Develop training guides for staff, students and researchers for online reseach communication and packaging together with WP7

(Proposal for Training in Open Science)

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V1	01/09/2022	UPF	Draft structure and contents
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Institutional Abbreviations

Univerza v Ljubljani	UL
Vrije Universiteit Brussel	VUB
CY Cergy Paris Université	CY
Göteborgs Universitet	GU
Universitat Pompeu Fabra	UPF
University of Warwick	UoW

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EXECUTIVE SUMMARY

EUTOPIA, formed by Univerza v Ljubljani, Vrije Universiteit Brussel, CY Cergy Paris Université, Göteborgs Universitet, Universitat Pompeu Fabra and the University of Warwick, is one of the winning alliances in the 2019 Erasmus+ "European Universities Initiative" competitive call. The aim of the EUTOPIA project is to create a connected, inclusive, open community, and this includes the advancement of Open Science, which is dealt with in WP3. This report is a training proposal in Open Science and is one of the expected outputs in SubWP3.4.

This report aims to develop training guides and modules reusing materials already prepared for staff, students and researchers on the different topics that fall under the Open Science umbrella, given that the Open Science Agenda requires the training of support staff and researchers in this new paradigm.

The Open Science Passport aims to be a training programme that allows anyone to become qualified in different topics included in open science, as well as to be able to develop strategies and skills to implement it. For this reason, and taking into account that the levels of knowledge and types of audience are very heterogeneous, different itineraries have been designed.

The development of the contents of these modules has been based on the reprocessing of existing materials, as there are high quality contents made for prestigious institutions. Moreover, this saves resources for the members of EUTOPIA. Therefore, after consulting these institutions that have been working in this field for some time, we selected different topics that we considered to be the basic ones to start working on Open Science: Introduction to Open Science, Open Access and Research Data.

For each of the modules created, the contents are detailed with a brief description of the resources, accompanied by a short self-study questionnaire and the estimated time required to complete the module. These modules have been created within the Aula Global, the virtual learning environment of the Universitat Pompeu Fabra, in order to carry out a pilot test with students from all the universities that are members of EUTOPIA.

On the other hand, this report also explores how to accredit those people who have completed the modules and have taken them. For this reason, it is considered that the use of badges could be a solution to be decided in the next EUTOPIA projects.

1. Introduction

EUTOPIA is an ambitious alliance of 10 like-minded universities ready to reinvent themselves: the Babeș-Bolyai University in Cluj-Napoca (Romania), the Vrije Universiteit Brussels (Belgium), the Ca'Foscari University of Europe (Italy), CY Cergy Paris Université (France), the Technische Universität Dresden (Germany), the University of Gothenburg (Sweden), the University of Ljubljana (Slovenia), the NOVA University Lisbon (Portugal), the University of Pompeu Fabra (Spain) and the University of Warwick (United Kingdom). Together, these 10 pioneers join forces to build the university of the future.

Each university holds several campuses deeply related to its territories. They have built solid ties with their communities, institutional structures, and local companies.

EUTOPIA students, researchers, and staff work together to build a new academic model, reflecting an open and united Europe, respectful of the citizens and the environment.

The mission of EUTOPIA is to build in the long term a unique and daring alliance of transformative and engaged institutions. EUTOPIA is a challenge-led, student-centered, inclusive alliance of entrepreneurial, change-focused universities. In conjunction with our partners and collaborators, EUTOPIA is characterized by these four key principles:

- Geared towards the challenges of the future: Challenge-led
- Student-centred and student-empowering
- Committed to the principles of openness and inclusion
- Service to society

1.1 The EUTOPIA 2050 project and WP3.4

The EUTOPIA 2050 project includes seven working packages, each focusing on a different domain.

The WP3 entitled “Integrating and Opening Research, Innovation and Knowledge Creation in EUTOPIA”, EUTOPIA will drive the Open Science agenda as a core pillar recognizing that knowledge needs not only to be free but also accessible for everyone. The future of Open Science is about ongoing collaborations with external stakeholders and citizens to make sure that what we know, they can also know. EUTOPIA will deliver a greater connection between diverse local, regional, and international stakeholders with an unprecedented openness of knowledge creation and sharing between academia, local businesses, regional actors, and civil society actors addressing real societal challenges and delivering impact.

