

# What are the ideas and goals of the IO?

- Establish a **common understanding** of what exactly we mean when we talk about data literacy within DaLiCo
- Provide an **overview of data literacy activities** (at the partner institutions), physical and virtual infrastructure (like labs, digital libraries), resources (e-learning/hybrid modules or courses), tools, in order to make these resources discoverable and accessible
- **Link existing competencies/personal expertise, resources, projects and possible scenarios as well as good practice examples**
- **Uncover existing gaps between needs and offers** of data literacy education, bridging the gaps between data cultures and provide context
- Highlight and **make visible the importance of data literacy education** at the partner institutions by creating points of reference

## How was the IO implemented?

Based on the appraisal of research reviews in academic journals and theses, programmatic publications on data literacy education, lighthouse projects, like nationally or internationally awarded data literacy projects, we **traced the current definitions** of the concept of data literacy in order to **shed light onto divergent understandings of the term data literacy**.

**Collecting pertinent** vocabulary from key documents, existing vocabularies, curricula ...

**Collecting pertinent resources** in the field of data literacy education in Zotero and tag with keywords from Glossary and assign to **DaLiCo Dimensions** in order to make them searchable and browsable

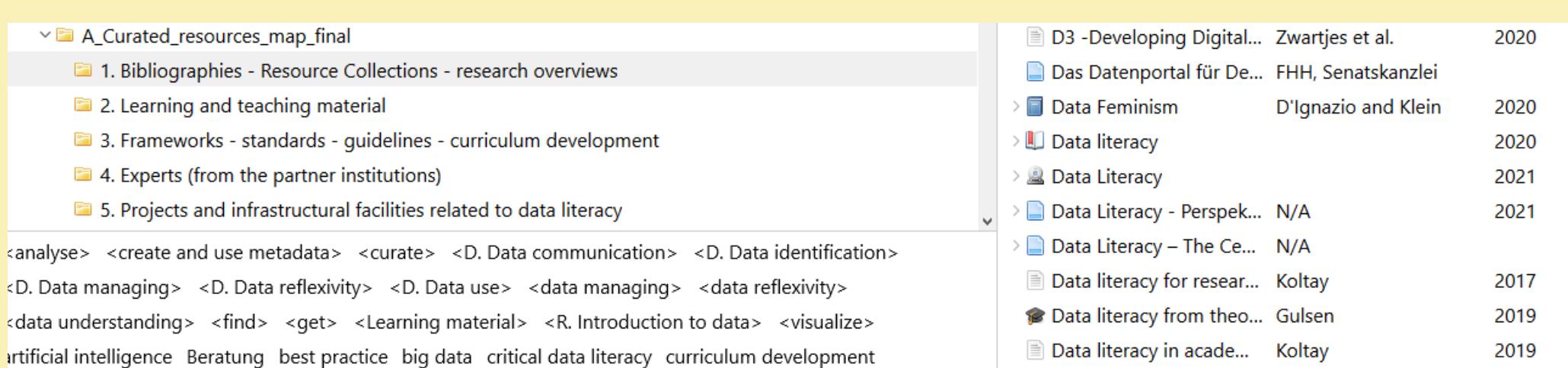


Fig. Screenshot of resource collection in Zotero

**Explorative institutional analysis** of the current state of data literacy education in order to **find access to different domains**. This was done by analysing personal competence levels of learners (students) as well as the currently addressed competence level in teaching expressed within selected curricula of the University of Applied Sciences (HAW Hamburg).



**MAPPING DATA LITERACIES**

**IO 1**

**ULRIKE SPREE, HAW Hamburg**

## What are the results of the IO?

→ **Paper:** Conceptual clarification: data literacy is a multifaceted concept and serves as a kind of boundary object (Gläser/Spree 2022)

→ **Concept and prototype of DaLiCo Glossary:** Collate and bundle key concepts and competencies of data literacy education in an online glossary. Mapping of existing frames. Realised as a faceted thesaurus with the Open Source tool *tematres*

