Digital Curation Preparation: A Survey of Contributors to International Professional, Educational, and Research Venues

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Introduction and Context

- Digital curation "involves the management of digital objects over their entire lifecycle, ranging from pre-creation activities wherein systems are designed, and file formats and other data creation standards are established, through ongoing capture of evolving contextual information for digital assets housed in archival repositories" (Lee and Tibbo 2007)
- Digital curation goals: 1) ensure continuing access; 2) add value
- Interdisciplinary and international
- Heterogeneous stakeholders
- Flexibility in designing educational and research frameworks

Method

- DigCCurr II goals: understand and cultivate doctoral-level education in digital curation
- Research Question: in what contexts are digital curation research being addressed?
    - What disciplinary and institutional contexts?
    - How do researchers characterize the field and their work?
    - How do researchers describe their current and projected research environments?
    - What are the key venues of engagement with the digital curation research network?
- Study reports on: education; disciplinary background; research foci; connections among research networks and curricula
- Venues examined: 1) The International Journal of Digital Curation (IJDC); 2) International Digital Curation Conference; 3) DigCCurr Conferences; 4) International Conference on the Preservation of Digital Objects (iPRES)
- Survey: April, 2011 to May, 2011; online solicitation to 607 authors and presenters of 686 contributions
- At close of survey: 209 started; 180 completed; overall response rate of 29.65%

Results

Describing the discipline:
- Respondents described (in free text) up to three disciplines in which they classified their research
- Many of the 119 respondents included "digital" in their descriptions
- The term "digital curation" appeared infrequently—only fourteen times in 304 total responses
- Respondents used terms and concepts drawn from information, archives or archiving, librarianship, or preservation.
- Presentation, article, and workshop titles were classified by their predominant themes
- The most common terms used in presentation or article titles included "digital," "preservation," "data," "curation," and "information"
- The terms "research" and "science" appeared less frequently. The phrase "digital curation" was used quite infrequently, appearing in only 57 of 607 titles

Current research and mentoring:
- 73% of respondents are currently engaged in research
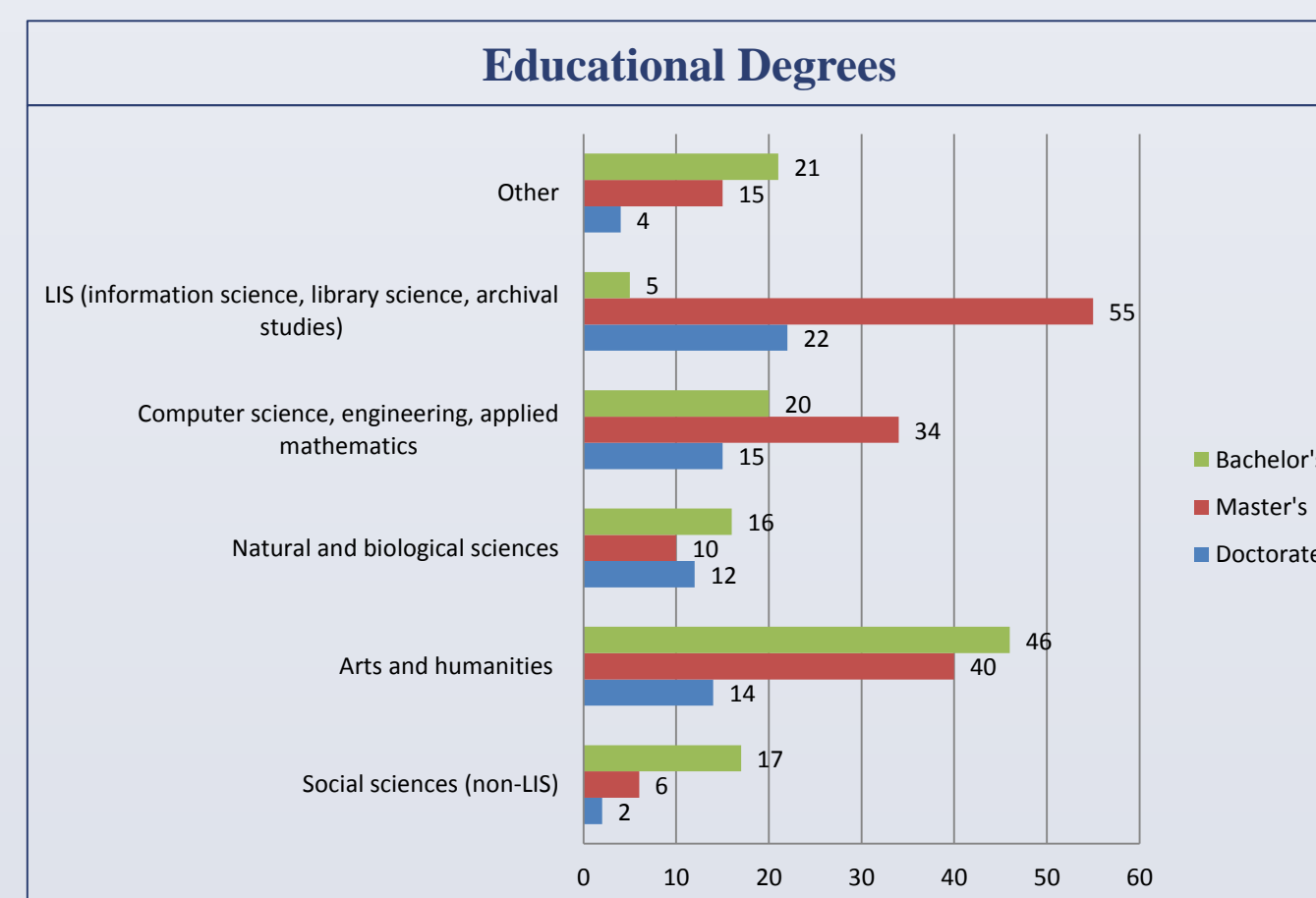- 53% of respondents reported that they currently had students work with them

