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D5.4 Report on international meetings and dissemination activity

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1. Executive Summary

Colleagues from the iSchool at the University of Toronto took part in a number of events during the past two years at which we disseminated and obtained feedback about the work that was ongoing and completed under the DigCurV Project. This deliverable provides a "synthetic report on international meetings at which [we have] presented on the development of the curriculum framework for vocational training in digital curation". We had the opportunity to describe the work of DigCurV at more than eight events. The eight events described here provide an indication of the audiences that we reached through our presentations and our discussions—there were other venues we could have included. The communities included Libraries, archives and information education sectors, digital preservation and information researchers and practitioners, and specialists in digital humanities and the preservation and access to the cultural heritage. Several of these meetings brought together key influencers, decision makers and education leaders in fields from information management to cultural studies.¹

- Closing Address, "Educating and Validating the Capabilities of Emerging Digital Management Professionals," International Curation Education (ICE) Forum, London, 29 June 2011²;
- Presentations and practical exercises at the Professional Institute on 'Curation Practices for the Digital Object Lifecycle' at the University of North Carolina at Chapel Hill 15-20 May 2011;
- Invited Opening Keynote Address, "Digital Preservation: Why Should Today's Society Pay for the Benefit of Society in the Future," *iPRES2011*, 8th International Conference on Preservation of Digital Objects, Singapore, 1-4 November 2011.³;
- Invited Plenary Address, "The Economics of Digital Creation, Curation, and Preservation", at UNESCO "The Memory of the World in the Digital Age: digitization and Preservation: An international conference on permanent access to digital documentary heritage," Vancouver, BC Canada, 26 to 28 September 2012;
- Invited Keynote Address, "Economic Sustainability of Digital Materials", at Cultural Heritage On Line: Trusted Digital Repositories & Trusted Professionals, Fondazione Rinascimento Digitale, Florence, IT, 11-12 December 2012;
- Served as a Panelist in "DigCCurr Digital Curation Education Experts Meeting", School of Information and Library Science at the University of North Carolina, Chapel Hill NC, 18-19 March 2013;
- Keynote, "Scholar-Practitioners and the Making of the Digital Preservation Professional", at Framing the Digital Curation Curriculum conference, Florence, Italy, 6-7 May, 2013; and,
- Special talk, "Beyond the Archive: Digital Curation Ecosystems and New Modes of Scholarly Creation and Communication," Cultural Heritage, Creative Tools & Archives Workshop, National Museum of Denmark, Copenhagen DK, 26-27 June 2013⁴.

¹ Several events have been omitted in which Dr Ross participated including the DigCurV Framing the Digital Curation Curriculum workshop in Florence on 10 December 2012. Dr Ross spoke at this event and also contributed to discussions of the DigCurV conceptual framework.

² http://www.jisc.ac.uk/whatwedo/programmes/preservation/iceforum.aspx

³ http://ipres2011.sg/pages/keynotes

⁴ <u>http://chcta.wordpress.com/;</u> https://twitter.com/Julian62523002/status/349799869222907904/photo/1

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These talks happened at key conferences and workshops in Europe (Copenhagen, Florence, and London), North America (Chapel Hill, and Vancouver) and Asia (Singapore). In total more than 1000 individuals attended these presentations. The range of these audiences and types of presentations meant that we both had the opportunity to share knowledge about the model widely and in some contexts to engage different communities in discussion about the model and its nature.

2. Introduction

As part of his participation in DigCurV, Seamus Ross used his opportunities to speak at a wide range of conferences, workshops and professional and academic events to support the dissemination of the work of DigCurV. In many of these he either had the opportunity to introduce the work of DigCurV in the context of discussing digital curation and preservation more broadly or he had the opportunity to engage in discussion with participants on a one-to-one basis about the contribution that DigCurV and in particular its Curriculum Framework made (or could make) to the shaping the development of information and digital curation professionals.

Professor Wendy Duff and Professor Fiorella Foscarini also participated in events at which they spoke about DigCurV and educational and training needs of information and preservation professionals. Their primary contribution was to the May 2013 Florence Conference, at which Prof Foscarini delivered a paper and Professor Duff chaired the closing session and provided an indication as to the future direction that DigCurV might take.

