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BASIC RESEARCH DATA MANAGEMENT FOR RESEARCHERS IN DIGITAL AGE

Discussion. Nowadays, we try to maintain our research on the current state and try to be aware of what's new concepts appear in our area of research.

In order to present, the research results we need to produce publications or reports, which describe our research output for a greater audience. However, in the digital age, it is not enough just to present our research output but what more important – we need to show the data on which we base our argument.

Many researchers and research institution discuss the topic of research data management as one of the most effective techniques in planning your research and giving access to your datasets.

Results. According to J. A. Hourclé and T. A. King, data are used to support the research question and may be represented in different forms including documents if we are talking about social or historical science [5]. C. Borgman considers data as the main unit of research, which represents factual interpreted information in forms of observation, calculation, records, experimental data, and digital data [1].

According to C. Borgman, data may exist in types of:

– Texts
– Numbers
– Multimedia
– Software
– Specified by discipline
– Specified by tools [1].

It is necessary to mention that data may exist in different formats and versions, which are important facts to take into account while delivering RDM.

In order to manage the data one needs to be familiar with the research data lifecycle. This lifecycle has different interpretation by numerous scholarly institutions. We will consider the Lifecycle scheme offered by Ottawa University represented on chart 1 below [6].
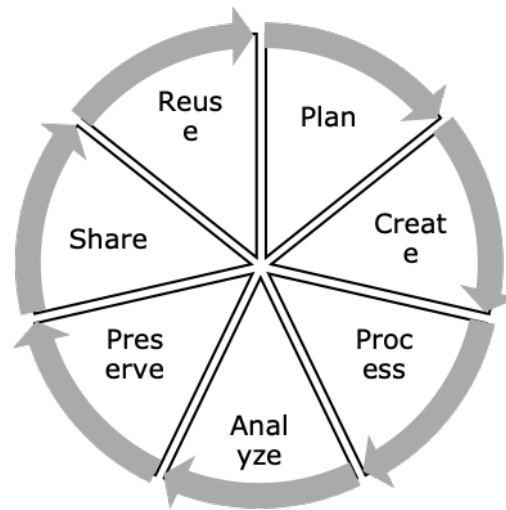
Chart 1. Ottawa University Research Data Lifecycle [6].

By looking at this chart becomes clear that the process of RDM practically never ends as there is always an option of re-discover and re-use of the datasets.

Reuse may serve as a tool for building a new research grounding on old data or may be a tool for verification of this particular research results.

Some researchers are afraid to share their data in fear of plagiarism and illegal data manipulation from the side of other researchers who do not stick to the rules and principles of Academic Integrity and research ethics.

Although there are some grounds for such worries, there are also tools for claiming your right to authorship such as: uploading your datasets to research data repositories and describe the authorship in metadata, attach a unified identifier to the dataset, protect your data and link datasets to your research data management plan.

The data management plan is a very important document, which can serve as a navigator or guide of your research. It consists of the following components:
   – Data collection
   – Documentation and metadata
   – Ethics and legal compliance
   – Storage and backup
   – Selection and preservation
   – Data sharing
   – Responsibilities and resources.

In order to give information about each component, modern researchers may use helpful tools such as DMP tool [2].

It is worth mentioning that datasets can be cited as well as ordinary publications. Modern platforms and repositories such as OSF let you import bibliographic styles, assign DOI, and help you in describing metadata to the datasets [4].

Data citation principles were developed by the initiative Force 11 (being exact – by Data Citation Synthesis Group). There are 8 principles of data citation:
1. Importance
2. Credit and Attribution
3. Evidence
4. Unique Identification

5. Access

6. Persistence

7. Specificity and Verifiability

8. Interoperability and flexibility [3].

Conclusion. In the digital age, it is necessary to remember that research data become more valuable than scholarly publications. Datasets can be treated as any publication, they may have DOI, and they can be cited with the use of any bibliographic style. Research Data Management is a multileveled and complicated process, which can be executed in partnership between the research institution, computer center, and the library. For modern-day researchers, it is crucial to building up a community of interested parties in order to disseminate their research output and with this purpose involving the library and information, specialists would be a good solution.

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