Preparing the workforce for digital curation: the iSchool perspective

Reflections & Challenges

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Professor Liz Lyon, School of Information Sciences, University of Pittsburgh
• **data engineer** - focus on software development, coding, programming, tools

• **data analyst** – focus on business/scientific analytics and statistics e.g. R, SAS, Excel to support researchers and modellers, business

• **data librarian** – focus on advocacy, research data management / informatics in a university / institute

• **data steward** – focus on long term digital preservation, repositories, archives, data centres

• **data journalist** – focus on telling stories and news

Flavours of data scientist
(Lyon 2012)
Likely degree backgrounds

- **data engineer** - computer science, engineering
- **data analyst** – mathematics, statistics, business studies
- **data librarian** – arts & humanities
- **data steward** – arts & humanities
- **data journalist** – journalism, media studies, communications studies
Flavours of disciplinary/domain (X-) informatics

- Archival informatics
- Bioinformatics
  - Bioimage informatics
- Biodiversity informatics
- Business informatics
- Cheminformatics
- Community informatics
- Computational informatics
- Development informatics
- Disease informatics
- Ecoinformatics
- Education informatics
- Engineering Informatics, an interdisciplinary field
- Environmental informatics
- Evolutionary informatics
- Forest informatics
- Geoinformatics, an interdisciplinary field
- Health informatics
  - Consumer health informatics
  - Imaging informatics
  - Public health informatics
- Hydroinformatics
- Irrigation informatics
- Laboratory informatics
- Legal informatics
- Materials informatics
- Medical informatics
- Music informatics
- Neuroinformatics
- Pervasive Informatics
- Social informatics
- Technical informatics
- Translational research informatics

STEM: strongly represented....
“Very few librarians are likely to have specialist scientific or medical knowledge - if you train as a research scientist or a medic, you probably won’t become a librarian.”
Curation : domain disconnect ?
“…teams are 37.7% more likely than solo authors to insert novel combinations into familiar knowledge domains”.
Teams: multidisciplinary? +/- data curation? informatics?
"If science becomes more multi-disciplinary, should I aim towards multi-disciplinary skills or towards specialisation?"

Curation skills?
Workforce challenges in 2014

1. Who should we attract to the data curation workforce?

2. How best to address data curation and team science?

3. How to balance multi-disciplinary vs domain specialisation skills?