2.1 International Curation Education (ICE) Forum (30 June 2011)

The Joint Information Systems Committee (JISC) organised a meeting on 30 June 2011 of the International Curation Education ('ICE') Forum to examine issues of digital curation education⁵. To create the event the JISC collaborated with the UK's Digital Curation Centre (DCC); the Institute of Library and Museum Services (IMLS) in the United States; the School of Library and Information Science, University of North Carolina at Chapel Hill; and the Department of Information Studies, University College London. The event which had been widely promoted by the JISC, IMLS, the UK's Digital Curation Centre as well as through a variety of mailing lists brought together ten speakers and an audience of around sixty educators and trainers from academic and professional domains to examine the issues the education needs of digital preservation professionals.

The speakers were drawn from North America and Europe. The speakers included, Helen Tibbo and Cal Lee (University of North Carolina at Chapel Hill), Michael Seadle (Humboldt University, Berlin), Steve Hitchcock (University of Southampton), Gordon McKenna (Collection's Trust), Simon Hodson (JISC), Joy Davidson (HATII at the University of Glasgow and DCC, Kate Fernie (MDR Partners), and Seamus Ross (iSchool at University of Toronto).

The audience was predominately from Europe. In the course of discussing the current state of education, the skills and educational needs of workers in digital curation and preservation and how that knowledge could be best shared, acquired and validated issues such as the characteristics skills required by curation professionals were discussed as was the issue of certification.

In her presentation on DigCurV, Kate Fernie drew attention to initial results of DigCurV effort to characterise the training opportunities open to information and digital curation/preservation professionals. She noted that most training was designed around workshops, lectures and hands-on practical sessions. She also drew attention to the nascent character of training in the area, as much of the available training was delivered by subject specialists; if the domain were more mature we would have expected training to have been offered by specialist trainers. The early characteristics of digital curation training were reinforced by the finding that few, if any, of the then current crop of training courses deployed any mode of assessment. In a subsequent talk, Seamus Ross drew attention to the need to validate the abilities of emerging digital management professionals through an accreditation and certification process. In the context of DigCurV, which was launching its initiative to define the skills needs of digital curation professionals from practitioners to managers to executives, accreditation and certification was going to of central importance because there was a clearly

⁵ A detailed report of the event can be found at: http://www.dcc.ac.uk/news/jisc-ice-forum-2011report#sthash.0llxszim.dpuf

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emerging need for professionals to be able to demonstrate they had the requisite knowledge and abilities. In the course of the presentation he argued that "digital preservation professionals need to think like humanists, behave like an engineers, and have a solid grounding in ethics and subject knowledge."

The impact of the event was evident in further discussions within the context of DCC conferences, IMLS, JISC, and the DigCCur Project at Chapel Hill (NC, USA) as to issues surrounding education, skills requirements and certification and accreditation. The workshop had an impact on the work of the DigCurV project itself by drawing attention to the need to define the skills required of information professionals. The session also raised awareness of DigCurV project within this constituency.

2.2 Professional Institute on 'Curation Practices for the Digital Object Lifecycle' (Chapel Hill, NC, USA)

Seamus Ross participated in the DigCCurr II project's third Professional Institute on 'Curation Practices for the Digital Object Lifecycle' which was held from 15 to 20 May 2011 at the University of North Carolina at Chapel Hill in the USA.⁶ The Institute brought together just over thirty professionals from academic libraries and archives, government archives, corporations, and non-profit consortia from the United States and Canada. The lecturers included Professors. Helen Tibbo, Cal Lee, and Richard Marciano (University of North Carolina at Chapel Hill), Prof Carolyn Hank (McGill University), Dr Nancy McGovern (University of Michigan), Prof Seamus Ross (University of Toronto), and Prof Manfred Thaller (University of Cologne).

The aim of the workshop was to provide the thirty information professionals with an opportunity to engage in lectures, discussions, and collaborative activities to cultivate skills, knowledge, and community among digital curation professionals. Students engaged in some twenty-four presentations, discussions and hands-on exercises during the week. The topics covered included: analysis of curation and preservation skills including those being considered by DigCurV, risk assessment and management (e.g. DRAMBORA) file formats and forensics, policy and management, curation technologies, and user access and interfaces. As well as introducing the participants to the work of DigCurV we took away examples of best practice in the design of training courses in curation and preservation and feed these lessons back to the DigCurV initiative.

