: next steps, Kate Fernie, Ann Gow, Maurizio Lunghi.....	18
3.3.3	Report on the context of the DigCurV Curriculum Framework, Nathan Moles and Seamus Ross.....	18
3.4	A curriculum Framework for digital curators: presentation of DigCurV results.....	19
3.4.1	Digital Curator Vocational Education Europe: overview of the DigCurV project, Kate Fernie, Ann Gow and Laura Molloy .....	19
3.4.2	A survey based analysis on training opportunities, Jurate Kupriene .....	19
3.4.3	The DigCurV review of training needs in the field of digital preservation and curation. An overview of the main findings, Claudia Engelhardt .....	19
3.4.4	The DigCurV Curriculum Framework. Structure, context and approach, Ann Gow, Laura Molloy, Leo Konstantelos .....	20
3.4.5	The CURATE! Game. Its Development, Evaluation and Use, Vicky Garnett, Karolina Badzmierowska, Susan Schreibman .....	20
3.5	Introduction to contributed paper sessions .....	21
3.6	Digital Curation education .....	22
3.6.1	Data-Intelligence Training for Library Staff, Ellen Verbakel, Madeleine de Smaele, Noordegraaf Marina and Nicole Potters.....	22
3.6.2	An Applied Approach to Data Curation Training at the Inter-university Consortium for Political and Social .....	22
3.6.3	Research (ICPSR), Jared Lyle, Mary Vardigan, Jacob Carlson and Ron Nakao .....	22
3.6.4	A Tale of Two Countries. Digital Curation Education in Malta and New Zealand, Milena Dobрева and Gillian Oliver.....	23
3.7	Frameworks and lessons learnt.....	23

3.7.1 Digital Curation in Architecture Curricula and vocational training for Architects. The DEDICATE Framework in Architectural CAD Courses Design, Ian Anderson and Ruggero Lancia .....	23
3.7.2 Introducing the Information Culture Framework as a Component of the Digital Curator's Toolkit, Fiorella Foscarini and Gillian Oliver .....	24
3.7.3 Getting Data Creators On Board with the Digital Curation Agenda. Lessons Learned in Developing Training for Researchers, Meriel Patrick and James A. J. Wilson .....	24
3.8 Mainstreaming digital curation education.....	25
3.8.1 Digital Stewardship Education at the Graduate School of Library & Information Science, Simmons College, Martha Mahard and Ross Harvey .....	25
3.8.2 Integrating Digital Curation in a Digital Library curriculum: the International Master DILL case study, Anna Maria Tammaro.....	25
3.8.3 Learning Hands-on and by Trial & Error with Data Curation Profiles, D Scott Brandt....	26
3.8.4 The digital curator between continuity and change: developing a training course at the University of Turin, Maurizio Vivarelli, Maria Cassella and Federico Valacchi.....	26
3.8.5 Mainstreaming Digital Curation. An overview of activity in the UK archives and records management Profession, Jenny Bunn and Sarah Higgins .....	27
3.8.6 Bridging By Design: The Curation and Management of Digital Assets Specialization at the University of Maryland, Katie Shilton, Michael Kurtz, Bruce Ambacher, Erik Mitchell, Douglas Oard and Ann Weeks .....	27
3.9 Developing 21st Century professionals .....	27
3.9.1 Infusing Digital Curation Competencies into the SLIS Curriculum, Patricia C. Franks..	27
3.9.2 The Digital Content Management Curriculum: A Case Study at Wayne State University's School of Library & Information Science, Joan E. Beaudoin .....	28
3.9.3 'DIY' Research Data Management Training Kit for Librarians, Stuart Macdonald and Robin Rice .....	28
3.10 The round table: Creating a common vision for digital curation education: building alliances, Chiara Cirinnà, Kate Fernie, Maurizio Lunghi .....	29

## 1 Executive Summary

The main aims of DigCurV was to pave the way for improving the availability of vocational education and training for the staff responsible for the long-term management of digital collections in the cultural sector, and to improve awareness of the importance of continuing vocational training in digital curation. Our objectives were to build a network of stakeholders, to analyse the training opportunities that are currently available, to understand the need for training in the culture sector and then to establish a curriculum framework for vocational education in digital curation.

This deliverable incorporates the final project report and the proceedings of the international conference organised by the project in Florence in May 2013.

The final report describes our approach and summarises the main outcomes of the project which include:

- a large international network of stakeholders interested in the topic;
- an online registry of training opportunities;
- a Europe-wide review of training needs amongst the cultural sector;
- a curriculum framework for vocational education and training in digital curation;
- CURATE! the game of the digital curator; and
- a series of reports, videos and other materials

The report goes on to describe the partnerships which have been established, the project's plans for the future and its contribution to European policies. In its plans for the future the project has set out immediate, short-medium term and long term goals with the overall objective of promoting the development of training and education in digital curation. To that end we have aimed to build the stakeholder network and develop alliances with projects and initiatives that are active in the field of digital preservation and digital curation.

In May 2013, the project organised an international conference, "Framing the Digital Curation Curriculum" which was held in Florence. This provided an opportunity for us to share the project's results and to launch DigCurV's Curriculum Framework to an audience made up of experts, educators and policy makers. The conference programme included papers from invited keynote speakers and experts who responded to a call for papers, all coming together to discuss lifelong learning, skills for the future, mainstreaming digital curation education and developing 21<sup>st</sup> century professionals. The full papers are published in the conference proceedings, which are included with this deliverable and will be published online with CEUR-WS.org.

### Acknowledgements

The authors would like to acknowledge the contributions of all of the members of the DigCurV project team, the members of the stakeholder network who have taken part in the surveys, focus groups and workshops organised by the project, the experts who took part in the stakeholder workshop in December 2012, Vittore Casarosa and the members of the programme committed for the "Framing the Digital Curation Curriculum" conference and all of the conference speakers and delegates.

## **2 Final report**

### **2.1 Project Objectives**

The main aims of DigCurV were to:

- pave the way for improving the availability of vocational education and training for staff responsible for the long-term management of digital collections in the library, archives, museums and cultural activities sector;
- improve awareness among policy makers in the appropriate circles across Europe and internationally regarding the quality, visibility, and transparency of continuing vocational training in digital curation.

The core objectives were to:

- build the network of stakeholder from training organizations and employers, to enable cooperation, collaboration and sharing of results and experiences in vocational training and continuing professional development for digital curators working in cultural institutions;
- identify, analyse and disseminate instances of best practices, specific courses, training curriculum, and approaches used for continuing professional development in the sector;
- determine training needs for digital curators in the culture sector, analyzing the core competencies and skills needed by managers and staff involved in digital preservation to enable fuller understanding of the sector's requirement;
- establish a curriculum framework for vocational education and training in digital curation;
- use this framework to influence the development of new training courses.

## 2.2 Project Approach

The work programme was carefully constructed to ensure, as far as possible, that DigCurV, over the course of its 30 months duration, achieved its aims and objectives and produced the deliverables and outputs specified, on time, to budget and of an acceptable quality.

The main activities were grouped into work packages as follows:

- Kickoff meeting and briefing
- Review of existing training initiatives, resources and methodologies
- Review of sector training needs
- Curriculum framework design and testing
- Dissemination and awareness raising
- Final conference and report
- Project management

As fitting for a project focussing on establishing a curriculum tuned to the needs of stakeholders 4 of the 7 work packages focused on analysing information gathered through desk research, surveys, focus group meetings and workshops. DigCurV recognises the importance of building the stakeholder network (among educational and curatorial institutions across Europe and internationally) and understands that the quality and perceived relevance of its outputs have a direct bearing this. Thus it has put in place a lively and effective dissemination plan together with a programme of activities designed to maximise impact and promote the exploitation of the project's results.

The work programme was well structured and properly resourced, with responsibility shared between the partners according to their expertise and their role in the project. Each partner is responsible for one or more work packages and for key tasks. In addition, care has been taken to put in place strong project governance mechanisms.

Each partner appointed a representative to the Project Management Board, which met on at least 5 occasions during the project and took all strategic project decisions. Mechanisms were also put in place to address any conflicts should they have arisen. Quality assurance and risk management as outlined in WP 7 are also a key element that ran right through the various activities, tasks and outputs of the work programme.

## 2.3 Project Outcomes & Results

Long-term preservation of digital assets held by the cultural sector is a vital component in an innovative and developing Information Society, where everyone can create, access, utilize and share information and knowledge. Enabling digital curators to develop and maintain the skills and competences that they need to fulfil their role in turn enables institutions to manage their growing digital collections in a sustainable way that promotes access and use.

