WHO IS THE DATA CURATOR? AN IFLA INVESTIGATION ON RESEARCH AND EDUCATION

Anna Maria Tammaro (IFLA Section Library Theory and Research)

Digital and data lifecycle curation

◦ The notion of lifecycle curation involves not only the content but the people involved with the content throughout its useful lifespan

◦ Data curator are responsible for the active management and enhancement of digital information assets for current and future use

◦ Who is the data curator? IFLA Library Theory and Research Section Project 2015-2016

Methodology

◦ Literature review

◦ Interview to data curator

◦ Job description analysis

◦ Survey of education and training offerings

Research questions

◦ Is digital curation emerging as an area distinct from other fields or disciplines?

◦ Is digital curation emerging as a specialization within the information disciplines?

◦ Is a set of interdisciplinary best practices employed by those who work with digital assets?

Examples of terminology used in Job descriptions

◦ Data curation appears as an additional responsibility in position announcements

for:

◦ Digital Repositories Archivists,

◦ Digital Collection Librarians,

◦ Data Repository Outreach Specialists,

◦ Repository Developers,

◦ Digital Preservation Librarians,

◦ and Science Librarians.
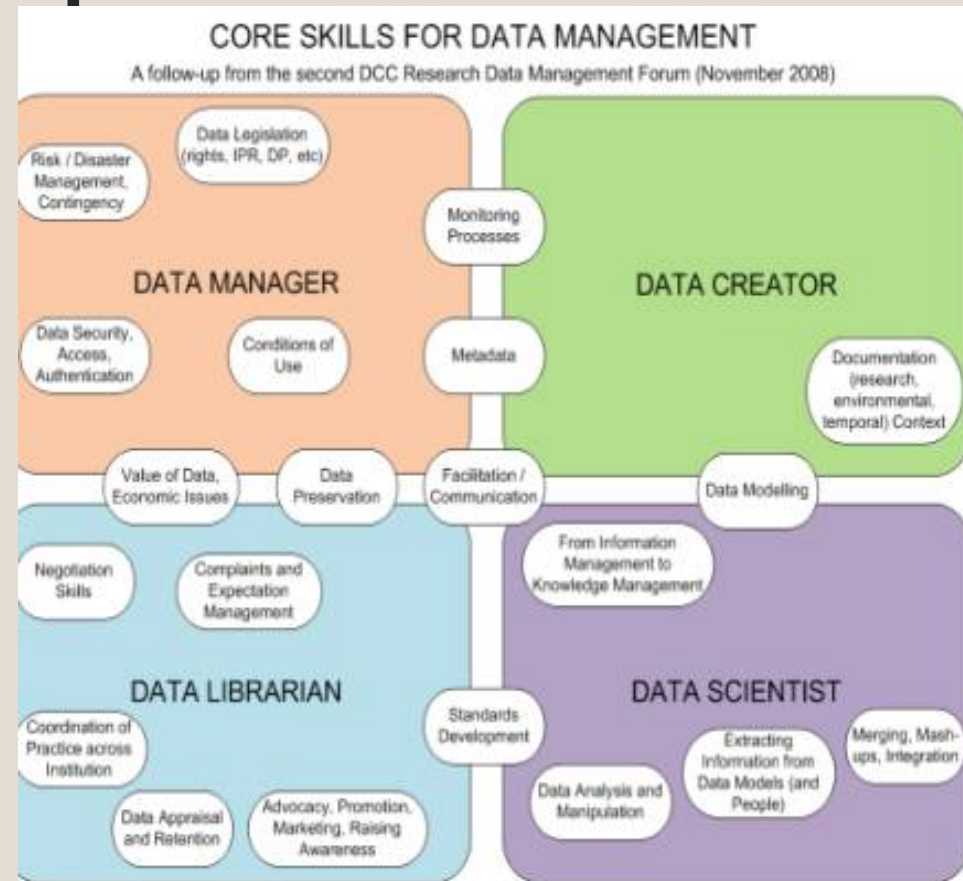
FAIR principles