2.3 8th International iPRES2011 Conference (Singapore)

In an invited opening keynote address at iPRES2011 on 'Digital Preservation: Why Should Today's Society Pay for the Benefit of Society in the Future', Seamus Ross from the iSchool at the University of Toronto examined the cost issues related to preservation. Among these he touched on the skills development and educational costs which provided a mechanism to explore the emerging thinking from the DigCurV project as to the educational and training needs of information professionals if they were to ensure that future generations could benefit from access to our memory being created in digital form. As part of assessing the benefits to society to be accrued by digital preservation/curation the education requirements and skills needs of professionals and practitioners must be understood if the overall cost and resource implications are to be fully understood—as Dr Ross pointed out the work of DigCurV was intended to address these issues.

⁶ For more information about the Institute or DigCCurr II, see the website at <u>http://www.ils.unc.edu/digccurr/</u>

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Image 1: Seamus Ross delivering the Keynote Address at iPRES2012 (Image (c) http://www.ncdd.nl/blog/?p=165)

iPRES2011, the seventh in the series of annual international conferences that brings "together researchers and practitioners from around the world to explore the latest trends, innovations, policies and practices in preserving our digital heritage" was hosted by the The National Library Board of Singapore and the Nanyang Technological University in November 2011. The Conference attracted some 170 delegates from Europe, North America and Asia, although at the open keynote there were substantially more participants as local dignitaries and special guests were present. As this is the leading International Conference at which researchers and professionals in digital curation and preservation engage in discussions about new approaches, old and emerging problems, and create synergies between researchers and those needing practical solutions to preservation challenges it provided an instrumental way to ensure that the work of DigCurV was presented to the research and professional community. There were some 80 paper proposals of which 40% were accepted, which led to a program with around 32 papers. In addition to the opening session, the work of DigCurV was highlighted in at panel discussion and in response to discussion of the future of professional education by Dr Ross.

iPRES2011 is a high impact event with most of the delegates being either leading researchers or leading practitioners in management and executive roles in information organizations from national libraries and archives to other sorts of memory institutions.

2.4 UNESCO "The Memory of the World in the Digital Age: digitization and Preservation: An international conference on permanent access to digital documentary heritage," (Vancouver, CA)⁷

According to the organisers, more than 500 cultural heritage professionals, academics, representatives of professional associations and industry and government, and rights holders took part in the UNESCO sponsored event on "The Memory of the World in the Digital Age: digitization and Preservation: An international conference on permanent access to digital documentary heritage" held in Vancouver in September 2012. This event, at which Dr Ross provided a keynote address, on "The Economics of Digital Creation, Curation, and Preservation" provided a range of opportunities to explore in conversation with other delegates the work of DigCurV.

The Conference in particular provided the opportunity for Dr Ross to discuss DigCurV's Curriculum Framework with colleagues from Archivematica, International Records Management Trust, MicroSoft Research, National Archives and Records Administration (including J Baron), National Institute for Standards and Technology, National Library of Australia, Open Planets Foundation, Joint Information Systems Committee in the UK (in particular Neil Grindley), as well as And academics from Aberwstwyth University (in particular

⁷ http://www.unesco.org/new/en/communication-and-information/events/calendar-of-events/eventswebsites/the-memory-of-the-world-in-the-digital-age-digitization-and-preservation/

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S Higgins), New York University, University of Glasgow, University of Roma "La Sapienza" (IT) (specifically Prof Maria Guercio), and Vienna University of Technology. The sheer number of attendees and the opportunities for discussion was invaluable.

2.5 Cultural Heritage On Line: Trusted Digital Repositories & Trusted Professionals (Florence, IT)

The Fondazione Rinascimento Digitale organised a major conference on Trusted Digital Repositories and Trusted Professionals in Florence from 11 to 12 December 2012.⁸ This conference attracted over 250 delegates, many of whom were key figures in the preservation of digital materials from across the globe. The focus of the conference on digital repositories and the role of digital professionals made it an ideal platform to discuss the education and training of information professionals and the work of DigCurV. This happened both in satellite events before the conference on 10 December, at the conference, and after the conference on the 13th of December. In his speech at the Conference Dr Ross spoke about the issues of "Economic Sustainability of Digital Materials." He took a broad view of economics to include the human resources that will be required now and overtime if we are to ensure that our memory institutions can curate the digital materials we are creating. This provided an introduction to the work of DigCurV and in particular to the perspectives that DigCurV provided on the skills which practitioners, managers and executives must have if they are to execute their roles effectively. It also provided an opportunity to draw attention to the role the DigCurV work would play in underpinning accreditation and certification of courses, programs and individuals.



