

8th GESIS Summer School in Survey Methodology Cologne, August 2019

Syllabus for Short Course D: "Open Access to Research Data. Facing Funders' Requirements on Making Research Data FAIR"

Instructors:	Sebastian Netscher	Anja Perry
E-mail:	Sebastian.netscher@gesis.org	anja.perry@gesis.org
Homepage:	www.gesis.org	www.gesis.org

Date: 01.–02. August 2019
Time: 09:00–13:00, 14:00–16:00
The course starts on Thursday morning at 09:00

About the Instructors:

Dr. Sebastian Netscher is a member of CESSDA Training, located at the GESIS Data Archive, designing and delivering workshops on research data management. Previously, he worked for the secretariat of the Comparative Study of Electoral Systems (CSES) at the GESIS Data Archive in Cologne. Sebastian is specialized in data harmonization and data management. His research interests are political science, investigating individual political knowledge and differences in political systems.

Dr. Anja Perry joined the GESIS Data Archive in 2016 and works in data acquisition. From 2012 until 2016 she worked for the German PIAAC research team at GESIS and was responsible for archiving and distributing the German PIAAC data. Anja completed her PhD thesis "Decision Making in Innovation and Entrepreneurship" at the Max Planck Institute of Economics and DFG Graduate College „The Economics of Innovative Change" at the University of Jena in 2010. After that she worked for the German Federal Statistical Office. Her research interests are skill mismatch, entrepreneurs' skill use and low literacy.

Selected Publications:

- Perry, Anja, and Beatrice Rammstedt. 2016. "The Research Data Center PIAAC at GESIS." *Jahrbücher für Nationalökonomie und Statistik = Journal of economics and statistics* 236 (5): 581–593. <http://dx.doi.org/10.1515/jbnst-2015-1024>.
- Perry, Anja, & Recker, Jonas. 2018. „Sozialwissenschaftliche Forschungsdaten langfristig sichern und zugänglich machen: Herausforderungen und Lösungsansätze." *O-Bib. Das Offene Bibliotheksjournal / Herausgeber VDB* 5(2): 106-122. doi: <https://doi.org/10.5282/o-bib/2018H2S106-122>.
- Netscher, Sebastian, and Katsanidou, Alexia. 2018. "Understanding and Implementing Research Data Management". In: Claudius Wagemann, Achim Goerres und Markus Siewert (eds.). *Handbuch Methoden der Politikwissenschaft*. Wiesbaden: Springer VS, pp. 1–18. http://dx.doi.org/10.1007/978-3-658-16937-4_4-1.
- Winters, Kristi, and Sebastian Netscher. 2016. "Proposed Standards for Variable Harmonization Documentation and Referencing: A Case Study Using QuickCharmStats 1.1." *PLoS one* 2016. doi: <http://dx.doi.org/10.1371/journal.pone.0147795>.

Short Course Description:

Nowadays, more and more funders, like the European Commission, require Open Data of high quality that can be re-used by researchers for replication as well as for new (research) purposes. Hence, data sharing of research data is of increasing importance in quantitative social science research. Of course, transparency and replicability of research data and research findings is considered an integral part of good scientific practice. In addition, data sharing enables others to continue working with the data in their own research projects, for teaching etc. Data sharing thus fosters research and innovations, avoids duplicating already existing data and increases efficiency of public money spent. In the context of Open Access to research data, researchers are prompt not only to share their data in one way or another, but to systematically process so called *FAIR* data, ensuring that research data can be found, accessed, interoperated and re-used by others. Developed by data professionals and archivists, the FAIR data principles are challenging for many researchers, being in doubt on how to satisfy appropriate requirements by funders. The current short course introduces the FAIR data principles in light of ensuring Open Access to research data. It discusses requirements of Open Access to research data and how the FAIR data principles foster a widespread of high quality data. Based on the definition of the FAIR principles and the discussion on appropriate requirements, the course guides researchers on how to process shareable data that can be re-used by others and how researchers could make such shareable data FAIR.

Keywords:

Open Science, FAIR Data Principles, Funders' Requirements, Data Sharing, Replication

Course Prerequisites:

None.

Target Group:

Participants will find the course useful if they conduct quantitative social science research and want to create Open Data or to gain basic knowledge on how to meet the funders' requirements for Open Science and the FAIR data principles.

Course and Learning Objectives:

By the end of the course participants will:

- be familiar with the idea of Open Access to research data and data sharing;
- know about the idea of FAIR data principles and how to satisfy appropriate requirements in (third-party funded) research projects.

Organizational Structure of the Course:

The course is a full-time course, consisting of 7 hours of group instruction (presentations, exercises and discussions) per day (including a one-hour lunch break).

Software and Hardware Requirements:

None.

Day-to-day Schedule:

Day	Topic(s)
1	<ol style="list-style-type: none"> 1. Introduction into Open Access to Research Data 2. Requirements of Open Access to Research Data 3. The FAIR Data Principles
2	<ol style="list-style-type: none"> 4. Processing Shareable Data 5. Making Data FAIR 6. Wrap-Up

Preparatory Reading:

- CESSDA. 2017. "Data Management Expert Guide". Available at: <https://www.cessda.eu/Training/Training-Resources/Library/Data-Management-Expert-Guide>, latest access: 2018-11-21.
- Force11. 2016. "The FAIR Data Principles". Available at: <https://www.force11.org/group/fairgroup/fairprinciples>, latest access: 2018-11-21.
- Huschka, Denis. 2013. "Why should we share our data, how can it be organized, and what are the challenges ahead?". Working Paper Series des Rates für Sozial- und Wirtschaftsdaten, No. 216.
- Wilkinson, Mark D. et al. 2016. "The FAIR Guiding Principles for Scientific Data Management and Stewardship." Scientific Data 3. doi:10.1038/sdata.2016.18.

Additional Recommended Literature:

- Doorn, Peter . 2010. "Preparing Data for Sharing. Guide to Social Science Data Archiving". Amsterdam: Pallas. Available at: <https://dans.knaw.nl/nl/over/organisatie-beleid/publicaties/DANSpreparingdataforsharing.pdf>, latest access: 2018-11-21.
- Eder, Christina and Alexander Jeding. 2018. "FAIR National Election Studies: How Well Are We Doing?" European political Science. <https://doi.org/10.1057/s41304-018-0194-3>.
- ICPSR. 2012. "Guide to Social Science Data Preparation and Archiving. Best Practice Throughout the Data Life Cycle". 5th Edition. Ann Arbor: ICPSR. Available at: <http://www.icpsr.umich.edu/files/deposit/dataprep.pdf>, latest access: 2018-11-21.
- Gherghina, Sergiu, and Alexia Katsanidou. 2013. "Data Availability in Political Science Journals". European Political Science, 12. S. 333– 349.
- Netscher, Sebastian, and Katsanidou, Alexia. 2018. "Understanding and Implementing Research Data Management". In: Claudius Wagemann, Achim Goerres und Markus Siewert (eds.). „Handbuch Methoden der Politikwissenschaft". Wiesbaden: Springer VS, pp. 1-18. http://dx.doi.org/10.1007/978-3-658-16937-4_4-1.
- Van den Eynden, Veerle., Corti, Louise., Woollard, Matthew., Bishop, Libby, and Horton, Laurence. 2011. "Managing and Sharing Data. Best Practice for Researchers". Colchester: UK Data Archive, University of Essex. Available at: <http://www.data-archive.ac.uk/media/2894/managingsharing.pdf>, latest access: 2018-11-21.