Terms	% (freq) (N=178)
Director, Executive Director, President, Head*	24.7 (44)
Research	23.6 (42)
Professor (all levels)	23.6 (42)
Digital	20.8 (37)
Archiv* (archivist, archives, archival)	10.1 (18)
Data	8.4 (15)
Curat* (curator, curation, curatorial)	7.3 (13)
Lecturer	6.2 (11)
Other	5.6 (10)

Results

Student participation:
- Only 11% of respondents (22 of 192) were students when they produced the item in question.
- The majority of those who contributed when they were students were doctoral students in schools of information, informatics, or computer science.

Education:
- 81.3% of the 171 respondents had earned master's degrees and 13.5% had earned two master's degrees.
- 42.8% had earned doctoral degrees in a range of fields, most commonly in Library and Information Science-related disciplines (28.6% or 22 of the 77 respondents with PhDs).
- 36.4% of the respondents' undergraduate degrees were in the arts and humanities and only 3.8% in Library Science, Information Science, or LIS.

Educational Degrees

Legend: Bachelor's, Master's, Doctorate

- Other: 21, 15, 4
- LIS (information science, library science, archival studies): 5, 55, 22
- Computer science, engineering, applied mathematics: 20, 34, 15
- Natural and biological sciences: 16, 10, 12
- Arts and humanities: 46, 40, 14
- Social sciences (non-LIS): 17, 6, 2

Career trajectories:
- Respondents also indicated their intended post-degree positions (each respondent chose up to three desired positions)
- The majority of the current students (eight of fourteen) intended to seek faculty positions, but three of the fourteen respondents (21%) would consider employment at a private corporation

Job titles:
- Senior roles (such as Executive Director or Head of Research) and academic faculty positions were the most frequently reported
- The terms "digital," "data," and "curation" appeared less frequently in respondents' job titles
- 42.8% of respondents have PhDs, but many occupy administrative as opposed to purely academic positions.

Results

Professional associations and organizations:
- Respondents listed up to three current memberships
- Respondents reported membership in more than 140 different organizations
- 33.9% belonged to one or more of the three most frequently mentioned organizations: the Association of Computing Machinery (ACM), the Society of American Archivists (SAA), and the American Society for Information Science and Technology (ASIST).
- But none of the five most frequently reported associations is geared specifically toward digital curation research or education.

Association Name	% (freq) (n=124)
Association of Computing Machinery (ACM)	18.5 (23)
Society of American Archivists (SAA)	16.1 (20)
American Society for Information Science & Technology (ASIST)	14.5 (18)
American Library Association (ALA)	8.3 (15)
Institute of Electrical and Electronics Engineers (IEEE)	10.5 (13)
Association for Library and Information Science Education (ALISE)	7.3 (9)
International Association for Social Science Information Services and Technology (IASSIST)	7.3 (9)
American Geophysical Union (AGU)	4.0 (5)
Ecological Society of America (ESA)	4.0 (5)
American Association for the Advancement of Science (AAAS)	3.2 (4)

Conference and workshop attendance:
- Respondents listed the three professional events (workshops, conference or symposia) that they had attended most recently
- Respondents also listed the conferences (up to three) they had attended most regularly
- iPRES and IDCC were two of the most frequently cited conferences, perhaps as a result of our sampling technique (selecting respondents who had recently contributed to venues that included iPRES and IDCC).
- The Annual Meeting of the Society of American Archivists (SAA) – a venue that we did not include in our sampling frame – was cited as frequently as IDCC.

