What do Job Postings Indicate about Digital Curation Competencies?

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Professional Evolution

• Advances in management, preservation & dissemination of digital resources
• Many streams of activity (e.g. computer science, archivists, records managers, librarians, data engineers, museum curators, MIS staff)
• Increasing recognition of common challenges & opportunities
• Recent adoption of term “digital curation” – reflects increasing confluence of previously distinct communities
Digital Curation

“The active management and preservation of digital resources...for current and future generations of users.”*

*Digital Curation Centre. “What is Digital Curation?” http://www.dcc.ac.uk/about/what/
Big Question:

What knowledge & competencies do professionals need in order to do digital curation work?
DigCCurr Project

• Funded by Institute for Museum & Library Services (IMLS)

• Developing curricular framework, educational materials & professional field experiences to prepare students to work in emerging arena of digital curation

• Organization & hosting of 2 conferences – second (DigCCurr2009) on April 1-3, 2008 in Chapel Hill

• Funding 5 masters students as Fellows, who work on digital curation initiatives at UNC-CH
They love them so much…

- ITS funding two additional Fellows & Odum Institute funding one additional Fellow this year
- Great sign of benefit to partners -- willing to pay for more!
DigCCurr2

• Also funded by IMLS (4 years), starting this fall
• Focus on:
  – Doctoral-level education & research
  – Summer continuing education workshops – first in June 2009
• Funding for doctoral student Fellows – we’d love to hear about promising candidates for Fall 2009!
Sub-Questions

• What should they learn in the **classroom**?
• What should they learn from **field experiences** while students?
• What should they know before engaging in professional education (**pre-requisite knowledge**)?
Sources of Data

• Ongoing review of literature
• Materials from existing courses & workshops (& participating in several)
• Interviews with expert Advisory Board
• Survey
• Experience in implementing curriculum & structured feedback from students

• Job postings
Matrix of Digital Curation Knowledge & Competencies

• Iteratively developed, based on data sources just identified
• Tool for thinking about, planning for, identifying & organizing curriculum
• Each unit of curriculum can address one or more dimensions
• Helping to address issue of core vs. specialized (optional) educational elements
Elaboration of Digital Curation Functions

• Main focus of matrix development & fundamental to curriculum development
• “Know how” rather than “know that”
• Essential (but quite challenging) for educators to address
• 24 high-level functions & 4 meta-functions, most of which are then composed of dozens of sub-functions
High-Level Functions

- Administration
- Advocacy & Outreach
- Analysis & Characterization of Digital Objects/Packages
- Analysis & Evaluation of Producer Information Environment
- Archival Storage
- Common Services
- Collaboration, Coordination, Contracting with External Actors
- Data Management
- Description, Organization & Intellectual Control
- Destruction & Removal
- Identifying, Locating & Harvesting
- Ingest
- Management
- Preservation Planning & Implementation
- Production
- Purchasing & Managing Licenses
- Reference & User Support
- Selection, Appraisal & Disposition
- Systems engineering & development
- Transfer
- Transformation of Digital Objects/Packages
- Use, Reuse & Adding Value to Accessed Information
- Validation & Quality Control of Digital Objects/Packages
Meta-Level Functions

• Analysis & Documentation of Curation Functions
• Education & Sharing of Expertise or Guidance on Curation Functions
• Evaluation & Audit of Curation Functions
• Research & Development to Support Curation Functions
Curriculum Development at SILS

• Identifying relevant current offerings & major gaps in offerings at SILS
• Developing modules on specific topics – first modules to be released this academic year
• Developing whole new classes
  – Introductory seminar for Fellows
  – Special topics seminar with many guest speakers (source of modules)
  – Understanding Information Technology for Managing Digital Collections (this semester)
  – Future coursework on building preservation environments
Collection & Analysis of Job Postings

• Identified 19 professional mailing lists likely to have relevant postings

• Queries:
  – “digital preservation” OR “digital curation” OR “digital collection” OR “digital archive” OR “digital repository” OR “data curation” OR “institutional repository” AND
  – job OR position OR vacancy

• Actually collected posting from only 9 lists, due to interfaces not supporting batch search/capture
<table>
<thead>
<tr>
<th>Mailing List</th>
<th>Job Posting Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archives &amp; Archivists (up to 2006)</td>
<td>206</td>
</tr>
<tr>
<td>DIGITAL-PRESERVATION</td>
<td>28</td>
</tr>
<tr>
<td>ERECS-L</td>
<td>9</td>
</tr>
<tr>
<td>Idealist.org</td>
<td>20</td>
</tr>
<tr>
<td>JESSE</td>
<td>3</td>
</tr>
<tr>
<td>JISC Repositories Discussion</td>
<td>13</td>
</tr>
<tr>
<td>Monster.com</td>
<td>20</td>
</tr>
<tr>
<td>Oss4lib</td>
<td>2</td>
</tr>
<tr>
<td>RECMGMT-L</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Unique Postings</strong></td>
<td><strong>304</strong></td>
</tr>
</tbody>
</table>
Coding of Job Postings

• Download & inventory by Jacob Kramer-Duffield

• Imported into NVIVO & coded – using matrix as main source of tree nodes (heavy lifting by Amber Cushing)

• Analysis still underway
Initial Results
<table>
<thead>
<tr>
<th>Term appearing in Job Titles</th>
<th>Number of Job Titles including Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>archivist</td>
<td>78</td>
</tr>
<tr>
<td>librarian</td>
<td>44</td>
</tr>
<tr>
<td>manager</td>
<td>33</td>
</tr>
<tr>
<td>assistant</td>
<td>25</td>
</tr>
<tr>
<td>specialist</td>
<td>21</td>
</tr>
<tr>
<td>head</td>
<td>17</td>
</tr>
<tr>
<td>director</td>
<td>16</td>
</tr>
<tr>
<td>curator</td>
<td>10</td>
</tr>
<tr>
<td>coordinator</td>
<td>8</td>
</tr>
<tr>
<td>developer</td>
<td>7</td>
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<tr>
<td>analyst</td>
<td>7</td>
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<td>administrator</td>
<td>4</td>
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<tr>
<td>architect</td>
<td>4</td>
</tr>
<tr>
<td>engineer</td>
<td>3</td>
</tr>
</tbody>
</table>
Exploring Bottom-Up Analysis

- Many of the matrix nodes do appear
- Given large number of coding categories from matrix, running simple statistical tests not very useful
- Need to further investigate patterns (great suggestion from Paul Conway to use software to visualize semantic patterns)
Questions for Discussion

- Are requirements stated in job postings a valid indicator of actual market needs?
- How best to sample for job postings (e.g. where to look, what terms to use)?
- What other data/methods would help us to answer the question of what digital curation professionals need to know?