As such vocational education and training in digital curation is a factor that underpins EU initiatives such as the i2010 strategy and the Digital Agenda for Europe. It is therefore important to put a framework in place that enables progress to be made in all Member States in ensuring that staff have the access to the training that they need.

The major outcomes of the project include:

- An [international stakeholder network of individuals and organisations](#) with an interest in vocational training and education in digital curation.
- A [profile of existing training opportunities and evaluation framework](#). This includes a [review of existing training initiatives](#), resources and methodologies, an [online registry of current training opportunities](#) and an [evaluation framework](#) for analysing training curriculum and training opportunities in the field of digital curation.

- A [review of training needs amongst the cultural sector](#). This provided for the first time a review of training needs across Europe. Following an executive summary and an overview of the components of the research, the results of an online survey were presented. This identified the skills and competences needed for digital preservation and curation, and the needs for vocational education and training in this field. The findings of a series of focus group meetings held in the partner countries were presented, along with an analysis of jobs advertised during the period. The results of the research suggest a great demand for training in digital preservation and curation that arises from a serious lack of qualified staff in the field.
- A [curriculum framework for vocational education and training in digital curation](#). This provides a framework for education providers to use in developing new training courses, comparing existing courses or for planning professional development. It defines separate skills lenses to match the specific needs of Executives, Managers and Practitioners within the field digital curation. The outcomes include:
  - An [online resource](#) that offers users a means of using the curriculum framework to identify, evaluate, and plan training.
  - A [report describing the curriculum framework](#), its development and how the framework can be used.
  - A [briefing paper](#) providing an introduction to the curriculum framework.
  - A [report discussing the context of the curriculum framework and its exploitation](#).
- Reports from the [kick off meeting](#), [focus group meetings](#), [multi-stakeholder workshop](#) and [national meetings](#) involving managers, practitioners and educators in discussing and define training needs and training curriculum.
- A set of [promotional resources](#) to support the exploitation and dissemination strategies of the project including [CURATE!: the game of the digital curator](#) (available for download by DigCurV network members); the project newsletter: [Ahead of the CurV](#), a series of [videos](#) and a set of advocacy materials which stakeholders can use to promote the development of training opportunities and to raise awareness.
- An [International Conference](#) “Framing the Digital Curation Curriculum” in May 2013 which involved educators and policy makers from across Europe and North America, and was supported by nine major initiatives in the field of digital curation. The curriculum framework and CURATE! game were presented with other DigCurV results. Following a successful call for papers the programme included presentations by speakers on lifelong learning, case studies in digital curation education, skills for the future, mainstreaming and developing 21<sup>st</sup> century professionals. The conference concluded with a round table discussion on creating a common vision for digital curation education.
  - [Proceedings](#) from the conference have been published online.



## 2.4 Partnerships

The consortium included partners with all the skills, recognised expertise and competencies required to carry out all aspects of the work programme.

HATII is a world-leading centre and provider of training programmes at undergraduate, postgraduate and professional levels in digital curation and the digital humanities. Home to the EU funded ERPANET and Digital Preservation Europe, and a core partner in the PLANETS project, the DELOS Network of Excellence and the UK's Digital Curation Centre (DCC) and Data Management Skills Support Initiative (DAMSSI) and partner the EU funded APARSEN project and the US initiative DigCCurr, HATII was well placed and well qualified to coordinate DigCurV and to lead WP4 on defining the curriculum framework.

VUL is a historically important university library established by 1570 and today established as a Scholarly Information and Communication Centre at the centre of scientific, academic and business community in Lithuania. Well placed to build partnerships in the Baltic States and Russia, VUL led WP2 (Review of existing training initiatives) building on its experience in Digital Preservation Europe.

UGOE, the state and university library at Goettingen is part of an internationally renowned university. A leading partner in the nestor qualifications consortium and partner in Digital Preservation Europe and the PARSE Insight project, UGOE led WP3 (Review of sector training needs) coordinating and analysing the survey of training needs.

TFTCD, the Long Room Hub is part of Ireland's oldest university Trinity College Dublin and a centre for Digital Humanities. TFTCD is partner in the DARIAH and CENDARI research infrastructure and led WP5 (Dissemination) building on its experience with the Digital Humanities Observatory and the Long Room Hub.

FRD, the Digital Renaissance Foundation was established to promote the application of new technologies in cultural heritage with a special focus on long term preservation. FRD is partner in wide-ranging national and European projects including APARSEN. FRD led WP6, the organisation of the project's final conference, where it builds on its experience in organising and running professional conferences and events in Italy.

MDR, an experienced project manager of networking projects under a variety of EC programmes leads WPs 1 (Kick off meeting) and 7 (Project management).

uToronto, a leading member of the international network of iSchools and, through Seamus Ross, internationally active in Digital Preservation initiatives in Europe and North America leads the Third Country programme of activities.

The consortium established a stakeholder network from the outset of the project including the USA's Institute of Museum and Library Studies (IMLS), the nestor curriculum consortium, the Digital Preservation Coalition and the Digital Curation Centre.

## 2.5 Plans for the Future

DigCurV was established with the aim of building a framework to address the needs for training in digital preservation resulting from the rapid growth in the digital economy in Europe and worldwide. Since the project began in 2011, DigCurV has carried out surveys into the opportunities for training in digital curation and also the need. Based on these findings and knowledge, expertise and research from within the project and a series of international initiatives, DigCurV has developed a framework for curriculum development and has developed the CURATE! Game and other products based on this framework.

Over the last two years, an international stakeholder network has built up including individuals and institutions with an interest in developing training and education in the field of digital curation. Now is the time to think about the next steps and how best to build on the results we, and allied initiatives such as DigCCur, APARSEN, DPC, nestor, DPOE, EUDAT, IFLA, JISC, ANORC and others, have achieved so far.

### Immediate goals

An immediate goal for the project is to **promote the DigCurV curriculum framework** and the **CURATE! game** and to encourage stakeholders to explore them and to consider their uses

Our overall goal is to promote the development of training and education in digital curation. To that end, we are aiming to **build the network** and **develop alliances** with projects and institutions and individual educators who are developing digital curation curricula and training courses.

We are inviting stakeholders to use the curriculum framework to **benchmark courses** and to give us their feedback on how well it fits and whether they are considering exploiting it.

### Short term goals

We are hoping to build alliances with the most important initiatives and to establish an agreement to work together and **a common reference model** whose benefits are clear to everyone.

After the conference DigCurV will continue to promote the adoption of the curriculum framework for benchmarking courses and encouraging people to play the game, and of course starting to think about the **future** and new developments.

Our survey of **training needs** amongst cultural institutions suggested a potential demand for short, modular courses. We would like to begin to explore the demand for **portable qualifications** and **accreditation of courses**; to evaluate ways of supporting **continuing professional development** of existing staff as well as student learners; and promoting the development of **training for trainers** based on the curriculum framework.

We need to begin to think about **sustainability** and how to continue the work of the stakeholder network around vocational education in Digital Curation.

### Medium term goals

Our short to medium term goal is to find **evangelists** – or ambassadors who adopt of the curriculum framework as a benchmark for courses themselves and promote its adoption by others. Our aim is to continue to **build consensus** around the curriculum framework and professional development in digital curation.

Our vision is that in the medium term there will be **courses available** that are benchmarked to the curriculum framework, and products and tools which can be used to help support their delivery. We would like to continue the development of the CURATE! game to provide an innovative, collaborative learning environment, which is benchmarked to the curriculum framework and the various roles in digital curation.

## **Longer-term goals**

In the longer term we envisage accreditation of courses by agencies as delivering portable qualifications benchmarked against the curriculum framework and which maintain or develop professional skills. We envisage that there will be a sustainable model in place for continued development of the framework and the network.

## **2.6 Contribution to EU policies**

There is substantial evidence available to suggest demand from institutions for staff with the skills and competences needed to curate digital assets for long-term preservation, and for the rapid emergence of new jobs for 'Digital Curators' and 'Digital Archivists'. Diffusing the skills and competencies needed by staff for this role means ensuring the availability of training and education.

However, Digital Curation remains a specialised field with training being delivered by relatively few initiatives in Europe and internationally. As a field it remains largely unrealized within the mainstream learning systems and education providers in Europe. The training available is often bespoke and tailored to the outcomes of research projects or to specific products. The integration of Digital Curation into established courses is starting to emerge but is still comparatively rare.

The absence of a recognised curriculum, limited awareness and lack of competence among educators have all represented significant barriers to the development of vocational education and training. Digital Preservation continues to be at different stages of implementation by institutions across Europe varying according to the size of collection and national and institutional frameworks.