Journals most frequently read:
- Respondents listed up to three journals or other professional publications (in rank order) that they most often read
- The *International Journal of Digital Curation* (IJDC) was the most frequently cited journal, (contributions to the *IJDC* constituted 128 of the 686 total contributions.
- Archival journals were listed frequently.
- But there was no single journal that all survey respondents read: a wide range of journals publish peer-reviewed digital curation articles

Journal	% (freq) (N = 144)
D-Lib Magazine	22.9 (33)
International Journal of Digital Curation	22.9 (33)
Journal of the American Society for Information Science and Technology (JASIST)	13.9 (20)
American Archivist	13.2 (19)
Communications of the ACM	9.0 (13)
Ariadne	8.3 (12)
Archival Science	7.6 (11)
Archivaria	6.9 (10)
Science	5.6 (8)
International Journal on Digital Libraries (IJDL)	4.2 (6)

Discussion

- The willingness of student respondents to pursue faculty or private sector positions suggests possibilities for private and non-profit partnerships
- Respondents showed great diversity in their educational backgrounds and in their skill sets
- There is apparently no set educational or career trajectory for digital curation professionals
- Digital curation education efforts may profitably be extended "upstream"
- Senior-level personnel and faculty members should make concerted efforts to mentor students
- The predominant venues (conferences, journals, and associations) in which digital curation professionals participate relate to the information professions (libraries, archives, and information science)
- The International Digital Curation Conference, the Digital Curation Centre, and the *International Journal of Digital Curation* continue to provide vital support and resources to digital curation stakeholders

Future research

- What institutions (beyond those elaborated at the beginning of this paper) are embarking upon doctoral-level digital curation education initiatives and how they are going about the process? What lessons have they learned and which stakeholders can those lessons benefit?
- What types of current training and apprenticeship roles and responsibilities in digital curation doctoral education are available? How well are such training and apprenticeship efforts working?
- Can other venues be established to further nurture a digital curation doctoral community? For instance, associations, conferences and workshops, and journals could cater to doctoral students by establishing student roundtables, electronic mailing lists, panels, and the like.
- What are the most appropriate models for funding and resources for doctoral student education in digital curation? Is partnering and pooling resources with other institutions such as state libraries a promising strategy?

Selected references

- Hank, C. (2010). *DigCCurr I: final report 2006-2009* (Institute of Museum and Library Services Award No. RE-05-06-0044-06). Chapel Hill, NC: University of North Carolina at Chapel Hill.
- Lee, C.A. (2009). Curation junction, what's your function? defining what it means to do digital curation in order to teach it. *Proceedings of the 2009 Annual Conference of the Association for Library and Information Science Education (ALISE).*
- Lee, C. A., Tibbo, H., & Schaefer, J. C. (2007a). DigCCurr: Building an international digital curation curriculum & the Carolina Digital Curation Fellowship Program. In *Archiving 2007*, Arlington, VA (pp. 105-109).
- Lee, C.A., Tibbo, H.R., & Schaefer, J.C. (June 2007b). Defining what digital curators do and what they need to know: the DigCCurr project. *Proceedings of the ACM IEEE Joint Conference on Digital Libraries*. Vancouver, British Columbia, Canada.
- Lee, C.A., & Tibbo, H.R. (2011). Where's the archivist in digital curation? exploring the possibilities through a matrix of knowledge and skills. *Archivaria*, 72, 123-68.
- Poole, A.H., Lee, C.A., and Murillo, A.P. (2012). "AERI 2012 digital curation pre-conference." *D-Lib Magazine* Volume 18, Number 9/10.
- Poole, A.H., Lee, C.A., and Murillo, A.P. (2012). "CurateGear: enabling the curation of digital collections." *D-Lib Magazine* Volume 18, Number 11/12.
- Tibbo, H., Hank, C., & Lee, C. A. (2008). Challenges, curricula, and competencies: researcher and practitioner perspectives for informing the development of a digital curation curriculum. In *Archiving 2008: June 24-27, 2008, Bern, Switzerland, Final Program and Proceedings* (pp. 234-238). Springfield, VA: Society for Imaging Science and Technology.
- Tibbo, H.R., Hank, C., Lee, C.A., & Clemens, R. (Eds.), *Proceedings of DigCCurr2009: digital curation: practice, promise, and prospects*, April 3-5, 2009, Chapel Hill, NC: School of Information and Library Science, University of North Carolina at Chapel Hill.