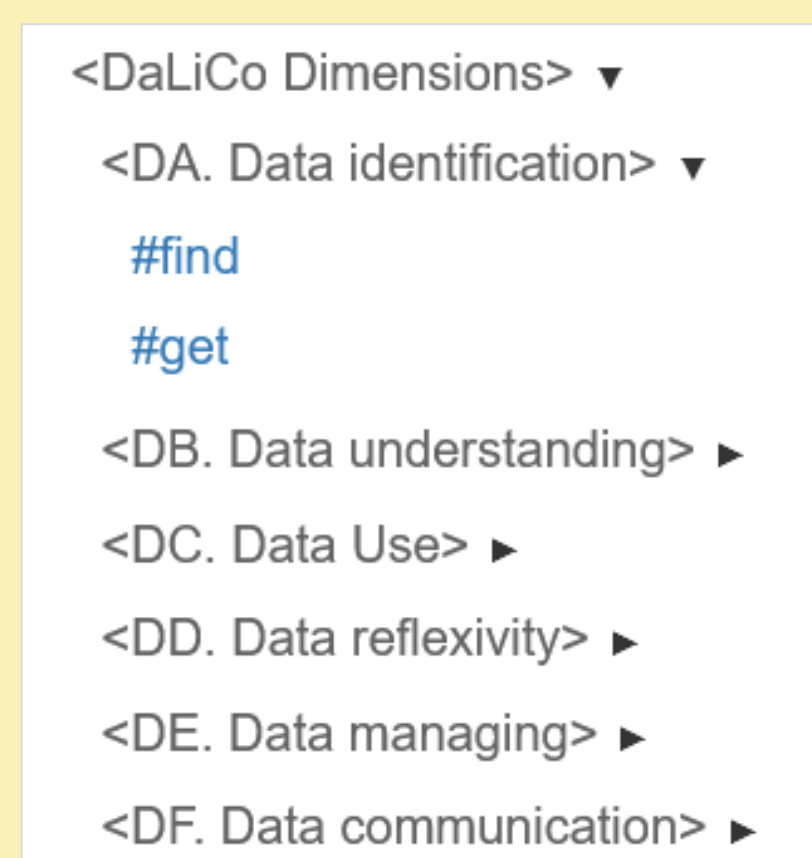


Fig. DaLiCo Glossary: <https://www2.bui.haw-hamburg.de/tematres/vocab/index.php>

→ **Curated collection of resources** on data literacy education tagged with terms from the Glossary and browsable via the DaLiCo Frame (in Zotero)

→ Using Ridsdale matrix to **inspire learner's reflection/visualization of their own handling of data**

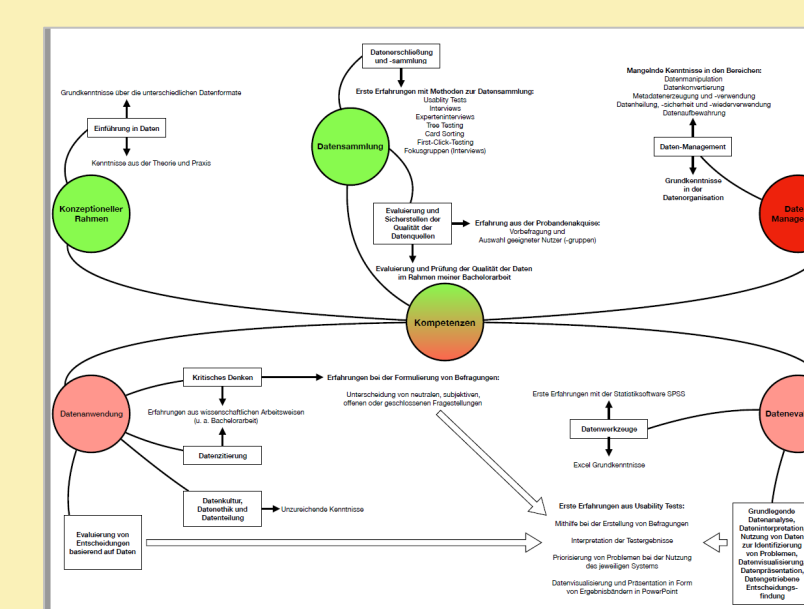


Fig. Personal Data Literacy Map of a MA student with experiences in Usability Engineering