DigCurV has provided a platform for the future by:

- taking a strategic approach to vocational education and training in Digital Curation, focusing on the establishment of a curriculum framework and the development of a stakeholder network;
- involving key actors who can bring about change and convincing them of the value of developing new training opportunities that can be benchmarked against an established curriculum;
- focussing on the needs of stakeholders effectively identifying the core skills and competences needed by Digital Curators;
- making use of the lessons learned and techniques developed by campaigners in other fields to disseminate the work of DigCurV effectively and encourage advocacy by stakeholders.

all activities which pave the way for the exploitation of the DigCurV curriculum and eventual mainstreaming of digital curation in professional training and development all levels of education.

### **3 Conference proceedings**

**Editors: Chiara Cirinnà, PhD, Kate Fernie and Maurizio Lunghi**

**Guest editor: Vittore Casarosa**

The Digital Curator Vocational Education Europe (DigCurV) project, funded by the European Commission's Leonardo da Vinci programme, organised the "Framing the digital curation curriculum" International Conference in Florence, from the 6th to the 7th of May 2013. The Fondazione Rinascimento Digitale (FRD) was responsible for organising the event for the project.

The conference launched a Curriculum Framework for Digital Curation developed through a programme of work by the project partners and involving different sectors. This framework offers a means to identify, evaluate and plan training to meet the skill requirements of staff engaged in digital curation, both now and in the future. This conference was an opportunity to conclude a successful process of validation and begin the exploitation of the project's results: it is also worth mentioning the project's CURATE! game, which has excited many digital curation practitioners.

For the DigCurV team's longer-term vision, the conference was a means of reaching the communities of national and international associations and organisations involved with vocational training in digital curation and of gathering them together around a table. We built relationships with related initiatives and advertised a very successful call for contributions attracting high quality paper contributions and a group of "supporters" who participated in the lively discussion at the final round table.

The participants came mainly from Europe and USA. The sectors covered were archives, libraries, museums, public administrations and research centres, but several private companies and students also joined the conference. The variety of organisations involved generated lively debate and enthusiastic discussion of the curriculum framework amongst the delegates.

The FRD is a non-profit foundation, established in 2005 by the Ente Cassa di Risparmio di Firenze, with a remit to investigate and apply information and communication technologies to the cultural heritage domain with special attention given to the long term preservation of digital objects and trusted digital repositories. The FRD would like to thank the Ente Cassa di Risparmio di Firenze for the venue in Palazzo Incontri that amazed our guests with its beautiful frescos. The success of the conference has been possible thanks to all the brilliant speakers, the Programme Committee members (John McDonald, Raivo Ruusalepp, Maria Guercio, Michael Seadle, Nancy McGovern, Steve Knight, Joy Davidson, Kate Fernie, Maurizio Lunghi and Chiara Cirinnà), the Programme Committee chair, Vittore Casarosa, the supporters of the conference and the participants, who enlivened and enriched the debate. Special thanks also to the DigCurV project partners for their precious support and to the FRD staff, always determined and motivated. Despite the fact that this was the final project conference, we believe that training for digital curation practitioners in the library, archive, museum and cultural heritage sectors is a key subject that deserves continuous attention. For this reason we hope that this conference was the start of a discussion that will be carried forward, and that it was an excellent opportunity for future cooperation actions. The DigCurV project has a short, medium and long-term vision, and now it is the time to think how to best build on the results achieved so far

**Chiara Cirinnà, Maurizio Lunghi, Fondazione Rinascimento Digitale**

**Conference organisation:** Fondazione Rinascimento Digitale

**Programme committee:**

Vittore Casarosa, chair, ISTI CNR

Chiara Cirinnà, Fondazione Rinascimento Digitale

Joy Davidson, Digital Curation Centre

Kate Fernie, MDR Partners (Consulting) Ltd.

Maria Guercio, La Sapienza University of Rome

Steve Knight, National Library of New Zealand

Maurizio Lunghi, Fondazione Rinascimento Digitale

John McDonald

Nancy McGovern, Library of Congress

Raivo Ruusalepp, National Library of Estonia

Michael Seadle, Berlin School of Library and Information Science, Humboldt-Universität zu Berlin

**Conference supporters:**

ANORC, Associazione Nazionale per Operatori e Responsabili della conservazione digitale

APARSEN, Alliance Permanent Access to the Records of Science in Europe

Digital Preservation Training Programme

Digital Preservation Coalition

EUDAT

Library of Congress

Nestor

Open Planets Foundation

Presto Centre



A special thanks to the Ente Cassa di Risparmio di Firenze for the venue in Palazzo Incontri

### 3.1 Introduction to the DigCurV project

The DigCurV project began life in 2010 as a proposal to the European Commission's Education and Training agency for a project to address the gap in the education and training available to people working in cultural institutions and managing digital collections. We proposed to build a stakeholder network involving leading individuals and organisations in establishing a curriculum framework as the base from which programmes of vocational education and training could be developed in future. The project was funded by the Leonardo da Vinci programme and work got underway in January 2011 at a kick-off meeting in London where the members of the consortium -.HATII, Fondazione Rinascimento Digitale, Goettingen State and University Library, Trinity College Dublin, Vilniaus Universiteto Biblioteka, MDR Partners and the University of Toronto – met to plan the project's activities.

In the thirty months since that meeting we have aimed to involve as many stakeholders with an interest in this field as possible. During the summer and autumn of 2011 we carried out surveys both of the existing training opportunities and to invite feedback from people working in cultural institutions on their training needs. The response was tremendous with more than 550 individuals taking the time to complete our online questionnaires – a figure which, as the survey was undertaken during the summer holiday season, in its own right makes a statement about the need for training and education in digital curation.

The information, which we collected through the surveys and via a series of focus group meetings and workshops, has directly helped to inform the Curriculum Framework that we are proud to launch at this conference. Along the way we developed the CURATE! game as a means of stimulating discussion about digital curation and the surrounding education and training issues. Both the Curriculum Framework and the CURATE! game have generated a lot of interest and discussion amongst the international network of people involved with Digital Curation Education.

This conference, which happens in the final months of the DigCurV project, is an excellent opportunity to bring together people who are actively involved in developing training and education for digital curators, to exchange ideas and to plan future developments. Our aim is to encourage people to make use of the tools which DigCurV has developed but ultimately our aim is to promote the emergence of new training opportunities in the field of digital curation.

I'd like to thank everyone who has helped to inform the Curriculum Framework by sharing their knowledge and experience, in particular all the members of the DigCurV project team who have worked with such enthusiasm and commitment.

**Kate Fernie, MDR Partners**



Delegates at the conference

## **3.2 Lifelong learning: a key to professional and personal development towards qualification and employment**

### **3.2.1 A future with no history meets a history with no future: how much do we need to know about digital Preservation, William Kilbride**

Digital preservation is a daunting challenge. It is a paradox that the cumulative effect of more than a decade of research and development in the topic seems to have made it impenetrable too. We started with predictions of data loss and since then our well-intentioned enthusiasm has produced great reams of blogroll, huge stacks of reports, endless screeds of code and toppling towers of power-point. The new projects, the new agencies, the acronyms, the jargon, the bluster and the debate constitute a discourse that would more likely discourage a novice than reassure them. Initially doom was our only colour scheme but in the last decade we seem to have settled for a literature in two forms: accessible, superficial doom laden premonitions of imminent disaster; or deathless cryptic monotones about partial solutions to infinitesimal problems. Both are prone to exaggeration: neither are very persuasive for terribly long. There are times I pity my students.

You could be mistaken in thinking that this was a problem: it is actually a diagnosis of health. In a rapidly developing field it is inevitable and useful that research should cover all sorts of ground. It's inevitable that some of it will appear impenetrable and some of it will get forgotten – what matters is that fragmented research congeals into a common understanding and a coherent set of practices. Novices need not be exposed to it all: teachers need a measured and thoughtful approach that makes sense of the whole and which engages them in the parts that really matter. It's the job of the teacher to interpret and keep abreast of the increasing specialisation, the evermore recondite detail, the exhaustive scrutiny of tools and services, and to assemble from them a coherence that engages and enlightens. Perhaps it's my students that should pity me.

So we've come a great distance in a short time. The fact that we've managed to turn our initial fears about digital calamity into something that now seems pretty boring suggests we're on the road to taming them. But there are few commentators who would say that the problem is solved. Most imply that apparent solutions tend only to reveal ever more subtle problems. In any case, change is not a bug: it's a core feature and one of the principle benefits of IT. We've proven pretty conclusively that finding solutions is not a problem: we're almost too good at it. Translating research into practical executable guidance seems to give us problems. So two questions arise for those who want to teach digital preservation: how much of this ever-thickening syllabus do we really need to hand on; and how, if we're not quite sure how to fix the problem ourselves, are we going to show others how to do it?