Research output should be

◦ **F**indable,

◦ **A**ccessible,

◦ **I**nteroperable

◦ and **R**eusable
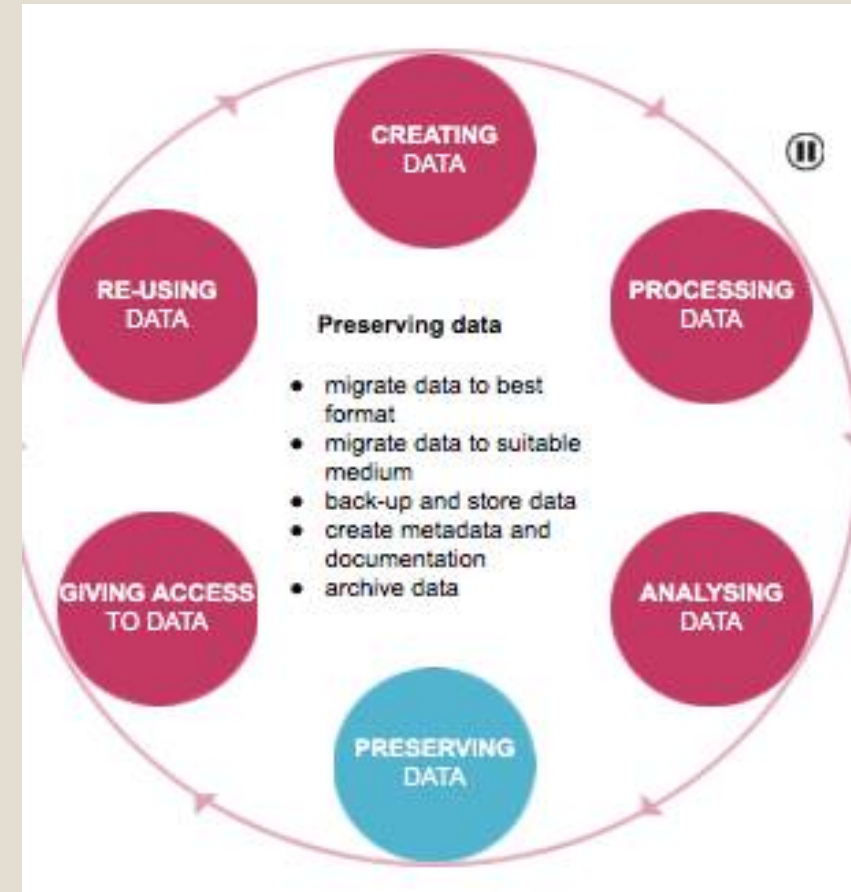
Roles and career path demands

◦ Data authors or creators,

◦ data scientists or specialists,

◦ data managers,

◦ and data librarians or archivists

(Swan and Brown 2008)

National Academy of Science "Future Career Opportunities and Educational Requirements for Digital Curation"

CORE SKILLS FOR DATA MANAGEMENT

A follow-up from the second DCC Research Data Management Forum (November 2008)

DATA MANAGER
- Risk / Disaster Management, Contingency
- Data Legislation (rights, IPR, DP, etc)
- Monitoring Processes
- Data Security, Access, Authentication
- Conditions of Use
- Metadata

DATA CREATOR
- Documentation (research, environmental, temporal) Context

- Value of Data, Economic Issues
- Data Preservation
- Facilitation / Communication
- Data Modelling

DATA LIBRARIAN
- Negotiation Skills
- Complaints and Expectation Management
- Coordination of Practice across Institution
- Standards Development
- Data Appraisal and Retention
- Advocacy, Promotion, Marketing, Raising Awareness

DATA SCIENTIST
- From Information Management to Knowledge Management
- Extracting Information from Data Models (and People)
- Merging, Mash-ups, Integration
- Data Analysis and Manipulation

