Do we still search for the identity of data literacy?

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The beginning of the story

High bandwidth networks =

Capacity to store massive amounts of data →

The evolution

- A shift away from a research culture, where data is viewed as a private preserve (Pryor, Jones, & Whyte, 2013)

↔ Researchers' varied willingness to share their data

→The push from funding bodies

= Wordwide challenge, mixed national readiness (different from Open access to publications)

New views on data

With its perceived importance,
the views on data are changing.

Is it situated beneath
information? →

A new definition of data

- Any information in binary digital form (Digital Curation Centre).

Almost an oxymoron =
contradictory terms in conjunction,
but a viable defintion

Research data

- More specific than ‘data’

  = ‘data collected as part of a research project’

The sequence of supporting researchers, etc.

1. Data literacy instruction,
2. Research Data Management (RDM),
3. Data curation,
4. Data preservation (Thomas & Urban, 2018).

Definitions of Data Literacy

- Competences needed for any work with research data (Schneider, 2013).
- Enables individuals to access,
- interpret,
- critically assess,
- manage,
- handle
- and ethically use data (Calzada Prado & Marzal, 2013).

- A specific skill set and knowledge base which
- empowers individuals
- to transform data into information
- and into actionable knowledge
- by enabling them to access,
- interpret,
- critically assess,
- manage,
- and ethically use data (Koltay, 2015).

Data literate persons

- Know how to select and synthesize data and combine it with other information sources and prior knowledge.
- Recognize source data value, types and formats;
- Determine when data is needed;
- Access data sources appropriate to the information needed (Calzada Prado & Marzal, 2013).

Data Literacy

- Focuses on data quality.

Involves elements of

- Statistical literacy,
- Numeracy,
- Data governance principles,
- Data science,
- and Open Data.

Data Literacy is relevant

- in the context of providing data services (for librarians and other providers, technical staff, etc.)
- in the context of education and training (of researchers, students, etc.)

Data literacy education’s main targets

- Students,
- Librarians and teaching staff members

(Educating the latter is a delicate issue.)

Not only for data librarians

- There is a clear need for teaching data literacy to *academic librarians* (Koltay, 2017).
- Being data literate is a need *for all future academic librarians* (Morrison & Weech, 2018).

The information literacy connection

- Data literacy is cognate to information literacy.
- Is compatible with the information literacy focus of academic librarianship.

Information literacy is overarching

- Information literacy is related not only to print, but **data**, images, etc. (CILIP, 2018).

cilip

Chartered Institute of Library and Information Professionals

Data literacy is more focused than IL

- When speakig about research data, data literacy is seen narrower than information literacy.

Unified terminology is needed

- Critical data literacy,
- Data information literacy,
- Pedagogical data literacy,
- Research data literacy.

= Data literacy

Fundamental topics

- The concept of data,
- Critical thinking,
- Ethical issues,
- Data quality,
- Data citation,
- Data visualization,
- Metadata,
- Research Data Management (RDM) (Ridsdale et al., 2015).

Themes and perspectives, related to RDM

- Data management and curation in/for research,
- Research skill for students and professionals,
- Data protection and privacy in personal data management,
- Data science.

Perspectives beyond RDM

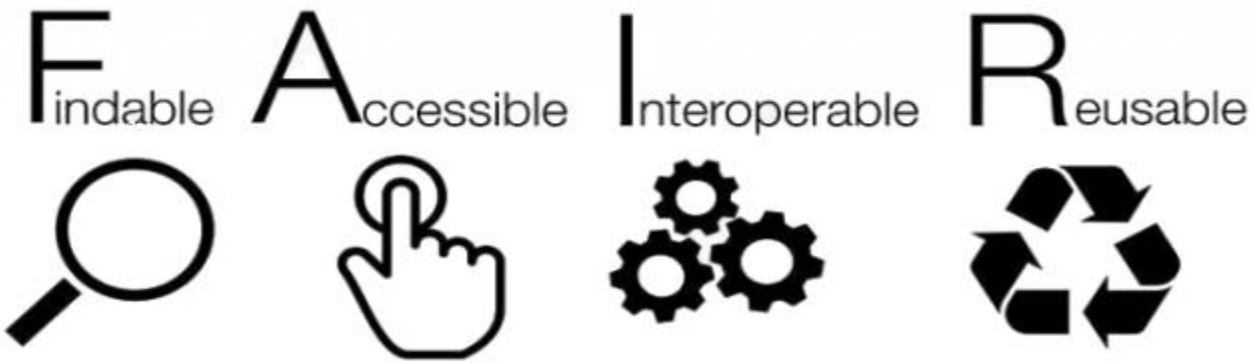
- Civil society,
- Open government,
- Community informatics,
- Journalism,
- Business,
- Teacher education.

Non-RDM themes

- Everyday problem-solving,
- Community engagement and citizen empowerment,
- Data-based/data-driven decision making in schools,
- Education for of business and learning analytics (Corrall, 2019).

To be mentioned (1)

Make research data FAIR =



To be mentioned (2)

- The Research Data Alliance (RDA) is an international organization that aims to reduce barriers to the openness of research data.

Be aware

- Data literacy is not exclusively about big data,
- but small data is indisputably important and useful.
- There are situations, when there is no data related to a given research by various reasons (Borgman, 2015).
- Count with the existence of grey data, which is useful data, produced by universities, but not peer reviewed (Borgman, 2018).

How to teach data literacy?

- Include mechanics related to research data;
- Focus on practice;
- Use real world data, when appropriate (Ridsdale et al., 2015).

One size fits all?

- Changing circumstances →
- Constant updating of concepts and competencies is needed.

= There is no single literacy that is appropriate for everyone, every time.

Conclusion

- We are still searching for the identity of data literacy,
- but we have much more certainty than ever before,
- because in the data-intensive world we can clearly see an increase in the attention towards data literacy.
- Therefore a number of academic librarians experience a move towards becoming data professionals.

Literature

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