A partial answer to both questions can be perceived if we are allowed a brief remembrance of what makes digital preservation an issue. Digital preservation is not like preservation, at least insofar as there are very few natural processes which we need to confront. That's to say, while traditional conservators are busy fighting an eternal battle with bacteria, chemicals and grot, our enemies – obsolescence, representation and bit rot – are practically always of our own making. So is it possible that we could make obsolescence obsolete? The idea may seem far-fetched but it's not out of reach and it would transform what and how we teach digital preservation.

The point is not to take us down a blind alley with another research agenda and another work programme. The purpose is to ensure that skills remain current.

The same thought-experiment is possible with some of our familiar metaphors. For example, It's becoming increasingly clear that what we called a 'repository' in 2000 is less of a 'place', it's more of a 'process'. We talk of 'trusted digital repositories' when we actually mean the deployment of trusted services by trusted agents with trusted data and trusted processes. The repository, if it exists at all, is retail data storage for the AIPs. So when we talk about assessing whether something could be a 'Trusted Repository' what we actually need to



assess are the services, the processes and the people. And in a service-oriented environment, with dependencies on a constellation of remote tools and operators, and where we call on 'Digital Preservation as a Service' we package trust along some very long supply chains. So why are we assessing and certifying repositories? Why isn't there a 'DP service seal of approval'? Perhaps instead of teaching students about the characteristics of a trusted archive we should teach them how to assess software dependency in a highly distributed environment?

Again the point is simply to observe that we work in a dynamic environment and that the curriculum needs to respond to this dynamic.



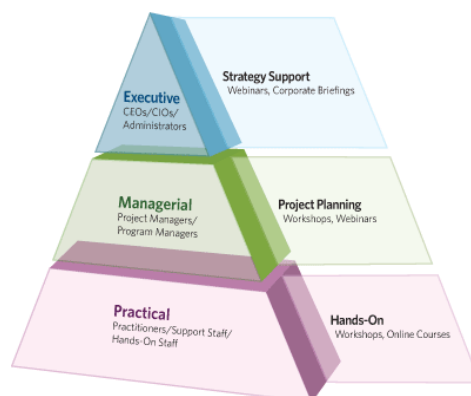
Delegates talking

[Read the full paper](#)

### 3.2.2 View from across the Pond: Opportunities, Gaps, and Challenges in Digital Curation Lifelong Learning, Helen Tibbo

*Abstract—While some excellent lifelong learning programs in digital curation and preservation for cultural heritage information professionals exist in the US, most activities are sporadic and depend on temporary and shrinking grant funding. How best to provide continuing education on digital curation and preservation remains an open question. This paper will critique current programs, discuss key issues, and question the sustainability of existing efforts.*

[Read the full paper](#)



The Library of Congress Digital Preservation Outreach and Education programme targets each layer of the information professional workforce as captured in this diagram.  
<http://www.digitalpreservation.gov/education/curriculum.html>



### **3.2.3 Balancing the Books. The Economics of Digital Curation Training & Education, Neil Grindley**

*Abstract - A great deal of work has been done to try and quantify the costs of digital curation and much of it has focused on assigning a cost value, either to various parts of the lifecycle of digital objects or to stages in the curation workflow. These models tend to assume that an organisational capability to curate is a given and have not tended to factor in the economic considerations associated with ensuring the relevant personnel have the skills and knowledge to do the work effectively. Training can also be understood as an investment and as such, organisations have to weigh the costs against the benefits to determine whether paying for training is worthwhile. From the perspective of standard economic theory, there may be disincentives to sponsoring training, which in turn may affect supply and demand issues and contribute to market failure in the training sector. The skills and capabilities that personnel either develop or acquire via training are all part of the complex financial equation that institutions have to solve to ensure that their digital assets remain safe and accessible. This paper will look at some of the issues related to training through an economic lens to test whether new insights emerge. The ultimate purpose is to check whether these issues have relevance for other projects and initiatives, especially the newly commenced EC-funded 4C project that is looking to help a diversity of organisations understand the true nature of investment into all aspects of digital curation, primarily through the mechanism of costs, but also through related concepts such as sustainability, value and benefits.*

[Read the full paper](#)

### **3.2.4 Extending the Reach of Digital Preservation Practice: a program to teach practitioners in small institutions, Mary Molinaro**

*Abstract— Many working in small libraries, museums, archives, and historical societies have been actively engaged in creating digital collections, but often these collections are not being digitized to standards, are presented to users via a web page and are not preserved in any meaningful manner. How do the people in these scenarios discover that there is a problem before they lose content and more importantly how do they learn what to do about it? The Library of Congress Digital Preservation Outreach and Education Program (DPOE) is taking a proactive approach to extending digital preservation education across the United States in a scalable way.*

[Read the full paper](#)

### 3.3 Session 2 - Skills for the future

#### 3.3.1 Skills for the Future. Educational opportunities for digital curation professionals, Achim Osswald

*Abstract - Several cultural heritage institutions all around the world have set up special services, trainings, courses or programs focusing on curation of digital material. Digital curation is a multifaceted task with a great variety of responsibilities, preconditions and objectives. For the first time in this field the DigCurV project offers a framework to locate competences and skills related to vocational education and training regarding digital curation processes. Referring to this framework should be a good starting point for differentiated educational activities focusing on special target groups, their educational background, the objectives of the digital curation process, and the material which has to be curated. Based on this, additional frameworks comprising these educational activities can be set up – still referring to the DigCurV framework partially or in total. This will offer the opportunity to compare educational activities regarding content and the results achieved.*

*Beside these efforts regarding content and concepts of digital curation education there is another ongoing challenge: getting people involved and making them eager to curate (their) digital material properly. The curation job is hardly glamorous or much admired. For the most part it is a service-oriented back office activity demanding functionality and perfection. For a long time, specialists will be needed – and will need qualified training – to meet these requirements. Increasing awareness of the need for digital curation by professionals and the public offers opportunities to get digital curation professionals and their skills involved even in everyone's working environment.*

[Read the full paper](#)

#### 3.3.2 DigCurV: next steps, Kate Fernie, Ann Gow, Maurizio Lunghi

*Abstract—This paper considers the next steps for the DigCurV project in working towards a sustainable future for vocational education and training in Digital Curation*

[Read the full paper](#)

#### 3.3.3 Report on the context of the DigCurV Curriculum Framework, Nathan Moles and Seamus Ross

*Abstract—This paper presents an overview of current or recently completed initiatives to create, structure, or help foster curricula for the on-going vocational training of information professionals with the aim of informing the implementation of DigCurV's curriculum framework. The initiatives examined include the Digital Curation Centre, DaMSSI (Research Data Management Skills Support Initiative), DigCCurr (Carolina Digital Curation Curriculum Project), Closing the Digital Curation Gap, Digital Curation Exchange, International Digital Curation Education Action (IDEA) Working Group, Digital Preservation Coalition, Digital Preservation Training Programme, the Library of Congress' Digital Preservation Outreach and Education, the Society of American Archivists' Digital Archives Specialist (DAS) Curriculum and Certification and nestor, the German competence network.*

[Read the full paper](#)

### **3.4 A curriculum Framework for digital curators: presentation of DigCurV results**

#### **3.4.1 Digital Curator Vocational Education Europe: overview of the DigCurV project, Kate Fernie, Ann Gow and Laura Molloy**

*Abstract—This paper provides an overview of the EC-funded DigCurV project, its context, methods, main findings, and the project's initial framework for a digital curation curriculum and the CURATE! game.*

[Read the full paper](#)

#### **3.4.2 A survey based analysis on training opportunities, Jurate Kupriene**

*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 programme. 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.*

[Read the full paper](#)



