



IO1 DATA LITERACY KNOWLEDGE MAP

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ABSTRACT

This result description introduces the Data Literacy Knowledge Map as format/method for self-assessment and self-reflection on data literacy competencies. With the Data Literacy Knowledge Map, we apply methods of structuring and visualising a person's information horizon as used in information behaviour research to the exploration of one's own data literacy. This method can be used in the context of teaching, self-paced-learning, training or train the trainer courses.

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Introduction

This result description introduces the Data Literacy Knowledge Map as format/method for self assessment and self reflection on data literacy competencies. With the Data Literacy Knowledge Map, we apply methods of structuring and visualising a person's information horizon as used in information behaviour research (Sonnenwald 2005; Stewart McCafferty, A., & Beaudry, J. (2018)) to the exploration of one's own data literacy. This method can be used in the context of teaching, self-paced-learning, training or train the trainer courses.

The Data Literacy Knowledge Map is apt to conveying a broad understanding of data literacy and interdisciplinary view on data literacy, as the Ridsdale definition “Data Literacy is the ability to collect, manage, evaluate, and apply data; in a critical manner” (Ridsdale et al. 2015) is taken as a starting point.

The format uses the method of knowledge maps to structure and visualize the personal knowledge and experiences of students / learners / participants in the context of data literacy.

Development

The Data Literacy Knowledge Map exercise was used for research in IO1 to capture and analyse students’ experiences and prior knowledge in the field of data literacy in order to identify needs and requirements [XXX IO1 report part 2].

The Data Literacy Knowledge Map was first practiced in a course as part of the master study program at the Department Information at HAW Hamburg in winter term 2020.

Later on it was applied and developed in other classes 2021 and practiced at the Summer School 2022.

Structure, Features and Use

The teaching experiences from DaLiCo project events proved that the method can be used as an entry-level exercise integrated in teaching and training events.

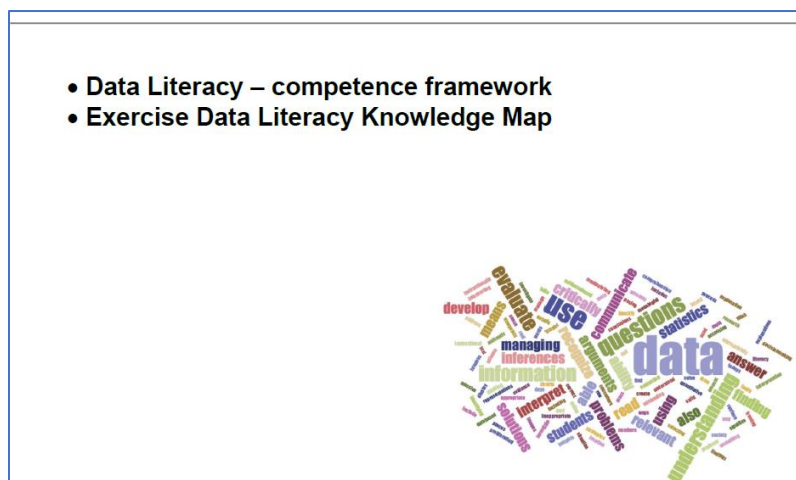

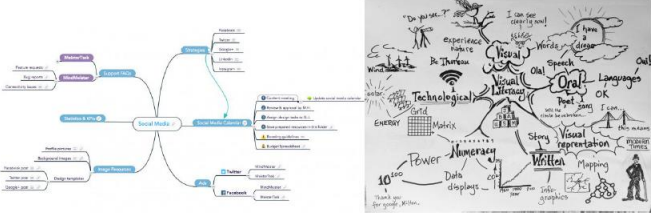



Fig. 1: Presentation for introduction the data literacy knowledge map

The contents are prepared exemplarily in the form of an exercise, which offers the following elements:

Topics	exemplary contents
<p>Introduction to broad and generic understanding of data literacy</p>	<p>Definition Data Literacy</p> <p>Data Literacy is the ability to collect, manage, evaluate, and apply data; in a critical manner (Ridsdale et. Al 2015)</p> 
<p>Introduction into specific format knowledge maps and the benefits and goal for this visual and structured approach</p>	<p>What are Knowledge Maps?</p> <p>Knowledge maps can be understood as graphic indexes of existing individual and organizational knowledge bases.</p>  <p>Heredero 2016 Stewart McCafferty / Beaudry 2018</p>
<p>Introduction to Ridsdale competences and underlying detailed knowledge and tasks</p>	 <p style="text-align: right;">(Guler 2019)</p>

<p>Exercise instruction and legend for the practical implementation of the data literacy knowledge maps</p>	<p>Exercise: Design your individual Data Literacy Knowledge Map:</p> <ul style="list-style-type: none"> Visualize your data-related knowledge. Use the structure of the Ridsdale competence matrix. Note down your existing knowledge by examples, practices. Note questions, unresolved issues, needs Use a consistent visualization that represents the current state. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Current state</th> <th style="text-align: left;">Sign to represent your knowledge</th> </tr> </thead> <tbody> <tr> <td>Existing knowledge</td> <td>+ (plus sign)</td> </tr> <tr> <td>No knowledge or practice</td> <td>- (minus sign)</td> </tr> <tr> <td>needs</td> <td>! (Exclamation mark)</td> </tr> <tr> <td>Questions</td> <td>? (Question mark)</td> </tr> </tbody> </table>	Current state	Sign to represent your knowledge	Existing knowledge	+ (plus sign)	No knowledge or practice	- (minus sign)	needs	! (Exclamation mark)	Questions	? (Question mark)
Current state	Sign to represent your knowledge										
Existing knowledge	+ (plus sign)										
No knowledge or practice	- (minus sign)										
needs	! (Exclamation mark)										
Questions	? (Question mark)										
<p>Examples from students from other courses to inspire for possible results from this exercise.</p>	<p>Examples</p>										

This exercise includes a follow-up session to reflect the students’ / participants’ individual knowledge maps.

If the exercise is integrated into a training the follow-up reflection should also consider the possible learning progress and success.

Based on the experiences with this method at HAW Hamburg the following insights can be shared. It proves to appreciate the student perspective as the following student’s quote shows: “Now I can imagine much better how the different aspects are related to each other”

Teacher gain a quick overview of strengths and weaknesses of the data competence of a group, they get an idea which language students use to describe data literacy competences and insights into the importance of acquiring specific competencies from a student perspective.

Sources

- Gläser, C. (2020). Wer spricht die Sprache der Daten? Data Literacy in der Lehre am Department Information. API Magazin, 1(2). <https://doi.org/10.15460/apimagazin.2020.1.2.48>
- Guler, Gulsen. (2019). Data literacy from theory to reality: How does it look?. https://www.researchgate.net/publication/335620777_Data_literacy_from_theory_to_reality_How_does_it_look
- Herdero, Manel (2016). A Step-By-Step Guide to Building a Knowledge Map. [Online, Zugriff am: 2022-06-10] Retrieved <https://www.mindmeister.com/blog/build-knowledge-map/>
- Ridsdale, C. et al.(2015). Strategies and Best Practices for Data Literacy Education: Knowledge Synthesis Report. Dalhousie University, Canada. [online, Retrieved: 2018-06-10] <http://hdl.handle.net/10222/64578>
- Ridsdale, C.(2018). Strategies and Best Practices for Data Literacy Education. Presentation. [Online, Zugriff am: 2020-06-10] Verfügbar unter: <https://www.stifterverband.org/download/file/fid/604>
- Sonnenwald, D.H. (2005). Information horizons In: K. Fisher, S. Erdelez, & L. McKechnie (Eds). Theories of information behaviour: a researcher's guide. NY: Springer.
- Stewart McCafferty, A., & Beaudry, J. (2018). Mapping, visual literacy, and assessment for learning. In Teaching strategies that create assessment-literate learners (pp. 61-84). [Online, Retrieved: 2022-06-10] Verfügbar unter: <https://dx.doi.org/10.4135/9781506382135.n5>