Image 2: Seamus Ross presenting a paper on the resource implications of digital curation at Florence in December 2012 (Image © FRD http://www.rinascimentodigitale.it/conference2012-photogallery.phtml)

Conferences and workshops, such as this 2012 Florence conference, also provided a platform for discussing DigCurV's framework as Seamus Ross and Prof Margaret Hedstrom (University of Michigan) can be seen doing in Image 3 below. In questions at the conference he drew attention to the work of DigCurV, as he can be seen doing in Image 4 below.

⁸ http://www.rinascimento-digitale.it/Conference2012.phtml

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Image 3: Seamus Ross and Prof Margaret Hedstrom discussing DigCurV Framework, Florence December 2012 (Image © FRD http://www.rinascimento-digitale.it/conference2012photogallery.phtml)



Image 4: Seamus Ross asking questions of educational models and training, Florence December 2012 (Image © FRD http://www.rinascimento-digitale.it/conference2012photogallery.phtml)

2.6 DigCCurr Digital Curation Education Experts Meeting (Chapel Hill, NC, USA)

Through being a participant and panelist in "DigCCurr Digital Curation Education Experts Meeting" at the School of Information and Library Science at the University of North Carolina, Chapel Hill NC on the 18 and 19 of March 2013, Professor Seamus Ross was able to draw participants attention to the DigCurV work and in particular to the Curriculum Framework.

The roughly sixty participants were drawn from Canada, Greece, United Kingdom and the USA. For the most part attendees were from academic institutions, which reflects their focus on the provision of masters, doctoral and continuing professional development education. The institutions represented included: Clayton State University, Kent State, University of Arizona, Simmons College (2), The Catholic University of America, University of North Carolina at Chapel Hill (4), University of Glasgow, University of Illinois at Urbana-Champaign (2), University of Maryland at College Park, University of Michigan (2), University of Pittsburg, University of Texas at Austin. University of North Texas. University of Tennessee-Knoxville (2), University of Toronto (Professors Ross, Duff, and Dallas). The event brought to a close nearly seven years of research supported by the Institute for Museum and Library Services (IMLS) for DigCCurr (Digital Curation Curriculum) projects at the School of Information and Library Science (SILS) at the University of North Carolina (Chapel Hill). The DigCCurr Digital Curation Education Experts Meeting took a broad discussion based approach and examined education and training issues related to Master's-Level Digital and Data Curation Education, the education of doctoral students, and Digital Curation Certificates and Continuing Education. The workshop also focused on identifying the key challenges faced by Digital Curation Educators and the steps that educators and trainers could take to provide practitioners, managers and executives with the abilities to address these challenges. The discussions focused around addressing issues of future research directions, developing of repositories of tools, hardware and software for training and experimentation, case studies, refining teaching methods, implementing course materials, and developing programs and curricula.

One of the key impacts of this event was the number of leading educators who were present who were made aware of the work of DigCurV and the models it had developed and how these could be used in defining teaching and learning opportunities. There were a number of proposals for outcomes from this event; among these the most relevant to DigCurV is the work that a sub-group of attendees led by Richard Pearce-Moses is taking forward on accreditation and certification for digital curation and preservation. The aim will be to develop international approaches to accrediting programs and courses (including training courses) and certifying individuals. Professor Seamus Ross is pressing the working group to adopt the DigCurV work as the framework to support continuing professional development for the certification of individuals. Our aim will be to use the curriculum framework and the lenses as the mechanism to structure the definition of the skills base that different levels of digital curation professionals should have.

2.7 Framing the Digital Curation Curriculum Conference (Florence, IT)

DigCurV (The Digital Curator Vocational Education Europe) project organised the "Framing the digital curation curriculum" International Conference in Florence, from the 6th to the 7th of May 2013.⁹ Several members of the University of Toronto team took part in this meeting. Dr Ross delivered a keynote address on "Scholar-Practitioners and the Making of the Digital Preservation Professional," Professor Wendy Duff (iSchool at UofToronto) chaired the closing session on "Creating a common vision for digital curation education: building alliances," and Professor Fiorella Foscarini spoke on "Introducing the Information Culture Framework as a Component of the Digital Curator's Toolkit."