Within the working package WP3, SubWP3.4 is devoted to the advancement of Open Science and includes the activities for the advancement of open science named Building EUTOPIA's Capacity.

1.2 Background

In order to establish the Open Science needs and priorities for Eutopia, a first report was put together which provided an overview of the state of affairs and shared best practices on the topic at each of the six member universities (Deliverable 3.4.2.1).

The deliverable summarizes the results of an internal survey with 247 questions and a comprehensive glossary about policies and strategies, research integrity, infrastructures, visibility of researchers, training and human resources related to Open Science (in general), Open Access, Research Data, Alternative Metrics, and Open Evaluation, Citizen Science, Open Educational Resources and Open Data.

The deliverable identified areas in which all or most of the Eutopia partners had needs or potential for growth and a number of priorities were established. The training proposal described in this report has used the information obtained in Deliverable 3.4.2.1 as a starting point.

1.3 Objectives

The aim, therefore, is to develop training guides building on already existing open-access materials prepared for staff, students and researchers on the different topics that fall under the Open Science umbrella.

In this context, the creation of a EUTOPIA passport/pass/visa for Open Science is proposed. This Eutopia passport can be obtained in different ways, following different training itineraries defined according to the different types of public and different levels of difficulty. Likewise, the itineraries are implemented through a series of flexible modules on different topics that must be successfully completed to obtain the passport.

2. Methodology

The decision to create training modules on open science was determined by the need that emerged in the initial survey. Subsequently, different courses already available were analysed (see 2.1) and the actions being carried out by different prestigious institutions were consulted (2.2).

This first stage of analysis allowed the development of the itineraries (2.3) and the definition of the Eutopia Open Science Passport (2.4).

2.1 Training courses analysed

In order to identify the ideal modules to be included in the scheme of the Eutopia Open Science Passport, different courses already available online were analysed. Only offerings put together by institutions with specific expertise and recognition in the relevant subject areas were analysed.

The open-access training courses that were analysed are the following:

- "Open Science Training Course", FOSTER, https://www.fosteropenscience.eu/toolkit
- "Open Science Primers: getting you started on good practices", OpenAIRE, https://www.openaire.eu/os-primers
- "EuroDOC Open Science Ambassador Training", EuroDOC, http://eurodoc.net/open-science-ambassadors-training/m1-open-science
- "Open Science: Sharing your research with the world", TUDelft, https://www.edx.org/course/open-science-sharing-your-research-with-the-world
- "Open Science MOOC", OS MOOC, https://opensciencemooc.eu/
- "Passport for Open Science: a practical guide for PHD students", Ministère français de l'Enseignement supérieur, de la Recherche et de l'Innovation, https://www.ouvrirlascience.fr/wp-content/uploads/2020/11/passport-for-open-science-a-practical-guide-for-phd-students_30-10-2020_web.pdf

2.2 Other prestigious sources of academic information consulted

In parallel to the courses analysed, the following prestigious institutions were also consulted to identify potential resources and training recommendations:

- Consorci de Serveis Universitaris de Catalunya (CSUC), https://www.csuc.cat/ca
- Digital Curation Center, https://www.dcc.ac.uk/
- European Commission, https://ec.europa.eu/info/index_en
- Ghent University, https://www.ugent.be/en
- Health Sciences and Human Services Library (HSHSL), https://www.hshsl.umaryland.edu/
- Ottawa University, https://www.ottawa.edu/
- Universiteit Utrecht, https://www.uu.nl/
- University of Cambridge, https://www.cam.ac.uk/
- University of Gothenburg, https://www.gu.se/en
- University of Leeds, https://www.leeds.ac.uk/
- University of Pittsburgh, https://www.pitt.edu/
- University of Reading, http://www.reading.ac.uk/
- UNESCO, https://es.unesco.org/

2.3 The itineraries

Three different parameters have been identified that would determine the composition of the itineraries:

- Knowledge level: basic and advanced,
- Type of audience: young researchers (main target), trainers, university support staff,
- Type of training (online; necessary to evaluate and determine the best platform to use).

