RI4C2
Research & Innovation
For Cities & Citizens

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Masterclasses on Open Science

DELIVERABLE 7.4
MONTH 32

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D7.4 – Masterclasses on Open Science

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I. Introduction

The key objective of RI4C2 WP7 'Open EC2U' is to foster a culture of Open Science within the EC2U Alliance by mainstreaming Open Science practices. To fulfil the gaps in training and education on Open Science skills, WP7 has created Masterclasses on Open Science, a collection of Open Educational Resources[1] featuring five instructional videos and two podcasts with internationally renowned Open Science experts sharing their insights and best practices on how to approach some Open Science practices not yet widely established.

Offering in-depth presentations on selected Open Science practices, the masterclasses specifically aim to accompany and complement the Open Science guidebook (D7.3). The masterclasses discuss the importance of Open Science to rigorous, reproducible and transparent research, and offer practical advice from researcher to researcher on how to get started and implement Open Science practices, such as pre-registration, reproducible workflows and science outreach.

The masterclasses are accessible online via the EC2U YouTube channel. They will be integrated with the D7.3 Open Science guidebook and interviews featuring Open Science Champions on the EC2U Open Science platform with the aim of providing an accessible online resource for researchers, students, educators, and anyone interested in Open Science, thereby facilitating the adoption of Open Science practices.

[1] Open Educational Resources (OER) describe any openly accessible materials, such as courses, videos, books, articles or sets of assignments that are openly available for use by educators and students, without an accompanying need to pay royalties or licence fees (UNESCO, 2011, 2015).

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II. Masterclass videos

All videos are accessible online on the official EC2U YouTube channel and they can be found also on the EC2U Alliance website. They are suitable for anyone interested in Open Science. Videos are licensed under a CC-BY 4.0 license.

A. Why is Open Science important?

1. Description

Experts from each partner university of the EC2U Alliance share their views on why Open Science is important in their native languages.

Figure 1: "why is Open Science important?" video screenshot

2. Experts

- Jukka Rantasaari, Head of Library Services, Doctoral researcher, University of Turku
- Damien Salles, Professor, Delegate Vice-Rector for Open Science, University of Poitiers
- Jóse Miguel Mateos Roco, Professor, Vice-Rector for Research, University of Salamanca
  Tránsito Ferreras, PhD, Coordinator of Library Services, University of Salamanca
- Birgitta König-Ries, Professor of Distributed Information Systems, Friedrich Schiller University of Jena
- Hellas Cena, Professor, Pro-Rector for Third Mission, University of Pavia
- Delfim Leão, Professor, Vice-Rector for Research, University of Coimbra

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- Lenuta Alboaie, Professor, Director of the Doctoral School, Alexandru Ioan Cruza University of Iași

3. Recording

- Video available on the EC2U YouTube Channel Playlist: Masterclasses on Open Science / RI4C2
- Keywords: "Open Science", "research", "open data", "multilingualism"

B. Open Science for scientists and opening science for non-scientists

1. Description

Postdoctoral researcher Smriti Mehta from the University of California, Berkeley, talks about Open Science and shares some examples of projects she is involved in that support Open Science practices.

Figure 2: video screenshot from Smriti Mehta's presentation

2. Expert biography

Smriti Mehta is a Postdoctoral Researcher in the Department of Psychology at the University of California, Berkeley. She hosts a podcast called Nullius in Verba with her colleague Daniël Lakens from the Eindhoven University of Technology. Their podcast is about science - what it is and what it could be.

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3. Recording

- Video available on the EC2U YouTube Channel Playlist: Masterclasses on Open Science / RI4C2
- Keywords: "Open Science", "research", "science"

C. Pre-registration: What does it actually bring us?

1. Description

Senior Research Fellow Lydia Laninga-Wijnen from the INVEST Flagship at the University of Turku discusses benefits and challenges related to pre-registration. She also shares some insights on how to write pre-registrations and what tools can be used.

Figure 3: video screenshot from Lydia Laninga-Wijnen's presentation

2. Expert biography

Lydia Laninga-Wijnen is a Senior Research Fellow in INVEST Flagship at the University of Turku. Her research interests are adolescent peer relationships and bullying, and her current research project SOLID is funded by the Dutch Research Council (NWO) and the Academy of Finland. Laninga-Wijnen is an active promoter of Open Science and founder & coordinator of the Open Science Community Turku.