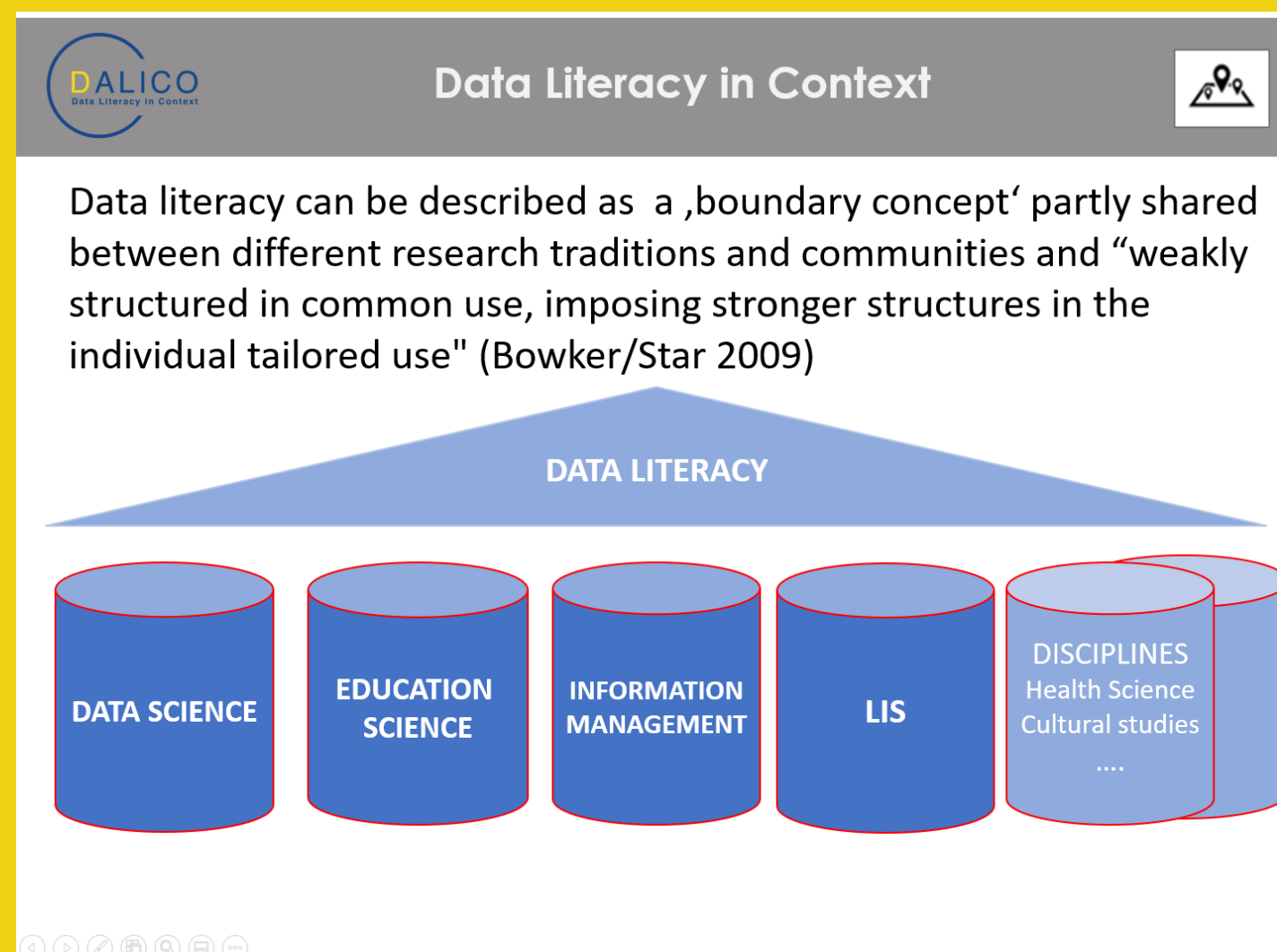
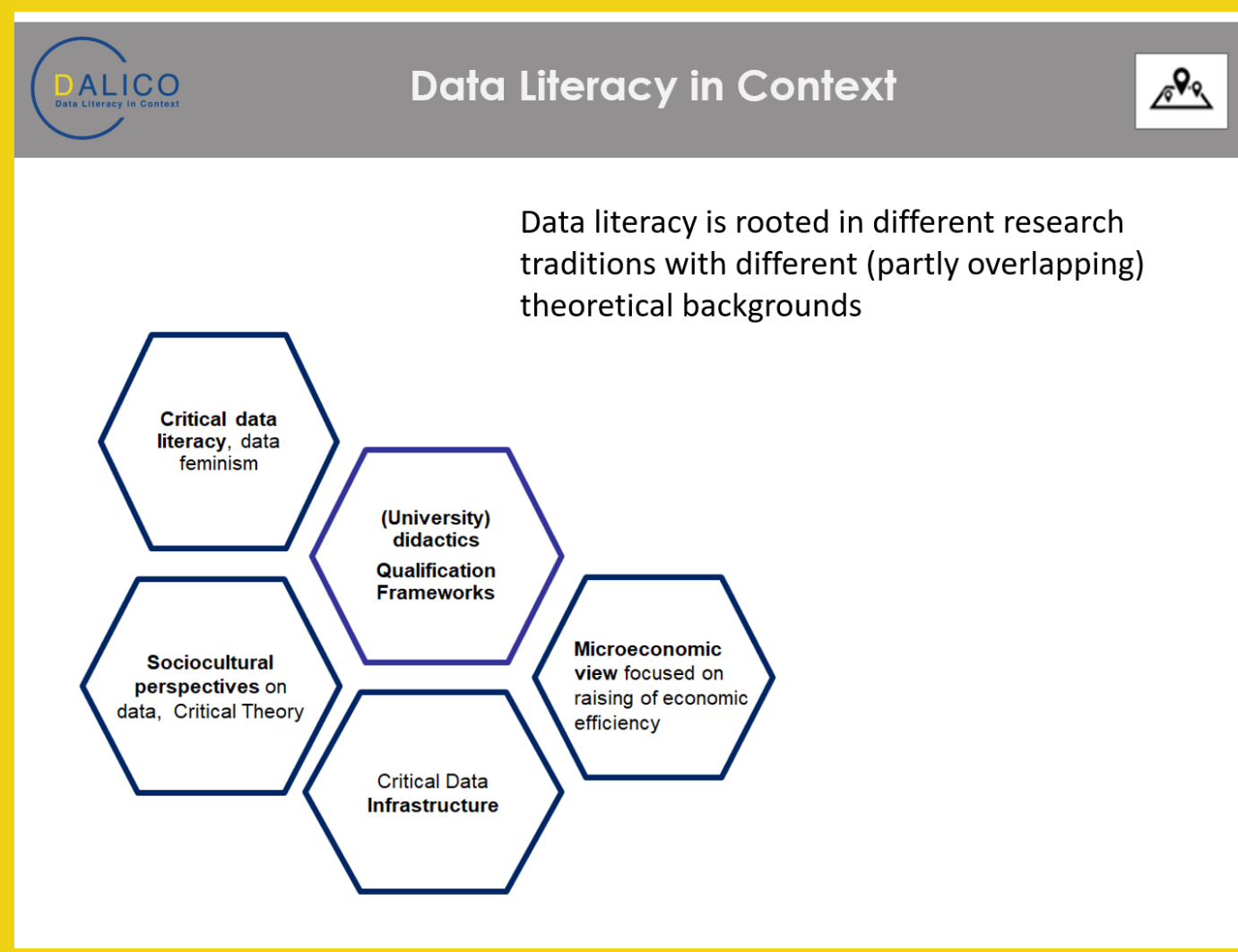
## What are ideas for future developments?