*Two of the DigCurV team members*

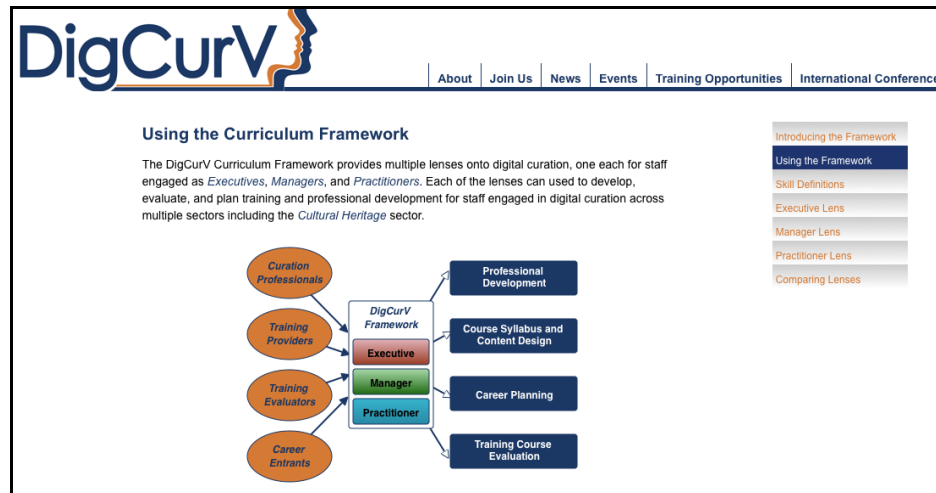
#### **3.4.3 The DigCurV review of training needs in the field of digital preservation and curation. An overview of the main findings, Claudia Engelhardt**

*Abstract—This paper presents the results of the DigCurV review of training needs in the field of digital preservation and curation. The project carried out three research activities during 2011 and in early 2012: an online survey, a series of focus groups, and an analysis of job advertisements. The results indicate a severe lack of qualified staff as well as a lack of appropriate training options for digital preservation and curation. Staff working in this area need to have a broad spectrum of skills and competences. These comprise both generic and digital preservation-specific and technical skills and competences. An urgent need for training was stated in terms of digital preservation-specific and technical as well as with regard to generic skills. When asked to set priorities and indicate the areas where the need for training was most pressing, respondents clearly assigned these to the digital preservation-specific and technical skills.*

### 3.4.4 The DigCurV Curriculum Framework. Structure, context and approach, Ann Gow, Laura Molloy, Leo Konstantelos

*Abstract—This paper describes the development of the initial curriculum framework, focusing on the method and theory underpinning the content and structure within the context of the project.*

[Read the full paper](#)



DigCurV project website and Curriculum Framework: <http://www.digcur-education.org/>

### 3.4.5 The CURATE! Game. Its Development, Evaluation and Use, Vicky Garnett, Karolina Badzmierowska, Susan Schreibman

*Abstract - The DigCurV CURATE! Game was developed by Katie McCadden, Prof. Susan Schreibman, and Dr. Jennifer Edmond at Trinity College Dublin (TCD), in conjunction with Carol Usher and Kate Fernie at MDR Partners in the UK. Developed as a means to highlight the importance of training in digital curation among practitioners and managers working in libraries, museums and cultural heritage institutes, the game has since expanded into a self-assessment tool, a team-building exercise and a training tool for early career students. A recent survey conducted by TCD and MDR Partners on behalf of DigCurV on the use and perceptions of the game has revealed new scope for further work.*



Delegates playing the CURATE! Game



### 3.5 Introduction to contributed paper sessions

With the increase of digital content in the broad areas of Institutional and domain specific Repositories, Libraries, Archives and Museums, digital curation is becoming a central activity and a challenge. The need for skilled professionals to manage digital collections is evident in Europe and internationally, yet there are limited numbers of institutions currently offering professional training and education programmes to prepare individuals to work in the field. One of the main objectives of the DigCurV project was to address the availability of educational curricula and vocational training for digital curators in the library, archive, museum and cultural heritage sectors needed to develop new skills that are essential for the long-term management of digital collections.

In line with those general objectives, it was felt that the inclusion of some Contributed Papers Sessions in the final conference of the DigCurV project would have added value to the project and interest to the conference. The objectives of the conference were to promote discussion and sharing of experience among the participants, and to start building some consensus among the main stakeholders for what concerns the criteria and requirements needed to develop training courses for professionals in digital curation. The presentation of results from projects and initiatives actively involved in education, training and professional development in the field of digital curation and digital preservation was therefore mostly welcomed.

A Call for Papers was issued, soliciting contributions on concrete examples of training initiatives and educational programmes in digital curation, illustrating approaches, methodologies and success stories of training addressed to an increasingly qualified workforce of the library, archive, museum and cultural heritage sectors. A number of topics of interest were suggested, from lifelong learning in digital curation to opportunities and challenges in developing training curricula, from training the trainers to sustainability of training initiatives. The complete [Call for Papers](#) can be seen at the DigCurV web site.

The call was quite successful, and the Program Committee in the end selected sixteen papers and twelve posters (of which only four were presented at the Conference, due to budget restrictions at the submitting organizations). The accepted papers were divided into 4 sessions, broadly based on the main topics dealt with within the paper, but this classification is rather coarse, as many papers could belong to more than one session, so we encourage the reader interested in browsing through the papers to look more at the abstract of a paper rather than at the title of the session.

By looking at all the accepted papers, an interesting consideration that can be done is that many of them are dealing with the curation and preservation of “research data”, despite the fact that this topic was not specifically mentioned in the Call for Papers. Today practically all the research activities are based on digital sources, and therefore a particular aspect of Digital Curation is the storage, management and preservation of digital research data. Digital research data can take many different aspects, such as previous publications, images, video, audio, data bases, email, web sites, etc., and most of the time those data are specific to the research field. The term Data Curator is more and more used to indicate the person/organization responsible for all the activities connected with the management (curation) of research data. However, it is not (yet) clear which of the existing professional roles are best suited for this activity. Should there be a Data Librarian, or a Data Archivist, or a Data Museum curator? Or is this a new role to be invented from scratch? Or should the responsibility of curating research data be given to the “data producers”, i.e. the researchers themselves? As previously stated, it is interesting to note the different approaches and solutions to these topics that are presented in many of the papers.

We thank the readers for their interest in Digital Curation, and we hope that this set of papers can stimulate further thoughts, discussions and cooperation. Enjoy your reading!

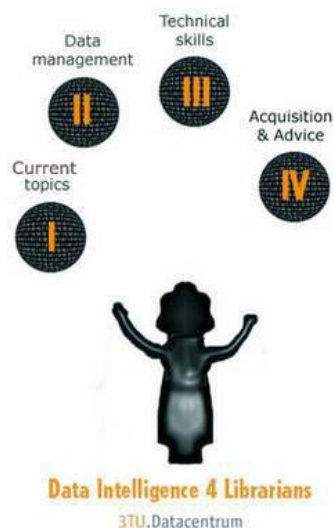
**Vittore Casarosa, Chair of the programme committee, ISTI-CNR, Pisa**

### 3.6 Digital Curation education

#### 3.6.1 Data-Intelligence Training for Library Staff, Ellen Verbakel, Madeleine de Smaele, Noordegraaf Marina and Nicole Potters

*Abstract - The course Data Intelligence 4 Librarians was developed by 3TU.Datacentrum at the end of 2011 to provide online resources and training for digital preservation practitioners, specifically for library staff. The course is intended to overcome the insecurity and perceived lack of knowledge about data management which prevents library staff from proactively providing support to research staff with the management, storage and sharing of their research data. The course objectives are: 1) to transfer and exchange knowledge about data management, and 2) to provide participants with the skills required to advise researchers or research groups on efficient and effective ways of adding value to their data. The course is an additional service provided by 3TU.Datacentrum23 a digital repository for research data set up by the research libraries of the three Dutch Universities of Technology (3TU): Delft University of Technology, Eindhoven University of Technology, and the University of Twente. The paper describes the process of creating the course, the methodology, and the results of the two courses in 2012.*

[Read the full paper](#)



*A graphic overview of the course: a data librarian juggling four balls: <http://dataintelligence.3tu.nl/>*

#### 3.6.2 An Applied Approach to Data Curation Training at the Inter-university Consortium for Political and Social

#### 3.6.3 Research (ICPSR), Jared Lyle, Mary Vardigan, Jacob Carlson and Ron Nakao

*Abstract—ICPSR recently developed two new training initiatives in digital curation: a week-long applied data curation workshop where participants learn the theories and methods of data curation using the ICPSR “processing pipeline” as framework, and an ongoing virtual working group of data librarians that discusses similar core data curation topics while giving participants independent access to curate their own data using ICPSR’s processing environment and tools. This paper discusses the background, structure, and lessons learned from these new training initiatives.*

[Read the full paper](#)

### **3.6.4 A Tale of Two Countries. Digital Curation Education in Malta and New Zealand, Milena Dobрева and Gillian Oliver**

*Abstract—This paper looks into the current tertiary and vocational offering in the domain of digital curation in two small countries, Malta and New Zealand. It illustrates how the specifics of local memory institutions and digital media sector influence the existing course, and identifies areas which can be improved. Particular emphasis in both countries needs to be placed on the vocational education and in-service training; in addition in Malta there is a need to develop a framework for the validation of the non-formal and informal learning in the domain of digital curation.*

