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Open science and research

THE OPEN RESEARCH POLICY

OF THE UNIVERSITY OF TURKU

2018

INTRODUCTION

The Open Research Policy of the University of Turku describes the principles and procedures related to opening research processes and methods on the University level. The operational programme of the Policy guides and regulates the practical implementation.

In this context, open research refers to the openness of the entire research process, making it available for anyone for utilisation unless prevented by a reason related to research ethics or legislation. Therefore, the openness of research is comprised of the provision of access to research data in accordance with the Data Policy of the University of Turku, providing open access to publications in accordance with the Publication Policy of the University of Turku, and providing access to all research phases necessary for ensuring the reproducibility of research in accordance with the present Policy.

In addition, the openness of research also refers to collaboration, visibility and impact that is as open as possible during the entire research process, including the designing, planning and implementation of research as well as the publication, valuation and utilisation phases. The transparency and openness of research can contribute to the quality, further use and impact of research. Furthermore, the promotion of open collaboration can also support multidisciplinary research and citizen science, and thus enable conducting research that could not be realised without open collaboration.

The preparation of the Open Research Policy of the University of Turku included using e.g. the contents of training events and the Open Science online course of the Open Science and Research project (ATT) of the Ministry of Education and Culture, a recording and presentations of the EOSC Summit of the European Commission, and the materials provided by the EOSCpilot project on its website as well as a report on the impact of open science produced for the European Commission (2015) and a report on the evaluation of research careers and incentives for researchers practising open science (2017). At an early preparatory stage, this Policy was made available nationally on the website of the Openness of the Research Process Working Group of the Research Services and Administration Network (TUHA). In addition, information on the open preparation process has been actively communicated to the University community via different communication channels. The community could also comment on the Policy with a Webropol survey.

The Open Research Policy of the University of Turku consists of two sections:

1) a policy section, which includes the policies on the openness of research; and
2) an operational programme, which describes the practical measures, responsible units, and the monitoring of the measures related to the policies.

The main themes of the Open Research Policy are

1) openness, co-operation and impact throughout the entire research process
2) evaluation, career and competence development, and merits of researchers as well as incentives for practising open science,
3) development of an enterprise architecture related to the prerequisites for open research and supporting open science.

The Policy aims to encourage researchers to provide better access to

1) the research methods, standards and technologies used and developed in a study,
2) the documentation of a research process, including source codes and related documentation, in a way that facilitates transparent and repeatable research,
3) research as early as possible to enable open collaboration, already before the publication of final results, unless there are obstacles for this.

Concepts in this Policy

Research output and quality of research

In the context of this Policy, the term *research output* refers to any publications, data, raw data (e.g. gene sequence data), source codes, methods, technology, standards or other equivalent resources generated during the research process. The term "output" does not refer to the results of the study, which are an outcome of processing data with a research method. *Providing open access to all research output enables improving the assessment of the validity* (do the used data, research methods and obtained results justify the statements presented in the study) *and reliability* (trustworthiness of research findings and statements) *of research and, further, the quality of research based on the standards for conducting research.*

Kansalaistiede Citizen science

As defined by the European Commission ([2018](#)), the term citizen science refers to citizen's engagement in scientific research activities, for example, by producing research data. Furthermore, the term refers to the public's better understanding of science through open publications, research data and process as well as to open dialogue with researchers and participation in decision making (European Commission 2018). Citizen participation in science is planned and realised so that it does not reduce the quality of research.

OPEN RESEARCH, COLLABORATION AND IMPACT

1. Providing access to the research process enhances the transparency, quality and impact of research and can promote collaboration. It is encouraged that openness is applied to research at an early stage and that open research is supported by mechanisms that allow for conducting research openly with a researcher-driven approach.

2. From the point view of published research findings, the research output is in principle open and available for joint use. The researcher or research group opens the phases and details, such as work diagrams and standards, related to conducting the research which are necessary for the repeatability and reliability of the study. The development of research methods and technology is conducted openly.

3. In accordance with the guidelines for good scientific practice (TENK 2018), reference must always be made to the developers of research output.

OPENNESS OF RESEARCH IS REALISED WITH CAREFUL CONSIDERATION

4. Research is made openly available based on established practices specific to each scientific field, and involves expanding and developing the practices and models of open research. The open research plan must present the key information about the research data and its management as specified in the data management plan that follows the University's Data Policy. The plan also presents the management and openness of other research output, and provides sufficient documentation for the repeatability and reliability of the study. Planned communication on the study in its different phases enables creating new co-operation.

5. The commercial use of the research output and the protection of related rights is taken into account in implementing the principles of openness. Openness may only be restricted for a justified reason, such as commercialisation or protecting inventions or expertise. The openness of research output may be restricted on commercial grounds, primarily based on the same principles as with other scientific publishing. At the same time, the aim is to support business models compatible with the principle of openness.

6. Every member of the University community is obligated to comply with the legislation, good scientific practice, ethical guidelines of research as well as with the instructions and regulations of the University when opening research process and practices.

THE UNIVERSITY SUPPORTS THE PREREQUISITES FOR OPEN RESEARCH

7. The expectations and prerequisites for open research make new technologies and support services as well as related competence necessary. The open research enterprise architecture is developed for researchers and research groups in collaboration with national and international operators, taking into account the services provided by these operators.

8. Understanding the significance of open science and related practices is an inseparable part of the training and career development of researchers. This is supported with training and with orientation that covers the entire research cycle and related questions concerning openness.

OPEN RESEARCH AND EVALUATION OF RESEARCH CAREERS

9. The promotion of open science and openly available research output are part of academic merits and qualifications. Researchers can distinguish themselves by promoting open science in different ways at different phases of their research process.

11. Researcher-driven development of open science requires monitoring and evaluating the changing needs of researchers and the introduction of incentives for practising open science.

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