Guidelines for Handling Research Data at Leibniz University Hannover

PREAMBLE

Leibniz University Hannover recognises the importance of research data in the process of scientific research.

These guidelines and the principles outlined in them are based in particular on the Alliance of German Science Organisations' "Principles for the Handling of Research Data"[1] and on the German Research Foundation's (DFG) "Guidelines on the Handling of Research Data".[2]

The reliable and responsible handling of research data is indispensable for the traceability of research and the dissemination of scientific findings. The production, processing, documentation, safeguarding, preservation and sustainable provision of research data should therefore take place in accordance with the recognised standards for each discipline and be based on the FAIR data principles.[3] This guarantees that data and metadata are findable, accessible, interoperable and re-usable. At the same time, legal and ethical requirements, as well as the characteristics of and differences between scientific disciplines, should be observed.

LUH encourages the development of proper recognition for its researchers, who provide access to their high-quality research data in recognised repositories and archives in accordance with the FAIR principles.

DEFINITION OF RESEARCH DATA AT LEIBNIZ UNIVERSITY HANNOVER

Research data refers to all data that is collected and processed during the scientific research process. It forms the basis for scientific research findings. Depending on the scientific discipline, this can include very different types of data. Leibniz University Hannover adopts the DFG's definition of research data, which includes, among others, the following types of data: "measurement data, laboratory results, audiovisual information, texts, survey data, objects from collections, or samples […]. Methodical forms

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1   Alliance of German Science Organisations (2010): Grundsätze zum Umgang mit Forschungsdaten: http://gfzpublic.gfz-potsdam.de/pubman/item/escidoc:2949914:3/component/escidoc:2949913/Grundsaetze_Forschungsdaten_2010.pdf (last accessed 14 June 2024).

2   German Research Foundation(2015): Guidelines on the Handling of Research Data: https://www.dfg.de/download/pdf/foerderung/antragstellung/forschungsdaten/guidelines_research_data.pdf (last accessed 14 June 2024).

3   Information from the FORCE11 group on the FAIR principles: https://www.force11.org/group/fairgroup/fairprinciples (last accessed 14 June 2024).

of testing such as questionnaires, software and simulations may also […] be categorised as research data."[4]

Research-data management ensures the accessibility, re-use, reproducibility and quality of research findings. It includes both the planning and the implementation of a process for the handling of research data. The cross-linking of research data with metadata throughout the research process ensures that data can be easily located and reused. An overview of subject-specific and cross-disciplinary metadata schemas is available in the RDA Metadata Directory.[5]

PRINCIPLES

1. Research project heads and independent researchers are obligated to observe the principles of good scientific practice in order to prevent data loss, prepare research data for sustainable use, and document and archive this data.[6] They are responsible for data management for their research activities and projects and for the integrity of the data collected.

2. Leibniz University Hannover requests that its researchers store, archive and publish research data in subject-specific repositories or in the university's existing institutional infrastructure – provided that this complies with legal and ethical requirements. This ensures that research data is freely accessible to the public, in accordance with the Leibniz University Hannover Open Access Policy.[7, 8] At a minimum, research data should be freely available for scientific use, and to ensure reusability it should be assigned an open licence.[9] The citation should likewise be assigned a persistent identifier, e.g. DOI (digital object identifier). Leibniz University Hannover recommends that its researchers use CC0 or CC BY licences to enable the extensive reuse of their work. This is in accordance with the requirements of the funding bodies as well as the FAIR data principles.

3. Leibniz University Hannover advises its researchers to develop internal institute and/or project guidelines which establish detailed rules for handling research data. Researchers should also systematically draft and implement data management plans within the scope of project planning.

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4   German Research Foundation(2015): Guidelines on the Handling of Research Data , p. 1.
    https://www.dfg.de/download/pdf/foerderung/antragstellung/forschungsdaten/guidelines_research_data.pdf (last accessed 14 June 2024).

5   Metadata directory from the Research Data Alliance: http://rd-alliance.github.io/metadata-directory/standards/ (last accessed 14 June 2024).

6   German Research Foundation: (2019): Guidelines for Safeguarding Good Research Practice. Code of Conduct, p. 22.
    https://zenodo.org/record/3923602/files/code_of_conduct_dfg.pdf (last accessed 14 June 2024).

7   Leibniz University Hannover (2011): Open Access Policy at Leibniz University Hannover. https://www.uni-hannover.de/en/universitaet/profil/leitbild-und-strategien/forschung/open-science/open-access/open-access-policy (last accessed 14 June 2024).

8   TIB Open Access Website: https://www.tib.eu/en/publishing-archiving/open-access (last accessed 14 June 2024).

9   Creative Commons Licences: https://creativecommons.org/ (last accessed 14 June 2024).

4. Leibniz University Hannover recommends that its faculties and research schools integrate the subject-specific handling of research data into their teaching.

SUPPORTING THE IMPLEMENTATION PROCESS

Leibniz University Hannover supports its researchers throughout the entire research-data management process, from project planning to publication, with an advising and training programme. It also provides an institutional data repository.[10] The advisory and training offers also cover issues related to ethical and legal requirements. This service combines the expertise of the TIB – Leibniz Information Centre for Science and Technology, the Leibniz University IT Services, and the Research and Innovation Services department. Up-to-date information about research-data management at Leibniz University Hannover is available on the university's research-data management website: www.fdm.uni-hannover.de/en

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10 LUH Institutional Data Repository: https://data.uni-hannover.de/en/ (last accessed 14 June 2024).