

RESEARCH DATA LIFECYCLE

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RESEARCH DATA AND MANAGEMENT

Research data lifecycle

- Covers the lifespan of research data from the moment of its creation through the reuse of the data;
- Present a structure for organizing the tasks and activities related to the management of data within a project or an organization;

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Research data lifecycle



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Research data lifecycle

- Data tend to go through:
 - ✓ Planning
 - ✓ Creating/collecting
 - ✓ Processing
 - ✓ Analysing
 - ✓ Preserving
 - ✓ Sharing
 - ✓ Re-using

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Research data lifecycle

1. Planning

- Involves:
 - ✓ Planning for data collection;
 - ✓ Locating data sources;
 - ✓ Ethical clearance (i.e., research permit);
 - ✓ Planning for data management throughout the lifecycle;
 - ✓ Formulate research data management plan.

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Research data lifecycle

2. Collect and capture

- Involves:
 - ✓ Collection of data through experiments, observations, surveys, and reviews;
 - ✓ Document data collection instruments

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3. Data processing

- Processing the data in order to be usable through:
 - ✓Cleaning data to eliminate errors;
 - ✓Combining data from multiple sources;
 - ✓Transforming data from one state to another;
 - ✓Validate or check the quality of data; and
 - ✓Document data processing procedures.

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4. Data analysis

- Involves:
 - ✓ Putting into the right format for presentation;
 - ✓ Interrogating the raw materials of research to produce the insights that constitute the research findings;
 - ✓ Documenting instruments and methods used for analysis ;
 - ✓ Preserving codes for purposes of data analysis and visualization;
 - ✓ Document the results.

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5. Preservation

- Involves curation of the data;
- Preserve data that have long-term value;
- Deposit in data repository or data centre for data curation;
- Confidential and non-digital data may be preserved locally or in a non-public location.

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6. Data sharing

- This phase is associated data publishing and sharing
- Involves:
 - ✓ Giving access to data;
 - ✓ Making data discoverable by sharing;
 - ✓ A data repository will enable discovery of the data;
 - ✓ Provide access to and share the data when this is permitted.

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7. Re-using data

- Setting up conditions of re-use;
- Data that are available for discovery and access may be re-used by other data users;
- Re-use data by further interrogation, analysis, validation, and follow-up research
- They can be use for policy-making, development of commercial products and services, and teaching.

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References

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