- Export resource collection to web portal
- Integrate the DaLiCo Glossary into Train-the-trainer-concept and Data Literacy Learning Space
- Use the DaLiCo Glossary to automatically scrape content and update the list of resources

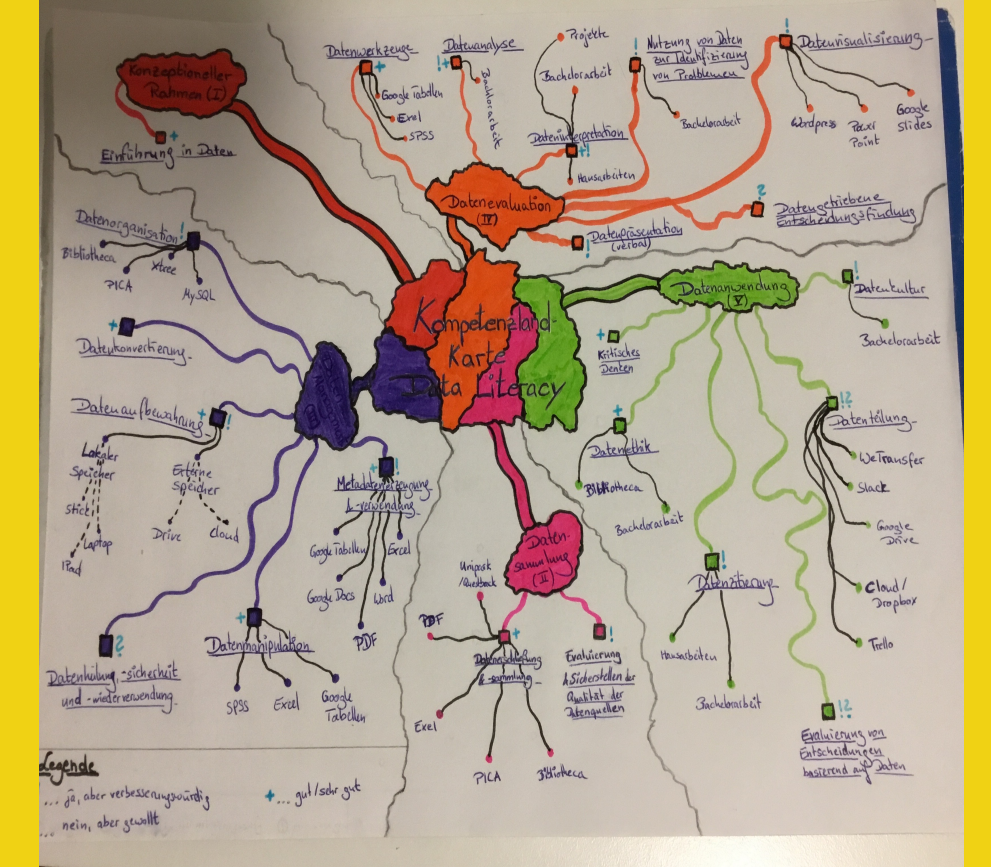
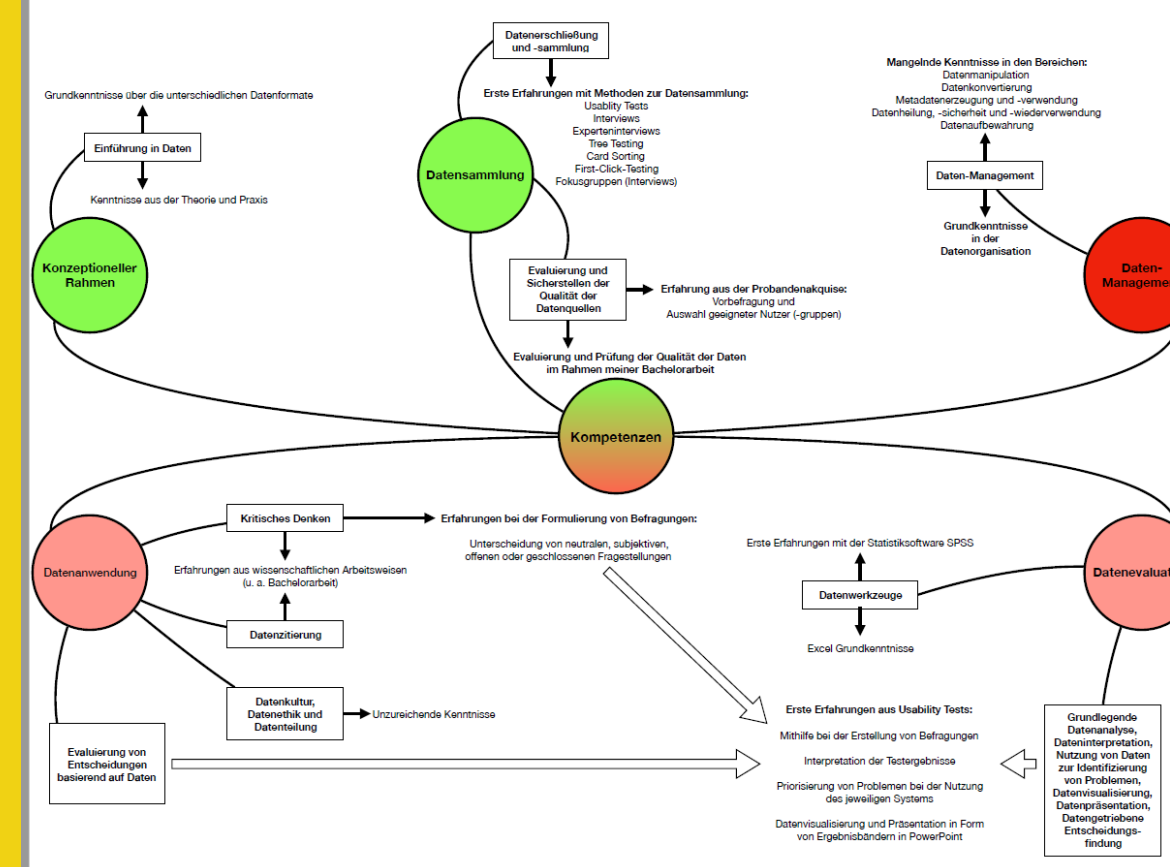
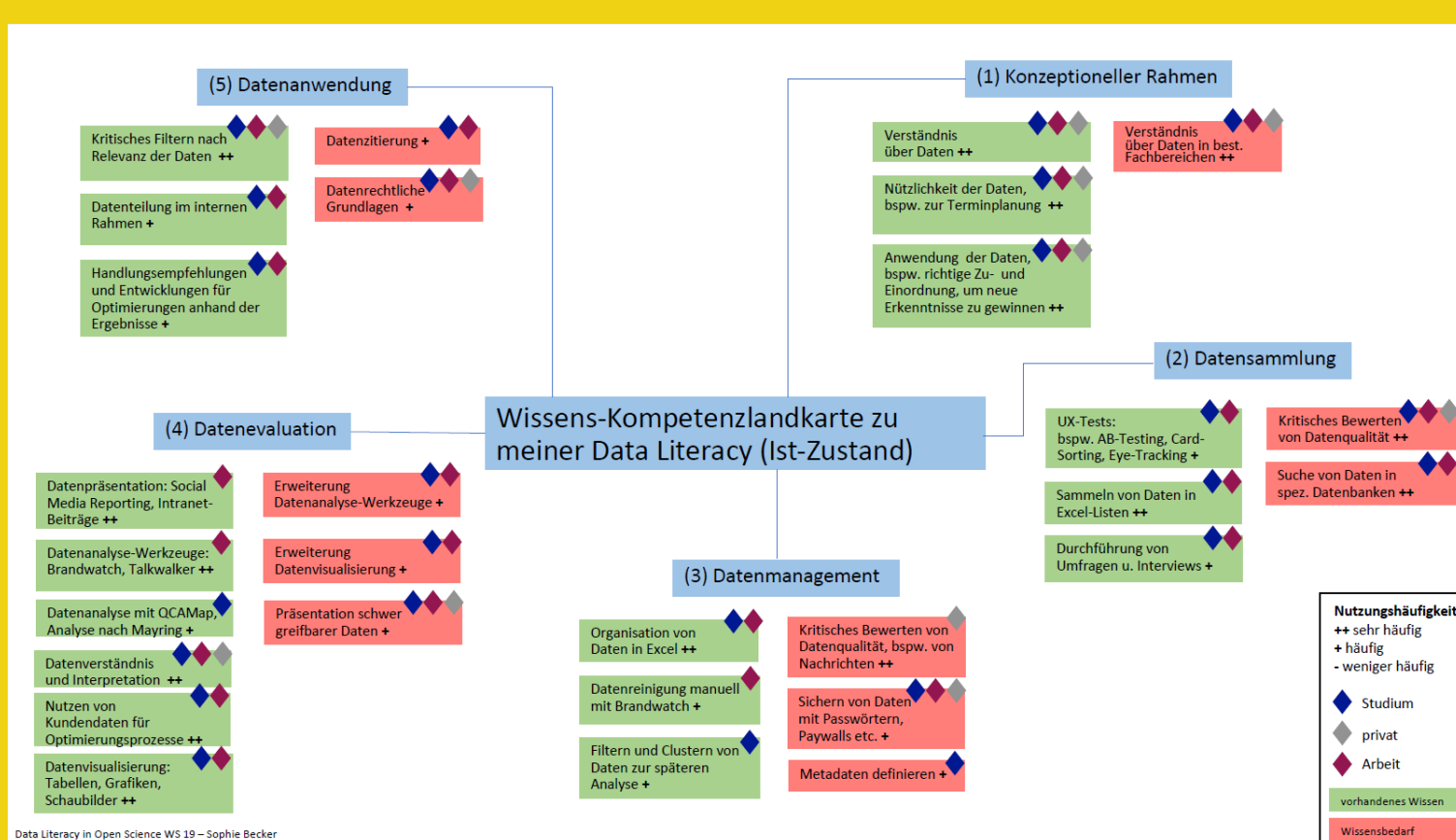