The itineraries described in this report are aimed at the following values for the aforementioned parameters:

- Knowledge level: Basic
- Type of audience: Young researchers
- Type of training: Online

At a later stage, itineraries can be developed for other levels and types of audiences.

2.4 Eutopia Open Science Passport

This report includes a proposal for the first modules of the Eutopia Open Science Passport. The material covers the areas: Intro to Open Science, Open Access and Research Data. All modules are introductory, allowing learners to choose to follow them all or pick the ones that are most relevant to them. Other areas in open science will be developed once these three pilot areas are implemented on line and tested.

In order to correctly visualise some of the materials in these courses, students are required to previously register, free of charge, as in the case of the TUDelft or FOSTER platforms. This registration procedure will be integrated in the Eutopia Open Science Passport platform.

Each module takes on average 30-40 minutes to complete, without taking into account the visualization of additional information. The expected duration is between 100 and 120 minutes. Modules contain video presentations, most of them have subtitles in several languages; PowerPoint presentations and online resources are also made available, as are documents and websites. Some of them have a number of learning activities, such as quizzes and exercises. These materials are in English.

The modules are made up with training materials from different sources that are integrated into the Eutopia Open Science Passport platform. Trainees are able to access one resources after the other from the platform in a seamless way.

3. Modules

This section shows the different modules and for each module:

- A summary of the contents
- The contents with a brief description of the resources and links
- A short self-study questionnaire
- The estimated time needed to complete the module

3.1 Intro to Open Science

3.1.1 Summary

4. Introduction to Open Science
5. What is Open Science
6. Benefits of Open Science
7. Openness and citations
8. Applying Open Science in research workflow
9. Open Science Miscellaneous

3.1.2Contents

Introduction to Open Science	UNESCO Recommendation on Open Science (video - 03:23 min. UNESCO): The Recommendation defines the key values and principles of Open Science. What is Open Science? (text - 2 pp. OpenSource.com): Preface and contextualization of the Open Science movement.
What is Open Science	What is Open Science (FOSTER): Includes a video (01:03 min.), exercises, and different slides that allow you to familiarize yourself with the expectations of research funders and learn how the practice of Open Science concepts can benefit in the progress of the researcher's career.

	An introduction to open science: How to incorporate best practices into your research (text - 2 pp. American Psychological Association): The main key points of Open Science and how to apply them throughout the research cycle are presented. It is a guide designed especially for young people who are starting out in scientific publication.
Benefits of Open Science	The advantages of being an open researcher Part 1 (video - 05:19 min. TUDelft): The advantages and disadvantages of becoming an open researcher are presented in detail. What are the benefits of Open Science? (text - 1 pp. FOSTER): Quick reading that gathers the general arguments to support Open Science. --- Additional information: Open Science Perspectives (video - 08:26 min. TUDelft): Interview with Karel Luyben, rector of Delft University of Technology, where he talks about his impressions and ambitions for Open Science.
Openness and citations	Increasing your research visibility (video - 06:00 min. TUDelft): It shows strategies to reach the audience and how Open Science can influence the visibility of the results of the research process. --- How to increase the visibility of your research? Six steps to increased visibility (text - 4 pp. University of Pittsburgh LibGuides): Guide that provides descriptions of six steps to increase the visibility and impact of research activity, and recommendations for tools that can help in this process. --- Additional information: The Open Access Citation Advantage Service (FOSTER): Link to studies that show how opening research increases the number of citations and, therefore, the impact in various areas of knowledge. --- Additional information: A Quick Tour of the ORCID Record (video - 03:02 min. ORCID): It briefly explains what ORCID is and why researchers should obtain this identifier.
Applying Open	Open Science into research practice (PowerPoint - 37 slides. FOSTER): It explains how to apply Open Science through some practical exercises.

Science in research workflow	Several tips and recommendations are also provided to answer the same question. Additional information: 101 Innovations in Scholarly Communication (video - 03:14 min. Universiteit Utrecht): It offers tools that researchers put into practice concerning the benefits of Open Science.

Figure 1. Intro Open Science contents.