This conference brought together nearly 120 participants from more than fifteen countries (Albania, Canada Denmark, Great Britain, Greece, Ireland, Italy, Lithuania, Malta, Netherlands, Portugal, Romania, Sweden, Switzerland, United States). The participants came from archives, libraries, public administration, private companies, research centres and universities. Among the Universities represented were leading centres of research and teaching in digital curation and preservation and in particular in digital curation training and education: Aberystwyth University, University of Oxford, The University of Edinburgh, European Humanities University, Faculty of Information, University of Toronto, Florida State University, ICPSR, University of Michigan, Loyola University Chicago Rome Center, San Jose State University(CA, USA), Simmons Graduate School of Library & Information Science. The University of Sheffield. Trinity College Dublin. Università degli Studi di Firenze. Università degli studi di Macerata, Università degli Studi di Trieste, Università di Modena e Reggio Emilia, Università Roma Tre, University College London, University Library of Bozen-Bolzano, University of Bologna, University of Edinburgh, University of Glasgow, University of Hull (UK), University of Kentucky, University of Malta, University of Maryland College Park, University of North Carolina at Chapel Hill, University of Parma, University of Toronto, University of Turin, Vilnius University, and Wayne State University.



Image 5: Prof Wendy Duff (UofToronto) presenting the concluding remarks at the May 2013 DigCurV Florence Conference. (Image © Kate Fernie)

⁹ See DigCurV deliverable 6.1 and the conference proceedings at <u>http://www.digcur-education.org/eng/Resources/DigCurV-2013-proceedings</u> and <u>http://ceur-ws.org/Vol-1016</u>.

It is worth noting that many key educational and training projects were represented at this conference. These included: educational programs at Simmons College (Boston, MA, USA), University of Maryland (College Park, MD, USA), Wayne State, San Jose, University of Glasgow were presented as were a range of initiatives supported by organisations such as IPSRC in the USA, The Library of Congress Digital Preservation Outreach and Education programme, Digital Preservation Coalition in the UK, Nestor, and 3TU Datacentrum. In a number of sessions the wide scope of the work that the DigCurV had undertaken from it surveys to its frameworks to its CURATE game were described and presented to a broad audience.

There are three key legacies coming out of this conference: (a) the relationships that developed between the participants as they exchanged knowledge, ideas and define possible future collaborations, (b) the wider awareness of the work of DigCurV that was created by the conference, and (c) the Conference proceedings which provide a benchmark of the work undertaken to date.

2.8 Cultural Heritage, Creative Tools & Archives Workshop, (Copenhagen, DK)

This workshop, Cultural Heritage, Creative Tools & Archives Workshop at the National Museum of Denmark (Copenhagen DK) from 26 to 27 June 2013¹⁰ organised by the Danish DIGHUMLAB DK and the Greek Digital Curation Unit (Athens) with support from the ALLC: The European Association for Digital Humanities¹¹ and DARIAH¹² (Digital Research Infrastructure for the Arts and Humanities) brought together leading researchers from across Europe engaged in creating, managing, and exploiting digital resources. The workshop aimed to ``foster the growth of a community of practice in the field of digital heritage and digital humanities, leading to closer cooperation between participants and helping attendees develop tools and methods that can be used by the wider community.``¹³

In his special talk on "Beyond the Archive: Digital Curation Ecosystems and New Modes of Scholarly Creation and Communication," Dr Ross drew attention to the need to change (a) the underlying characteristics of digital objects, (b) how we created digital objects, and (c) how we educated and continue to train digital curation professionals to ensure that digital objects could be managed outside of the context of the archive and digital curation and preservation professionals will be able to handle these new kinds of objects. As a model for education and training of the digital curation professional would need to be shaped in the future the DigCurV framework was used.