[Read the full paper](#)



Milena Dobрева speaking

## **3.7 Frameworks and lessons learnt**

### **3.7.1 Digital Curation in Architecture Curricula and vocational training for Architects. The DEDICATE Framework in Architectural CAD Courses Design, Ian Anderson and Ruggero Lancia**

*Abstract—As the design processes in architectural practices switch toward entirely digital workflows, architects are gradually required, because of their legal and commercial liability, to provide for both a relatively long-term curation of their own digital products and the deposit of authoritative data. But, despite being the sole curation actors for their data, architects receive little education or training in either pertinent competences nor agreed and established procedures to comply with these duties. In this paper, the DEDICATE project, an AHRC funded project hosted by the HATII of the University of Glasgow, will be discussed to explain its role in the design of Digital Curation courses within architectural CAD education and architects' vocational training.*

[Read the full paper](#)

### 3.7.2 Introducing the Information Culture Framework as a Component of the Digital Curator's Toolkit, Fiorella Foscari and Gillian Oliver

*Abstract—The purpose of this paper is to promote the notion of “information culture” as an integral component of the education for digital curation professionals. Understanding the context in which digital artefacts are created and used is essential for their meaning to be knowable, communicable, and preservable over time. Human beings’ attitudes towards information and the values they attach to it are an unexplored aspect of such context. The Information Culture Framework (ICF) that is presented here has been developed to help organizations assess the ‘soft’ factors that enable and constrain their information-related practices. By applying the ICF, digital curators will be able to shed light on the information culture underlying the objects under their purview, to explain how and why such objects are as they are, and to enhance understanding of what they meant to their creators and users.*

[Read the full paper](#)

### 3.7.3 Getting Data Creators On Board with the Digital Curation Agenda. Lessons Learned in Developing Training for Researchers, Meriel Patrick and James A. J. Wilson

*Abstract—University research projects are a key source of digital information with potential long-term value. Researchers rarely need to be persuaded that preserving the fruits of their work is in principle a good thing, but may often lack knowledge of the best way to go about doing this. Additionally, time pressures on academics are such that curation can frequently end up being pushed down the priority list. It is therefore important that information professionals working alongside researchers are able to offer appropriate training and advice on both the practicalities of and the rationale for digital curation.*

The DaMaRO Project is one of a series of research data management projects based at the University of Oxford. The project's remit includes developing training for researchers (intended to encourage them to consider data sharing and preservation issues at an early stage in their research), plus the development of an institutional data archive (DataBank) and catalogue of datasets (DataFinder). This paper offers some reflections on our experiences thus far, and in particular looks at the question of how researchers and others who are involved in the creation of digital data may most effectively be engaged in planning for and facilitating its long-term preservation.

[Read the full paper](#)



Animated discussion in progress

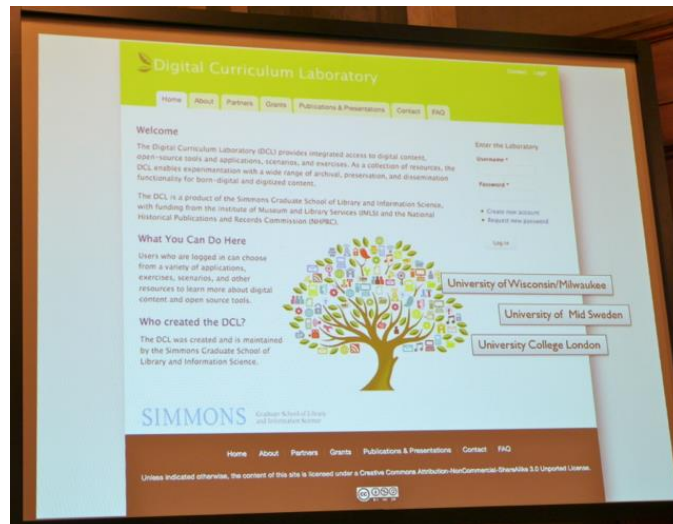


### 3.8 Mainstreaming digital curation education

#### 3.8.1 Digital Stewardship Education at the Graduate School of Library & Information Science, Simmons College, Martha Mahard and Ross Harvey

*Abstract—This paper describes two initiatives based in the Graduate School of Library and Information Science, Simmons College that contribute to meeting educational and training needs in digital stewardship: the online Digital Stewardship Certificate and the Digital Curriculum Laboratory.*

[Read the full paper](#)



*Illustration of the Digital Curriculum Laboratory at Simmons College*

#### 3.8.2 Integrating Digital Curation in a Digital Library curriculum: the International Master DILL case study, Anna Maria Tammaro

*Abstract—The paper describes the design and delivery of the curriculum of the International Master DILL and the methodology used to integrate the digital curation module and its specific learning objectives.*

[Read the full paper](#)



**What is Digital Curation? Conference speakers were interviewed for a DigCurV video:**  
<http://www.youtube.com/watch?v=6cuOdgYRGM>

### 3.8.3 Learning Hands-on and by Trial & Error with Data Curation Profiles, D Scott Brandt

*Abstract— The Data Curation Profiles Toolkit can be used in several ways to capture requirements for data sets, as articulated by researchers. As a flexible instrument it can facilitate dialog between librarians and researchers to discuss data concerns, current data workflow, and possible outcomes for the future. As a structured tool it can help identify areas of concern and need, to begin to making informed decisions about the data. Published Profiles offer insight into similarities and variations in data and data workflow, across multiple research areas or sub-disciplines. Designed as a tool for practitioners, it can help build knowledge and skill through application. Librarians who have completed Profiles have found the process to improve their comfort, increase their confidence, and build competencies in working with researchers. Mapping use of the Profiles Toolkit to the DigCurV Curriculum Framework can help identify strengths and weaknesses in what is currently a hands-on, trial and error self-learning approach.*



Discussion underway

### 3.8.4 The digital curator between continuity and change: developing a training course at the University of Turin, Maurizio Vivarelli, Maria Cassella and Federico Valacchi

*Abstract—The paper tackles with the challenges and the opportunities to establish a training course for digital curators in an Italian university, namely the University of Turin. The authors give a broad perspective of the role of the digital curator who is a figure that adds to the technical, communicative, managerial and legal skills the ability to embed these skills in more complex cultural ecosystems, which regulate and define the mechanisms of production and communication of the cultural heritage.*

[Read the full paper](#)

### **3.8.5 Mainstreaming Digital Curation. An overview of activity in the UK archives and records management Profession, Jenny Bunn and Sarah Higgins**

*Abstract— This paper seeks to describe recent moves to address the need for digital curation training from within the UK archives and records management profession. It outlines how such training has been included within established archival education programmes, at Aberystwyth University and University College London, as well as discussing moves by the recognised professional body, the Archives and Records Association, to address the issue of providing digital curation training to existing professionals, as part of their continuing professional development (CPD).*

[Read the full paper](#)

### **3.8.6 Bridging By Design: The Curation and Management of Digital Assets Specialization at the University of Maryland, Katie Shilton, Michael Kurtz, Bruce Ambacher, Erik Mitchell, Douglas Oard and Ann Weeks**

*Abstract—The Curation and Management of Digital Assets specialization in the College of Information Studies at the University of Maryland focuses on instruction in the creation, management and use, long-term preservation, and access to digital assets in a variety of disciplines and sectors of the economy. This paper describes the development of this new specialization, which will include students from two degree programs: a Master's in Library & Information Science, and a Master's in Information Management. The paper discusses interdisciplinary opportunities for the program, including a demonstrated cross-sector need among employers in the region, as well as the opportunity to strengthen the college's interdisciplinary mission. It also discusses challenges presented by the program, including developing curriculum to train students with diverse work backgrounds and technical expertise, and bridging divergent expertise and skill sets among the faculty and professionals who will teach in the program.*

[Read the full paper](#)

## **3.9 Developing 21st Century professionals**

### **3.9.1 Infusing Digital Curation Competencies into the SLIS Curriculum, Patricia C. Franks**

*Abstract— The unprecedented rate of growth of digital information requires professionals with digital curation skills and knowledge. However, education and training programs are inadequate to meet the demand. An infusion of digital curation competencies into the Library and Information Science curriculum is required to ensure that today's digital assets are available today and tomorrow. The purpose of this paper is to describe the ways in which Digital Curation Competencies are integrated into the MLIS curriculum at San José State University. Course descriptions are provided for several MLIS courses, and a crosswalk is presented demonstrating the correlation between the MLIS core competencies supported by those courses and the operational and professional core competencies identified as necessary for Digital Curators. One course, Professional Experiences: Internship is offered as an effective way for students to apply their digital curation skills and knowledge in the real world, either by working on site or working remotely.*