Core competencies

◦ Primary
  ◦ Data curation and management
◦ Range of other functions
  ◦ Policy development
  ◦ Copyright oversight
  ◦ Promotion of open access
  ◦ Training
  ◦ Data analysis using quantitative and qualitative software
  ◦ Information visualization
  ◦ Repository services
◦ Competencies
  ◦ Expertise in statistical software
  ◦ Knowledge of metadata standards
  ◦ Familiarity with open access repository software, such as DSpace or Fedora

The competencies gap

○ Digital curation has emerged rapidly within professional and research practice

   ○ best practices and procedures for the lifecycle management of data

○ More rapidly than higher education curricula or professional training

   ○ educational and skill requirements for professionals in digital curation continues to be defined (Kim, Warga, & Moen, 2013; Osswald, 2013)

○ Although there is a visible growth in educational programs, it is still unclear how the education for this knowledge and skills set fits within the educational landscape

Core curriculum models for higher education

Comprehensive curriculum frameworks

◦ Digital Curator Vocational Education Europe project (DigCurV)

◦ Digital Curation Curriculum Project (DigCCurr)

Within archival studies, and library and information science (LIS) programs expanded to understanding digital collections, services and technology applications:

◦ Gaps: data management and curation (Davidson, Corrall, Coulboume, and Rauber 2012)

◦ Gaps: understanding institutional repository software; project planning, defining collections, metadata and standards, training contributors and users (Allard, Mack and Feltner-Reichert 2005)

Graduate education in Italy

"**microinsertion**"

◦ International Master Digital Library Learning DILL in English, by distance, is offered jointly by the Universities of Tallinn and Parma

◦ Master in Education, Management and Preservation of Digital Archives (FGCAD Master in formazione, gestione e conservazione di archivi digitali in ambito pubblico e privato) is offered jointly by the University of Macerata and the University of Padua.

◦ A recently established degree granting program at the University of Turin focuses on preparing information professionals for careers in digital curation, an area they approach as encompassing multiple roles and shared responsibilities

Continuing professional development

◦ Zenodo Collection: DCC RDM training materials

   ◦ https://zenodo.org/collection/user-dcc-rdm-training-materials

◦ RDM Educational efforts

   ◦ https://docs.google.com/spreadsheets/d/10RTW-nZk0x_mpQw2VAlttcc656MV9EeCaDe2lM4umb4/edit#gid=0

◦ Data Curation Curriculum database

   ◦ http://cirss.lis.illinois.edu/DCCourseScan1/

Lack of recognition/accreditation

◦ A 2012 Italian study found that although the repository manager is the most important role in Italian institutional repositories, the positions were often part-time, highlighting a lack of professional recognition

(Cassella & Morando, 2012).

◦ In a 2012 German survey of researchers from eleven disciplines the study's investigators found that there was no clear role defined for library involvement in curation and preservation o f research data

Osswald and Strathmann (2012)

Educated in subject? or Information technology? or LIS?

◦ UK 18 of 20 initiatives lead by

libraries (2 from IT)

　◦ RLUK Reskilling for research

　◦ RDLS Research Information and Digital

　　Literacies

◦ LIBER 10 recommendations for

libraries to get started with RDM

◦ The responsibilities of data curation librarians in the academic library setting often involve interdisciplinary work and building bridges between a library and campus departments or specialized centers.

Professional communities (not Associations)

◦ International Digital Curation Conference,

◦ Committee on Data for Science and Technology

◦ World Data System conferences,

◦ Research Data Alliance Plenary meetings

◦ ASIS&T Research Data Access and Preservation Summit,

◦ iPRES

◦ IFLA SIG Big Data , Section LTR

Conclusions

Digital curation specialists will need

◦ some knowledge of the disciplines and domains in which the digital information they curate will be used.

◦ some study and command of the knowledge and skills of digital curation

◦ instruction in technology, statistics, and computer programming

Minicourses, microinsertion of material, and postdocs provide some training in digital curation to those studying other fields