Aineistoa tutkimuksen toistettavuudesta

Reproducibility is an important part of providing evidence of the correctness of research results. Other researchers should be able to inspect the workflow and evaluate all of the steps that have been taken during the analysis and repeat them.

Reproducibility is defined as the possibility to obtain consistent results using the same data and code as the original study (computational reproducibility).

Replicability means obtaining consistent results across studies aimed at answering the same scientific question using new data or other new computational methods. In this case new data is collected or created.

Documenting and sharing **research software** and **workflows** are crucial elements of reproducibility. Research infrastructures and services should not only enable but also support reproducibility.

Please, feel free to add links to this list.

Methods and formats

Research compendium

https://research-compendium.science/

https://github.com/ropensci/rrrpkg

Research object crate

https://www.researchobject.org/ro-crate/background.html

https://github.com/ResearchObject/ro-crate

CWL

https://www.commonwl.org/user_guide/

https://github.com/common-workflow-language

Reports

FsF Report https://doi.org/10.5281/zenodo.4095092

FAIR data & software (Executable papers and software, p. 25-):

https://ec.europa.eu/info/sites/info/files/research_and_innovation/ki0120580enn.pdf

Knowledge Exchange report 2021 https://www.knowledge-exchange.info/event/publishing-reproducible-research-output

Articles

Open Science Software engineering

https://link.springer.com/chapter/10.1007%2F978-3-030-32489-6_17

Creating an executable paper is a journey through Open Science

https://www.nature.com/articles/s42005-020-00403-4

Using a PID graph for reproducible research

https://zenodo.org/record/4275872#.X7ukSBMzYXo

Implementing FAIR Data Infrastructures
https://doi.org/10.4230/DagMan.8.1.1

From FAIR research data toward FAIR and open research software
https://doi.org/10.1515/itit-2019-0040

Open Source Research Software
https://doi.org/10.1109/MC.2020.2998235

Taking a fresh look at FAIR for Research Software

https://doi.org/10.1016/j.patter.2021.100222

Articles about executable articles (different fields)

Executable Papers - improving the article format in computer science

https://www.journals.elsevier.com/the-journal-of-logic-and-algebraic-programming/news/introducing-executable-papers

eLife launches Executable Research Articles for publishing computationally reproducible results

https://elifesciences.org/for-the-press/eb096af1/elife-launches-executable-research-articles-for-publishing-computationally-reproducible-results

Toward Executable Scientic Publications

https://www.sciencedirect.com/science/article/pii/S1877050911001323

RDA Health Data IG - Reproducible Workflows in Healthcare Guide

https://osf.io/x9jqb/

Demo

https://sorse.github.io/programme/software-demos/event-019/

Initiatives

RDA

Reproducibility IG

https://www.rd-alliance.org/groups/reproducibility-ig.html

Reproducible Health Data services WG

https://www.rd-alliance.org/groups/reproducible-health-data-services-wg

FAIR 4 research software

https://www.rd-alliance.org/groups/fair-4-research-software-fair4rs-wg

The Netherlands

Local Reseaarch software Directory https://www.research-software.nl/

Guidelines for FAIR software https://fair-software.nl/about

(Don't publish: Tom Bakker as contact point for further inquiries Tom Bakker t.bakker@esciencecenter.nl)

France

- Software Heritage INRIA https://www.softwareheritage.org/save-and-reference-research-software/
- Certification Agency for Scientific Code and Data (cascad): https://www.cascad.tech/

  (With the YouTube boasting: https://www.youtube.com/watch?v=i17UI2bKh0E&feature=youtu.be)

- RunMyCode (an online repository allowing people to share code and data associated with scientific publications): http://www.runmycode.org/about.html

Misc

RDA Sweden/EOSC-Nordic webinar: "Placing research software into Open Science":

https://snd.gu.se/en/placing-research-software-open-science-initial-results-rda-sweden-and-eosc-nordic-collaboration