ORCID-ID: 0000-0001-6158-8950

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3. Recording

- Video available on the EC2U YouTube Channel Playlist: Masterclasses on Open Science / RI4C2
- Keywords: "Open Science", "research", "pre-registration", "open workflows"

D. Baby steps for reproducible workflow in R – part 1: introduction

1. Description

Senior researcher Juuso Repo from the INVEST Flagship at the University of Turku gives an introduction to reproducibility and why we need it. He also presents the steps for reproducible workflow in R.

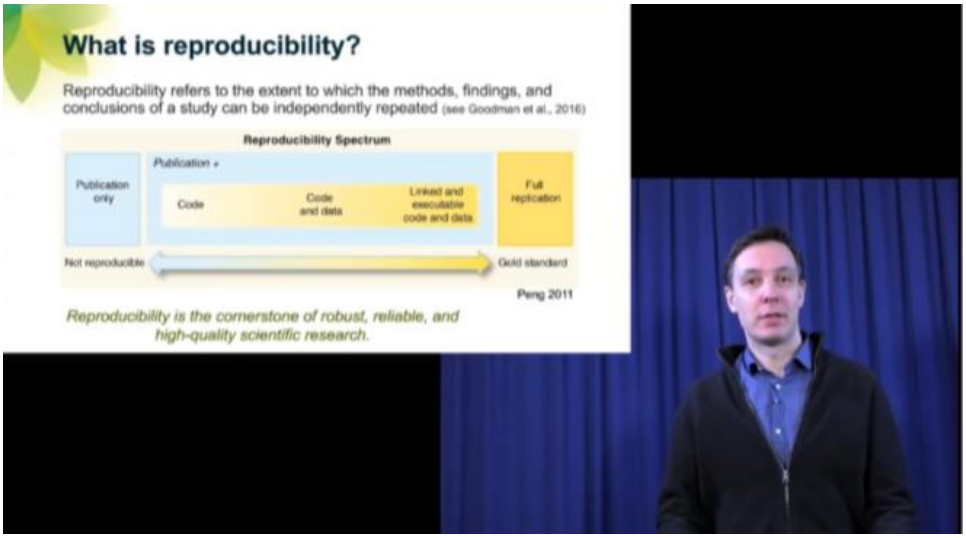

Figure 4: video screenshot from Juuso Repo's presentation

2. Expert biography

Juuso Repo is a Senior Researcher in INVEST Flagship at the University of Turku. His areas of expertise are societal impact and data analysis. He has initiated and managed several national and international projects with a special emphasis on education and well-being.

ORCID-ID: 0000-0001-8756-6936

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3. Recording

- Video available on the EC2U YouTube Channel Playlist: Masterclasses on Open Science / RI4C2
- Keywords: “Open Science”, “research”, “reproducibility”, “open workflows”, “RStudio”

E. Baby steps for reproducible workflow in R – part 2: demo

1. Description

Showing in action the steps introduced in the ‘Baby steps for reproducible workflow in R - part 1: introduction’, Senior researcher Juuso Repo presents a hands-on demo on reproducible workflow in RStudio.