3.1.3 Questionnaire

Most scientific knowledge is stored:	
Openly available	Incorrect! Scientific Knowledge still has paywalls, but Open Science will be the path that will allow science to be openly available, free to use, and under terms that enable reuse and redistribution.
Free to use	Incorrect! Scientific Knowledge still has paywalls, but Open Science will be the path that will allow science to be openly available, free to use, and under terms that enable reuse and redistribution.
Behind paywalls *	Correct! Unfortunately, science still has paywalls, but Open Science will change that paradigm!
Under terms that enable reuse and redistribution	Incorrect! Scientific Knowledge still has paywalls, but Open Science will be the path that will allow science to be openly available, free to use, and under terms that enable reuse and redistribution.
Which one is a persistent identifier for authors?	
ORCID *	Correct! ORCID provides an international persistent digital identifier that distinguishes researchers.
DOI	Incorrect! DOI identifies publications. ORCID provides an international persistent digital identifier that distinguishes researchers.
R0R	Incorrect! ROR identifies organizations. ORCID provides an international persistent digital identifier that distinguishes researchers.
PubMed ID	Incorrect! PubMed ID identifies publications. ORCID provides an international persistent digital identifier that distinguishes researchers.

What is the result of publishing open access articles and research data?	
More credibility	Incorrect! The results of publishing open access articles and research data can be higher citation rates.
More citations *	Correct! The results of publishing open access articles and research data can be higher citation rates.
More projects	Incorrect! The results of publishing open access articles and research data can be higher citation rates.
Less impact	Incorrect! The results of publishing open access articles and research data can be higher citation rates.
Who benefits from Open Science?	
Researchers	Incorrect! The answer is not entirely correct. Open Science benefits all stakeholders: researchers, funders, private sector and others.
Funders	Incorrect! The answer is not entirely correct. Open Science benefits all stakeholders: researchers, funders, private sector and others.
Private sector	Incorrect! The answer is not entirely correct. Open Science benefits all stakeholders: researchers, funders, private sector and others.
All of the above *	Correct! Open Science benefits all stakeholders: researchers, funders, private sector and others.
In general, which of the following disciplines already practices Open Science?	
Psychology	Incorrect! This discipline still has a lot of work to do in the practice of Open Science.
Medicine	Incorrect! This discipline still has a lot of work to do in the practice of Open Science.
History	Incorrect! This discipline still has a lot of work to do in the practice of Open Science.
Energy physics *	Correct! Disciplines such as astronomy, oceanography, or energy physics have long practised Open Science.
How can ORCID information be kept?	

Public	Incorrect! The answer is not entirely correct. ORCID allows you to define which information is kept public, which is available to the organization and which is private.
Available into the organisation	Incorrect! The answer is not entirely correct. ORCID allows you to define which information is kept public, which is available to the organization and which is private.
Available into the organisation	Incorrect! The answer is not entirely correct. ORCID allows you to define which information is kept public, which is available to the organization and which is private.
All of the above *	Correct! ORCID allows you to define which information is kept public, which is available to the organization and which is private.

Figure 2. Open Science questionnaire.

3.1.4 Expected duration

The expected duration of the Intro to Open Science module is approximately **40 minutes**.

3.2 Open Access

3.2.1 Summary

1. What is Open Access
2. How to publish in Open Access
3. Open Access, copyright and licensing
4. European Commission research grants and Open Access

3.2.2 Contents

What is Open Access	Introduction to Open Access (video - 06:02 min. Health Sciences and Human Services Library): This video provides a brief overview of Open Access publishing: definition, benefits, types of Open Access… An introduction to open access (text - 2 pp. JISC UK): Quick guide that presents what this movement is about: what it is, main benefits, types, compliance and requirements…