[Read the full paper](#)

### **3.9.2 The Digital Content Management Curriculum: A Case Study at Wayne State University's School of Library & Information Science, Joan E. Beaudoin**

*Abstract—This paper examines the development of a specialization for digital content management at the School of Library and Information Science at Wayne State University. Addressed in this case study are the pedagogical approach taken in the specialization's curriculum development and the steps that were taken in developing the curriculum. The paper highlights five core characteristics that were used to describe the kinds of knowledge and skills expected from students completing the specialization. Additionally, the paper discusses the resources needed to support the specialization and the indicators to be used in the evaluation of its success.*

[Read the full paper](#)

### **3.9.3 'DIY' Research Data Management Training Kit for Librarians, Stuart Macdonald and Robin Rice**

*Abstract – This paper discusses extended professional development training in research data management for librarians piloted at the University of Edinburgh. This is framed by the evolving research data management Roadmap at the University, national and international initiatives in managing research data by bodies such as Jisc and LIBER, and the subsequent need to 'up skill' information professionals in the emerging area of academic research data management. This knowledge-transfer exercise includes independent study based on the research data MANTRA course and reflective writing, face to face sessions with different speakers giving short presentations followed by discussion, and group exercises. The resultant training 'kit' was released in Spring 2013 with an open licence for other institutions, particularly those without local research data management expertise, to utilise for 'DIY' RDM training.*

[Read the full paper](#)



**Answering questions from delegates**



### **3.10 The round table: Creating a common vision for digital curation education: building alliances, Chiara Cirinnà, Kate Fernie, Maurizio Lunghi**

The “Framing the digital curation curriculum” conference closed with a lively round table discussion, thanks to all the speakers that participated with enthusiasm to the debate, where the most important issues were again placed under the microscope to be summarized and discussed.

Wendy Duff, Professor at the University of Toronto, Faculty of Information, chaired the session

Participants were the delegates of the organisations that supported the DigCurV conference and the attendees, which sought to draw on the Curriculum Framework (CF) presented by DigCurV, in order to assess and gain further insights into the contribution of all the organisations in further developments and adoption of the CF.



**The round table discussion**

*Wendy Duff* opened the discussion by asking the participants which benefits and/or obstacles in adopting the CF could be highlighted.

*Andrea Caccia* is the delegate from ANORC<sup>1</sup>, the Italian National Association for digital preservation, a not for profit organisation that acts as a reference point for all the stakeholders involved in the process of digital storage and dematerialisation. ANORC is interested in being involved in the CF development, because it has a precise commitment in delivering training courses to all the professionals involved in digital curation. The CF would significantly benefit from the possibility to transfer the CF into a standardised framework, to help fill the gap of the competences needed by professional at all levels.

*Achim Osswald* is the delegate from nestor<sup>2</sup>, the German competence network for digital preservation. The nestor network has been involved in the evaluation of the CF and Achim was pleased for the great opportunity to use the results of the DigCurV project. In the near future he envisages a lot of steps to be done, not only to apply the framework itself (or some of its aspects), but also to try to improve it in some areas. One example would be to create role models or profiles that go beyond the practical lenses. In the German workshops for the evaluation of the CF, they thought the three lenses suggested that there were an equal number of persons involved. Actually there is a great number of practitioners involved in different aspects of digital curation. Therefore a suggestion is that these lenses should be further developed in the future.

---

<sup>1</sup> [http://www.anorc.it/index\\_ing.php?lang=en](http://www.anorc.it/index_ing.php?lang=en)

<sup>2</sup> [http://www.langzeitarchivierung.de/Subsites/nestor/EN/Home/home\\_node.html](http://www.langzeitarchivierung.de/Subsites/nestor/EN/Home/home_node.html)

*Ann Gow*, from the DigCurV project, confirms that HATII and the other project partners are committed to continuing the development of the framework.

*Wendy Duff* asked Achim to clarify what type of roles he is suggesting. Achim indicated that, during the workshops, they discussed different kind of roles and they think that a lens should focus also on IT specialists, on people responsible for technology watch, and digitization; he suggested there is a great variety of activities in digital curation that can be broken down into roles and in different sectors.

*Adam Carter* is representing EUDAT<sup>3</sup> (European Data Infrastructure), a project involved in large-scale data infrastructures. One of the aims of the project is to provide services for community data centre managers, specifically in the subject area of data repositories. EUDAT is trying to develop services to connect subject area repositories together and make sure that data can be reusable and curated in the long term. The conference topic is a bit on the periphery of EUDAT, but it helped Adam better understand the interface between what EUDAT is working on and subject librarians, and what EUDAT needs to train people in. The CF helps to work out the boundaries to what different people can specialize in. Adam will review the framework in more depth, particularly those skills that EUDAT considers relevant and he will suggest whether the lenses should be split into more detailed roles. In general Adam thinks the CF is very useful, as the tool for accessing the framework. He suggested the online tool needs a “search” feature. Adam thinks that EUDAT would be interested in joining a prospective Network, depending on what membership entails. In any case he would like to keep abreast of what is happening.

*Simon Hodson* from the JISC management data research programme, which is designed to support the management of research data of UK universities spoke next. JISC looks at policies, strategies, infrastructures and support roles. Simon emphasises that there is a danger in digital curation: experts have turned digital preservation into a daunting and serious challenge. The challenge is to make digital preservation accessible, practical and applicable to every day activity by researchers and this is what JISC seeks to encourage. With regard to the CF, Simon was excited to hear speakers say how useful the framework was in clarifying the language or their approach. A significant achievement would be to use the framework in networks to define skills and competences and to help clarify terminology. Simon thinks it would be interesting to understand to what extent the CF can be used to define the contents that are a little bit less specialised for the digital curation and what researchers have to do with digital curation, or need to be a little aware of, even if they are not specialist. This leads to the question about handover procedures between responsible parties; he thinks this should be built into the framework and training materials. People need to know where their responsibilities start and stop. This is a moving target and so the handovers are also likely to change.

*Wendy Duff* asks about a 4th lens. What would it be for the framework to identify a lens for the personal record keeper? Simon Hodson thinks that, since today we live in a digital world, a certain amount of digital curation knowledge is a life skill, so everyone needs a certain amount of knowledge about it.

*Helen Tibbo* is an Alumni Distinguished Professor at the School of Information and Library Science (SILS) at the University of North Carolina at Chapel Hill (UNC-CH). Helen thinks that graduate education is quite easy as the teacher has a “captive” audience and defined programmes to follow. Her main concern is about vocational education which is very difficult, not only for the contents to teach, but also for the organisation of the training courses and for the financial aspects (who pays for the classes?). Professionals cannot update their competences in a few hours course. Vocational training is a huge challenge. In Helen’s opinion, the CF is great, but it needs to set out some kind of course structures. Helen asks herself if there are organisations in Europe that are going to conduct continuing education: one of the biggest problems is that today projects come and go, as well as funding.

---

<sup>3</sup> <http://www.eudat.eu/>

*Wendy Duff* mentions the Digital Curation Exchange<sup>4</sup>, which contain extensive teaching resources. To deliver a course, a lot of preparation is needed and not only from the organisational side. Could a Network be of help in delivering training? What role could it have? Should it be international or European? Should we differentiate between secondary education and postgraduate education? In US there are lots of courses with a digital curation component. Wendy is mainly worried about continuing education; at present time there is not an designated organisation with this mission.

*Neil Grindley* (Programme Manager at JISC) from the audience, declared his interest in the CF and asks how professionals might design courses using the framework. He wonders if there is a scope in student trainees putting the course together themselves choosing from some kind of international catalogue of courses. There is an international community looking for ways of collaborating together to offer this kind of shop window.

*Wendy Duff* believes that today the business models for universities are changing. There are thousands of students taking courses which are based world-wide. An example is the course on introduction to computer science that was free: 100.000 students signed up, and only 9.000 finished!

*Helen Tibbo* thinks that a lot of these courses are broad, then people take more specific courses. Another issue is that, to plan a training course, besides text books, you must include exercises and hands-on activities.

*Seamus Ross*, Dean of the Faculty of Information at the University of Toronto, points out that DCC 101 offers a whole series of introductory topics with exercises. The University of Toronto is also currently offering MOOC, free online courses to experiment with the business models planning.