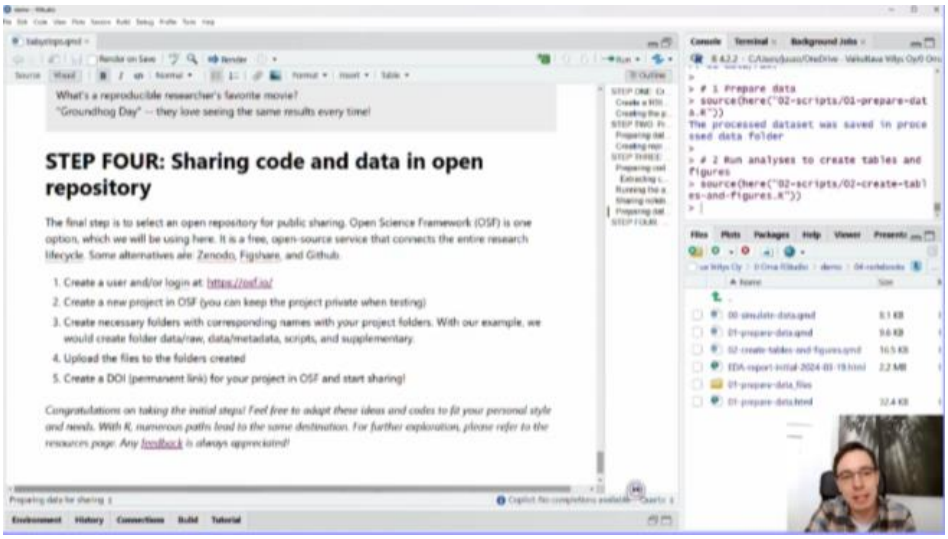

Figure 5: video screenshot from Juuso Repo’s demonstration

2. Recording

- Video available on the EC2U YouTube Channel Playlist: Masterclasses on Open Science / RI4C2
- Keywords: “Open Science”, “research”, “reproducibility”, “open workflows”, “RStudio”

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III. Masterclass podcasts

Podcasts are accessible via the EC2U Alliance website, and they can also be found directly on Soundcloud and Spotify. They are suitable for anyone interested in Open Science. Podcasts are licenced under a CC BY-NC-SA 3.0 DEED license.

A. How open workflows increase impact and enhance open science?

1. Description

In this episode, Laura Niemi and Outi Nurmela from the University of Turku interview associate professor Caspar van Lissa from the Tillburg University. The episode focuses on open workflows in research.

Figure 6: screenshot from the podcast's recording

2. Expert biography

Caspar van Lissa is an Associate Professor of social data science at Tilburg School of Social and Behavioral Sciences. His research interests focus on the utilisation of machine learning for theory development and meta-analysis, and development of methods for reproducible workflows. Van Lissa is the chair of the Open Science Community Tilburg.

ORCID-ID: 0000-0002-0808-5024

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035803

3. Recording

- Podcast available on Soundcloud and Spotify
- Keywords: "Open Science", "research", "podcast", "open workflows"

B. How to make science more tangible for a broader audience?

1. Description

In this episode, Laura Niemi and Outi Nurmela from the University of Turku interview researcher Ties Fakkel from the Erasmus University Rotterdam. The episode focuses on how researchers can make their research more tangible and accessible to a broader audience.

2. Expert biography

Ties Fakkel is a Postdoctoral Researcher at the Erasmus SYNC Lab, Erasmus University of Rotterdam. He studies socioeconomic differences in adolescent psychosocial competencies and examines how these competencies contribute to socioeconomic outcomes in early adulthood. Fakkel advocates transparency, collaboration and accessibility through the entire research process.

ORCID-ID: 0000-0001-8276-9443

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035803

3. Recording

- Podcast available on Soundcloud and Spotify
- Keywords: “Open Science”, “research”, “podcast”, “citizen science”

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IV. Concluding remarks

Strengthening competences related to Open Science by developing supportive structures and resources is one key goal of the EC2U Alliance. The masterclasses on Open Science is a collection of Open Educational Resources created to facilitate sharing of good practices and mutual learning.

The starting point of the Masterclasses on Open Science has been the identified practices of Open Science that are already established within several European universities. The relevant Open Science practices were identified by compiling case descriptions about Open Science practices being implemented in the universities of the EC2U Alliance (D7.1). The analysis of the case descriptions revealed that several novel and emerging Open Science practices are not yet widely established (D 7.2). Therefore, these materials address both established and emerging Open Science practices.

Together with the introduction and toolkit provided in the Open Science Guidebook (D7.3), the Masterclasses on Open Science offer a readily accessible online resource for practical information on Open Science. The Masterclasses on Open Science are openly accessible and suitable for anyone interested in the wide range of topics covered in the materials.

V. References

UNESCO (2011, 2015) A Basic guide to Open Educational Resources (OER) Available at: https://unesdoc.unesco.org/ark:/48223/pf0000215804

D7.1 Case descriptions on Open Science. Available at: https://ec2u.eu/wp-content/uploads/sites/709/2023/10/D7.1-Case-descriptions.pdf

D7.2 Open Science practices: Case synthesis. Available at: https://ec2u.eu/wp-content/uploads/sites/709/2023/05/D7.2-Case-synthesis1.pdf

D7.3 Open Science Guidebook. Available at: https://ec2u.eu/wp-content/uploads/sites/709/2023/05/D7.3-Guidebook-for-Open-Science-champions1.pdf

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