	Additional information: Open Access Model versus Subscription-based model (video - 03:03 min. TUDelft): This video compares and describes the differences between the two models of scientific publication.
How to publish in Open Access	What is open access? (video - 05:01 min. FOSTER): Video dedicated exclusively to understanding the difference between the golden route and the green route, what an APC is, and the various types of licences that can be used in scientific publication. How to publish open access (text - 1 pp. University of Gothenburg Library): Guide where the three best known alternatives are presented for publishing articles in Open Access: publishing in an Open Access journal (Gold Open Access), self-archiving in an open archive (Green Open Access), or publishing in a so-called hybrid journal. It also makes special mention of the publication of monographs and book chapters. Additional information: Think. Check. Submit (video - 01:58 min. Think. Check. Submit): This short video aims to guide the researcher in their process of choosing an Open Access journal for the publication of the results of their research.
Open Access, copyright and licensing	Open licences (video - 03:05 min. TUDelft): This video covers in depth the meaning of Creative Commons licences, which are recommended for open publication to protect the researcher's copyright. Open access: copyright and licensing (text - 2 pp. University of Reading): This guide offers information on all issues related to copyright and licences that must be taken into account when publishing in Open Access.
European Commission research grants and Open Access	Open Access Requirements in Horizon 2020 (video - 03:55 min. FOSTER): This video, through an introductory perspective, addresses the main requirements of the European Commission's Horizon 2020 programme. Open access: EU support for open access (text - 2 pp. European Commission): This website includes all the useful information to European Union member countries regarding the use of open access: EU support for

	open access, what it means, how it is integrated into the funding programmes, advice for projects and working with EU countries. Additional information: Open Access mandate and Open Research Data in Horizon 2020: How Can OpenAIRE help? (OpenAIRE): Factsheet with a brief overview of how to comply with H2020 Open Access mandates, specifically this resource is intended for researchers to learn about the H2020 Open Access policies and how they can easily comply.

Figure 3. Open Access contents.

3.2.3 Questionnaire

What is the service that allows you to view the summary of publishers' open access archiving conditions for individual journals?	
Sherpa Fact	Incorrect! Sherpa Fact is a service designed to provide guidance to researchers on whether on journal compliance with a funder's open access policies. Sherpa Romeo is an online resource that aggregates and presents publisher and journal open access policies from around the world.
Sherpa Romeo *	Correct! Sherpa Romeo is an online resource that aggregates and presents publisher and journal open access policies from around the world.
Sherpa Juliet	Incorrect! Sherpa Juliet enables researchers and librarians to see funders' conditions for open access publication. Sherpa Romeo is an online resource that aggregates and presents publisher and journal open access policies from around the world.
OpenDOAR	Incorrect! OpenDOAR is a global Directory of Open Access Repositories. Sherpa Romeo is an online resource that aggregates and presents publisher and journal open access policies from around the world.
Which is the most dominant licensing model in Open Access scientific publishing?	
CC0	Incorrect! CC0 is a public dedication tool, it allows creators to give up their copyright and put their works into the public domain. CC-BY is a license where attribution to the author is required.
CC-BY *	Correct! CC-BY is a license where attribution to the author is required.

CC-BY-SA	Incorrect! This license indicates public to give appropriate credit and distribute the contributions under the same license as the original. CC-BY is a license where attribution to the author is required.
CC-BY-NC-ND	Incorrect! This license indicates that it is made possible to copy and redistribute the material in any medium or format if you give appropriate credit, you do not use the material for commercial purposes, nor do you transform the material.
On the green route, which version can be deposited into the repository?	
Mostly Pre-print and post-print versions *	Correct! Mostly pre-print and post-print versions can be deposited into the repository.
Published version	Incorrect! Published versions usually are not permitted to be deposited into the repository. Mostly pre-print and post-print versions can be deposited into the repository.
Any version of the paper	Incorrect! Usually the pre-prints and post-prints versions are allowed permitted by the publishers. If you consult the publisher's policy you can know which one you can deposit
None of above	Incorrect! Most pre-print and post-print versions can be deposited in the repository.
What does "NC" mean in Creative Commons?	
No comments	Incorrect! NC in Creative Commons means the non-commercial uses of the work are permitted.
No credit	Incorrect! NC in Creative Commons means the non-commercial uses of the work are permitted.
Non-commercial *	Correct! When the CC licence includes “NC”, it means only non-commercial uses of the work are allowed.
No cite permission	Incorrect! NC in Creative Commons means the non-commercial uses of the work are permitted.
What is the name of the Open Access publishing platform for Horizon 2020 and Horizon Europe research results?	