# Appendix

## Researching the use of the concept data literacy



## Using the data literacies competencies matrix (Ridsdale) to inspire learner's to visualise their personal data literacy



## Data Literacy Glossary

data literacy

Scope note

Data literacy in this glossary describes the understanding of data literacy in an academic and sciences context with a focus on generic competencies. In this context data literacy refers to knowledge and skills involved in collecting, processing, managing, evaluating, and using data for scientific inquiry. It focusses on the functional ability in data collection, processing, management, evaluation, and use. This coincides with the academic practice of producing, and using digital datasets during scientific research. Data literacy serves as a 'boundary concept' (Bowker/Star) partly shared between different research traditions and communities, weakly structured in common use however imposing stronger structures in the individual tailored use of a community of practice. Taking up a term coined by Pedersen and Caviglia (2019) data literacy is described as a compound competence ascribed to a community of practice rather than an individual consisting of some level of competence in metadata-management, statistics, data visualization and more generic competencies in problem-solving and reflexivity using different data. As such data literacy is closely related to data science but differs in the level of competence and the focus. While data science is a specific domain for trained specialists focussed on data analysis, data literacy is the set of competencies and apt to bridge between communities of practice and provide interfaces. This understanding calls for interdisciplinary collaboration that integrates different competencies and levels of skill. (DaLiCo 2022).

Definition note

Data Literacy is the cluster of all efficient behaviours and attitudes for the effective execution of all process steps for creating value or making decisions from data. Source: Schüller, K. (2020\_07). *Future Skills: A Framework for Data Literacy: Competence Framework and Research Report*. Hochschulforum Digitalisierung. Online: <http://doi.org/10.5281/zenodo.3946067>

"Data Literacy is the ability to collect, manage, evaluate, and apply data; in a critical manner." Source: Ridsdale, C., Rothwell, J., Smit, M., Ali-Hassan, H., Bliemel, M., Irvine, D., ... & Wuetherick, B. (2015). *Strategies and best practices for data literacy education: Knowledge synthesis report*. Online: <https://dalspace.library.dal.ca/bitstream/handle/10222/64578/Strategies%20and%20Best%20Practices%20for%20Data%20Literacy%20Education.pdf>

Non-preferred terms

- [UFHM](#) < adal-institut
- [UFES](#) < alfabetización de datos
- [UFEM](#) < datagelettertheid
- [UFDE](#) < Datenkompetenz

Broader Terms

- [BTG1](#) literacy

More specific terms

- [NT3](#) NTG < critical data literacy

Related terms

- [RT](#) < data information literacy
- [RT](#) < digital literacy
- [RT](#) < information literacy
- [RT](#) < statistical literacy
- [RTRF](#) < RA1. Introduction to data

Eric Thesaurus Data Analysis

ExactMatch: <https://www.wikidata.org/wiki/Q17067559>

Demo: <https://www2.bui.haw-hamburg.de/tematres/vocab/index.php?tema=2&/data-literacy>

Scope note: DaLiCo use of term

Divergent definitions

English synonyms

Translation in DaLiCo languages:  
Dutch, German, Hungarian, Spain

Broader terms

Narrower terms

Related terms:  
Reference to concept and  
assigned to frame term

Mapping to other vocabularies

### Publications:

Gläser, C., Spree, U. (2022). Finding Access Points for Data Literacy: The Example of the ERASMUS+ Project DaLiCo (Data Literacy in Context). In: *Kurbanoğlu, S., Špiranec, S., Ünal, Y., Boustany, J., Kos, D. (eds) Information Literacy in a Post-Truth Era. ECIL 2021. Communications in Computer and Information Science*, vol 1533. Springer, Cham, p. 109-121