*Mary Molinaro*, Associate Dean for Library Technologies at the University of Kentucky Libraries, shares concern about sustainability of training programmes. She believes that low cost solutions should be provided for a wide range of people in vocational education with professional responsibilities for digital contents. She asks if it would be useful to overlay the DigCurV Curriculum Framework over the DPOE curriculum<sup>5</sup>, in order to make them converge. This action would be beneficial for the international collaboration on the definition of curricula. Moreover to have a unique curriculum as a reference could be a benefit as would be easier to maintain and update. Someone is more likely to pay for this joint effort. There is a lot of duplication of events calendars, Library of Congress, Digital Curation Exchange: it may be helpful to have a European one and US one. We need to think about duplication of effort and see if this can be reduced. Overcoming this obstacle is not an easy task; she suggested another grant might help. She shares concerns about the DPOE programme, as there have been cutbacks in the US. Also the Dean of the University of Kentucky supports this work.

*Jurate Kupriene* is the Director for Innovations and Infrastructure Development at Vilnius University Library. She is partner of the DigCurV project and contributed to the development of the CF, that she considers good to start work. Lithuanian situation is not very developed, there is a big gap in the availability of training for MLA professionals. In 2011 more than 70 structures are going to have a repository and they are talking only about digitization: curation is quite a new thing. The DigCurV framework is useful for Lithuania, Latvia and Estonia to create a movement to go out and talk to colleagues. In parallel the Open Access Movement has been active since 2006, today an Open Access repository for Lithuania is available. This year they started to create a national open access repository for scientific publications and a big project for national research data archive was funded, and Lithuanian Vilnius University is the project manager. The DigCurV CF is a good tool to help explain to managers what they will be responsible for in the initial stages of the projects and to start planning. The CF could also be translated into the Lithuanian language for older people. The framework can be a

---

<sup>4</sup> <http://digitalcurationexchange.org>

<sup>5</sup> <http://www.digitalpreservation.gov/education/curriculum.html>

used as a business plan to develop training for academic librarians as we are planning to have a good national training centre for academic librarians, archivists and museums.

*Achim Osswald* added a note about the national focus that *Jurate* mentioned. The DigCurV framework offers the opportunity to connect between different experiences and also different nationalities. Although at the conference there were lots of good and enthusiastic presentations from colleagues from the United States, we should be aware that we are talking about the results of a European project, and the main focus was to tackle and solve the problems that are present in Europe. To help to do this, the conference brought in partners from the US to discuss their experiences. Also Britain can be considered sometimes inside and sometimes outside Europe. The main issue is that the CF provides an opportunity to delineate what we have achieved in our national educational activities to get a common understanding and to identify which are the levels we are achieving and the programs that we apply. In *Achim's* opinion it is important to discuss these issues within the national context. Another important subject is the business model: in many European countries, higher education is not a business area, rather it is a state-funded area: in fact it's up to the university and the activities of the deans of the departments if programs have to be applied, in relation to the demands of the labour market. So the perspective of the business model should be taken into account.

*Wendy Duff* poses a question to the group regarding how the CF will be maintained, since people's reactions have been very positive. She does not think that looking for the next grant is the answer. So a possibility could be to set something up, so that people's experiences in using the framework can be fed back into the development of the framework.

*Neil Grindley* suggests that there are contexts where the DigCurV framework could be discussed. He refers about a conference in Tallin in 2011, "Aligning national approaches to digital preservation", which was an excellent discussion of potential alignment strategies across various national preservation programs. The second edition has been scheduled for Barcelona, Spain, on November 18-20<sup>6</sup>. There are certainly other initiatives that would benefit from having the DigCurV framework included in their programme.

*Anna Maria Tammaro*, from the Governing Board of IFLA (International Federation of Library Associations and Institutions), intends to support this framework. There is a working group in IFLA on convergence of associations. She invites DigCurV to participate in the IFLA conference in Lyon on August 2014<sup>7</sup>: there is a satellite event dedicated to the convergence issue. Moreover if interested, this DigCurV framework can be included in the strategic initiatives of IFLA (standardization, digital contents). *Anna Maria* offers to take on the role of diffusing the DigCurV framework within IFLA.

*Wendy Duff* is interested in what professionals from Archives think about the Framework. The ICA (International Council on Archives) could be interested in the CF. *Jenny Bunn* offered to take DigCurV Framework to the Archives organization. The ICOM (International Council of Museums) is an international group that might be interested. *Wendy Duff* asks *Ann Gow* and *Laura Molloy* what they think about taking the Framework to various conferences and professional associations. *Ann* would be pleased to see the Framework used, the only concern is with the EU funding for travel. *Laura* encourages people to send comments as soon as possible (short focused pieces of feedback would be great). *Wendy* asks the speakers who spoke about using the framework to send feedback to *Laura*.

*Maurizio Lunghi*, from FRD (Fondazione Rinascimento Digitale), invited the PrestoCentre initiative that agreed in principle to share a common approach and in cooperating even if they are not able to attend the conference.

*Wendy Duff* spoke about the history of Drambora. Anything that can be done to move the Framework towards associations and sustainable contexts would be good.

---

<sup>6</sup> <http://www.educopia.org/events/ANADPII>

<sup>7</sup> <http://conference.ifla.org/ifla80/>



*Andrea Caccia* refers about CEN (European Committee for Standardisation), a EU standard organization. They already had workshops about DRAMBORA. If we are able to reach an harmonized competence framework, it would be of help for the mobility of competences across Europe.

*Wendy Duff* reminds people about business schools, computer science groups that also have educational components.

*Wendy Duff* closes by encouraging people to send their feedback on the framework and the CURATE! game. She says that DigCurV has been an amazing project and hopes it will be sustainable. Such a vibrant community, we need to make sure that the excellent tools the project developed are sustained.

The impression is that we are on the right track.

[Read the full paper](#)

## 4 References

DigCurV project website: <http://digcur-education.org/>

European Commission Leonardo da Vinci programme website:  
[http://ec.europa.eu/education/lifelong-learning-programme/ldv\\_en.htm](http://ec.europa.eu/education/lifelong-learning-programme/ldv_en.htm)

DigCurV project consortium: <http://www.digcur-education.org/eng/About/Founding-Partners>

DigCurV network: <http://www.digcur-education.org/eng/About>

European Commission, 2013, "Digital Agenda for Europe" website:  
<http://ec.europa.eu/digital-agenda/>

Digital Preservation Coalition: Training Needs Analysis, JISC, 2004  
<http://www.jisc.ac.uk/publications/reports/2004/trainingneedsanalysisreport.aspx>

Harvey, R, 2007, "Professional Development in Digital Preservation: a life-time requirement", DigitalPreservationEurope briefing paper:  
[http://www.digitalpreservationeurope.eu/publications/professional\\_development.pdf](http://www.digitalpreservationeurope.eu/publications/professional_development.pdf)

De Aenlle, C., 2009, "Digital Archivists in Demand", New York Times, February 2009, online:  
[http://www.nytimes.com/2009/02/08/jobs/08starts.html?\\_r=0](http://www.nytimes.com/2009/02/08/jobs/08starts.html?_r=0)

Gartner, 2010, "Gartner Identifies Four Information Management Roles IT departments need to Remain Effective", press release: <http://www.gartner.com/newsroom/id/1282513>

JISC, 2011, "International Curation Education (ICE) forum", web page:  
<http://www.jisc.ac.uk/whatwedo/programmes/preservation/iceforum>

DigCurV, 2011, "Registry of Training Opportunities", online: <http://www.digcur-education.org/eng/Training-opportunities>

DigCurV, 2011, "Training opportunities Survey and Evaluation Framework", report available on this page: <http://www.digcur-education.org/eng/Resources>

DigCurV, 2012, 'Report and analysis of the Training needs survey', online: <http://www.digcur-education.org/eng/Resources/Report-and-analysis-on-the-training-needs-survey>

DigCurV, 2013, 'A Framework Curriculum for Digital Curations', online resource:  
<http://www.digcurv.gla.ac.uk/> and see also: <http://www.digcur-education.org/eng/Resources>

Molloy, L., and Gow, A., 2012 "Ahead of the CurV: Digital Curator Vocational Education", 9th International Conference on Preservation of Digital Objects (iPres2012), 1-5 Oct 2012, Toronto, Canada.  
<https://ipres.ischool.utoronto.ca/sites/ipres.ischool.utoronto.ca/files/iPres%202012%20Conference%20Proceedings%20Final.pdf>

DigCurV 2012, "Framing the Digital Curation Curriculum: A DigCurV workshop", <http://www.digcur-education.org/eng/Events/Framing-the-Digital-Curation-Curriculum-a-DigCurV-Workshop>

DigCurV 2012, "Curate: The Digital Curator Game", <http://www.digcur-education.org/eng/Resources/CURATE-Game>