PsyCuraDat
The development of a user-friendly curation standard for psychological research data

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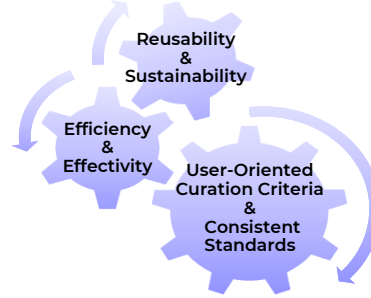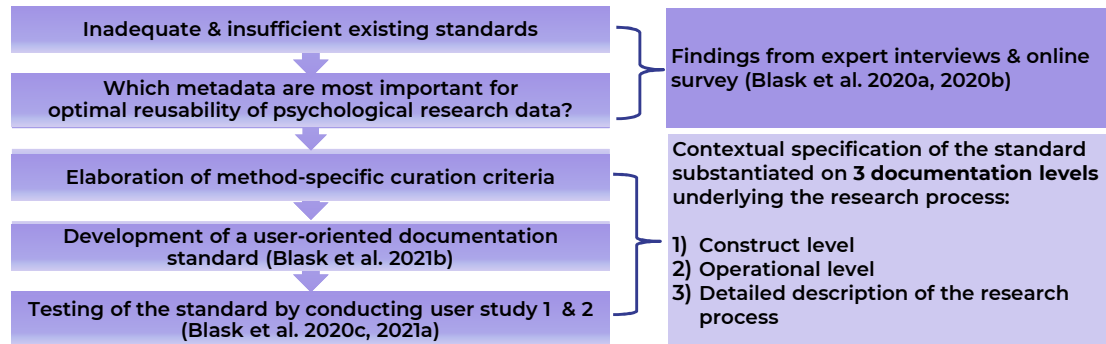**Contact:** PsyCuraDat@leibniz-psychology.org , Universitätsring 15, 54296 Trier

Background & Purpose

- Lack of standards for documenting psychological research data that meet the complex method-specific requirements and are easy for researchers to use; enabling long-term interpretability and reusability of the data

- PsyCuraDat aims to develop a **user-friendly documentation standard based on the definition of method-specific curation criteria**, considering needs of **researchers in their roles as data providers and data users**

Reusability & Sustainability

Efficiency & Effectivity

User-Oriented Curation Criteria & Consistent Standards

Approach & Development

Inadequate & insufficient existing standards

Which metadata are most important for optimal reusability of psychological research data?

Elaboration of method-specific curation criteria

Development of a user-oriented documentation standard (Blask et al. 2021b)

Testing of the standard by conducting user study 1 & 2 (Blask et al. 2020c, 2021a)

Findings from expert interviews & online survey (Blask et al. 2020a, 2020b)

Contextual specification of the standard substantiated on **3 documentation levels** underlying the research process:

1) Construct level
2) Operational level
3) Detailed description of the research process

Results

User study 1

- Need for a more consistent rationale of the proposed documentation levels
- Request for further information about the research design and hypotheses

User study 2

- Positive feedback towards the compatability of the standard into the individual research process
- Half of the researchers stated benefits outweigh the implementation effort
- Working on the task, researchers most strongly relied on: **design description, codebook, graphical procedure presentation & analysis scripts**
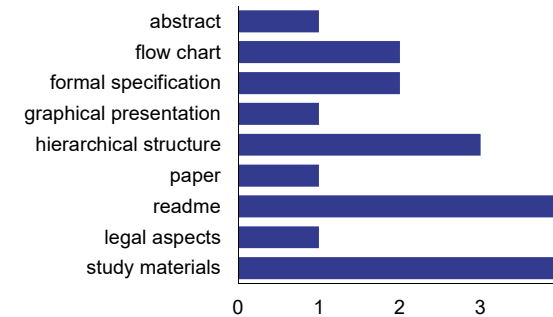

Figure 1. Requested information for an optimal reusability of psychological research data (User Study 1). Analysis units are statements made by researchers.
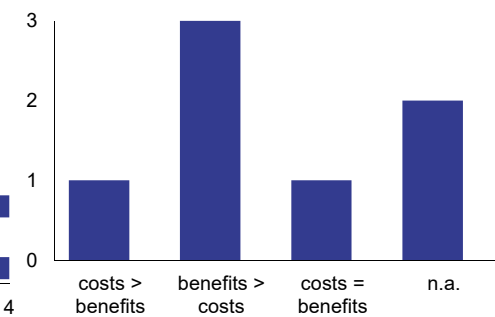

Figure 2. Perceived cost-benefit-ratio with regards to the applicability of the standard (User Study 2). Analysis units are statements made by researchers.

Methods

User study 1 - Metadata for optimal reuse

- Sample: N=6, psychological researchers
- Method: Cognitive interviews (via videocall)
- Design: 2 (dataset: integrated vs. excluded) X 2 (order: correct vs. incorrect)
- Task: Reviewing dataset for correctness or checking suitability for answering new research questions

User study 2 – Refinement of the standard & evaluation of its integrability

- Sample: N=7; psychological researchers & spokespersons of NOSI (Network of Open Science Initiatives)
- Method: Cognitive interviews (via videocall)
- Adaptive design
- Task: Items about procedural knowledge of presented dataset

Discussion & Outlook

What is still missing:

- Stronger integration of the three documentation levels (e.g. by means of a hierarchical structure)
- More accurate definition of the formal specification, which means setting up the standard's information architecture

What is next:

- Working out the standard´s information architecture with a maximum of usability, that is to say an „easy-to-use" and "easy-to-learn" data documentation structure enabling effective & efficient use of research data
- Development and provision of a user manual & guidelines about how to implement the standard in everyday research routine

References

Blask, K., Jalynskij, M., Gerhards, L. (2020a). Metadata in Psychology 1.0: What researchers really need - Study description of the data referring to the expert interviews conducted in the BMBF-funded project PsyCuraDat. ZPID. https://doi.org/10.23668/PSYCHARCHIVES.2750

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