¹⁰ http://chcta.wordpress.com/; https://twitter.com/Julian62523002/status/349799869222907904/photo/1

¹¹ http://www.allc.org/

¹² http://www.dariah.eu/

¹³ http://chcta.wordpress.com/; https://twitter.com/Julian62523002/status/349799869222907904/photo/1

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Image 6: Seamus Ross Speaking on Beyond the Archive and the role of presevation practitioners in managing the digital heritage (Image © Julian Richards, https://twitter.com/Julian62523002/status/349799869222907904/photo/1)

The attendees were leading practitioners in digital humanities from a range of institutions including Aarhus University, DARIAH, University of Graz, Digital Curation Unit – IMIS, Athena Research Centre (Greece), Centre for Historical Research and Documentation on War and Contemporary Society (Belgium), European Holocaust Research Infrastructure, University College London, Vilnius University Faculty of Communication (VUFC), LARM Audio Research Archive Project, The Media Museum Institute for the Study of Culture, University of Southern Denmark, Norwegian University of Science and Technology (NTNU) University Library, Scuola Superiore Sant'Anna (Pisa, Italy), Serious Games Interactive (Denmark) Archaeology Data Service and Centre for Digital Heritage (University of York), University of Copenhagen, National Museum of Denmark, National University of Ireland Maynooth, Europeana Foundation, eCloud, Danish Social Science and Humanities Data Centre, and Data Archiving and Networked Services (DANS).

4. Conclusion

The centrality of the work of DigCurV to digital curation and preservation was highlighted at more than eight international conferences and workshops in a number of different ways—in keynote lectures, in panel presentations, and in practical workshop sessions. One of the lessons which we, at the University of Toronto took away from these presentations and audience engagement opportunities was a recognition that while the DigCurV Curriculum Framework provides an outstanding way to talk about the skills needs of professionals at various levels (e.g. practitioners, managers, and executives) and how they should go about acquiring them, it is essential that audiences come to an understanding as to how the curriculum framework relates to the digital preservation lifecycle whether this is represented by OAIS or DCC Lifecycle models.

Based on the feedback from these presentations we pioneered at Toronto an in-class activity where students map the skills and characteristics inherent in the DigCurV Curriculum Framework to the OAIS and DCC Lifecycle models. This enables students to grasp the diversity of skills that are required at each stage of their career as digital curation and preservation professionals. It gives them a sense of the relationship between preservation workflow and process and skills. It gives students an appreciation of the hierarchical nature of the OAIS and DCC Lifecycle models, which from most perspectives are seen as onedimensional models. Once the skills are mapped on to these two models you begin to appreciate the nuanced nature of preservation and curation and the different points of view from which preservation and curation must be approached. By doing this mapping between models and skills students also, at a very early stage, become aware of the fact that training is a continuing requirement if they are to keep pace with practical and methodological developments in the areas of digital curation and preservation. In its curriculum framework DigCurV captures the rich array of skills that digital curation professionals must have at different stages in their career if they are to execute their roles as practitioner, manager, and executive effectively. Through mapping these skills as defined by DigCurV to information management and preservation models which are widely in use students grasp the different ways across a career they will contribute to the preservation of our cultural, scientific, and social digital heritage.

Other clear areas of strength, highlighted by discussions at various conferences and workshops, that DigCurV developed are in the areas of play and the provision of a skills framework that can support the definition of accreditation and certification initiatives. The CURATE game is a landmark achievement and although in its current physical form it does not have the dynamic character that a multi-user digital version might have, it demonstrates the power of play as a key learning device in the digital curation and preservation arena. The model also provides a latchkey for initiatives to develop accreditation and certification programs for digital curation/preservation. As the profession becomes more and more central to the economic and social viability of our heritage and digital production there will be increasing calls for evidence that those professionals responsible for curating our digital output have the requisite skills. A strength of DigCurV's work on the curriculum framework is that in its lenses it has laid the foundation for these kinds of discussions. In so doing it has bounded the accreditation and certification skills domains that we need to consider and opens the possibility to define methods for assessment and validation of skills claims and requirements.

The process of disseminating knowledge about the work and discoveries of DigCurV provided valuable feedback to help the project develop further and for some of us who participated in the project to envisage new research, teaching, and training directions that will be worth pursuing in the future.

References

DigCurV (2011). 'About' (webpage). Available from: http://www.digcureducation.org/eng/About.

DigCurV (2012). 'CURATE game' (webpage). Available from: http://www.digcureducation.org/eng/Resources/CURATE-Game.

DigCurV (2013). 'A Curriculum Framework for digital curation'. Available from: http://www.digcurv.gla.ac.uk/index.html.