Open Research Europe *	Correct! Open Research Europe is a scholarly publishing platform available to Horizon 2020 and Horizon Europe beneficiaries. It comes at no cost to them, has a rigorous and open peer review process, and the open access model enables everyone to access the results.
European Commission	Incorrect! Open Research Europe is a scholarly publishing platform available to Horizon 2020 and Horizon Europe beneficiaries.
Open Research Data	Incorrect! Open Research Europe is a scholarly publishing platform available to Horizon 2020 and Horizon Europe beneficiaries.
Open Research Articles	Incorrect! Open Research Europe is a scholarly publishing platform available to Horizon 2020 and Horizon Europe beneficiaries.
Can your institutional repository be used to comply with the open access mandates required by the European Commission?	
Yes *	Correct! The institutional repository can be used to comply with the mandates of the European Commission.
No	Incorrect! The institutional repository can be used to comply with the mandates of the European Commission.

Figure 4. Open Access questionnaire

3.2.4Expected duration

In this case, the expected duration of the Open Access module is approximately **30 minutes**.

3.3 Research Data

3.3.1 Summary

1. Introduction to Research Data
2. Research Data Management
3. Research Data, copyright and licensing
4. Data Management Plan (DMP)
5. FAIR Data

3.3.2Contents

Introduction to Research Data	Knowledge clip: What is Research Data Management (RDM)? (video - 03:31 min. Ghent University Data Stewards): This video briefly presents what Research Data is and its benefits for the research community. It also refers to the goals of RDM. Research data management explained (text - 3 pp. University of Leeds Library): Document that explains what Research Data is, why researchers should manage Research Data, and shows the life cycle of Research Data.
Research Data Management	Research in 3 minutes: Research Data Management (video - 03:17 min. Office of Scholarly Communication, University of Cambridge): In this video the concept of Research Data Management (RDM) is introduced. Answers are given to questions such as: why does data have been managed? What is the purpose of RDM? What are the benefits of RDM? How should this data be shared? A Research Data Management Handbook (text - 5 pp. OpenAIRE): Introductory manual to the exchange of research data which provides a summary and bullet points of the subject in question. Through its various sections, the following elements are treated in more detail: why manage data? Responsibilities in Research Data Management? Which data should be preserved and shared? Additional information: What is research data management? (graphic - 2 pp. Ottawa University Library): This image explains how RDM involves the active organization and maintenance of data throughout the research process, and the appropriate archiving of the data at the end of it. It is a continuous activity throughout the life cycle of the data.
Research Data, copyright and licensing	Licensing Open Data: A Practical Guide (video - 02:04 min. Colleaga): Video that presents the legal limitations that affect Research Data (copyright) and the licences that must be applied to manage and publish it openly. How do I license my research data? (text - 3 pp. OpenAIRE): Guide for researchers where licensing information is provided for Research Data and how to apply it in order to address copyright issues and related rights. Through its various sections, the following elements are dealt with in depth:

	what licence should be applied to Research Data? How to apply licences for Research Data? Specifications for licensing Research Data. Additional information: Open Research Handbook: Open licences (text - 1 pp. University of Reading): Practical guide to Open Research and, more specifically, on open llicenses The Software section contains general information on Open Source llicenses definition, best-known licenses, the distinction between a permissive license and copyleft license... There is also a brief talk about the Open Source Initiative.
Data Management Plan (DMP)	What is a DMP or a Data Management Plan? (video - 01:59 min. Consorci de Serveis Universitaris de Catalunya, CSUC): Video on the operation of the eiNaDMP that allows writing DMP for different agencies of financing or collectives, consulting the guides and examples, sharing plans with other researchers, and exporting plans in different formats. La Factoria at Pompeu Fabra University has carried out the updates of the video screens due to changes in the software and has also included subtitles in Spanish and English. How to create a Data Management Plan for H2020 projects (text - 4 pp. OpenAIRE): Guide for researchers where information on the topic in question is presented in an introductory way. From different sections, the following elements are delved into: how to create a Data Management Plan, the first steps in the process, and when to write and revise the DMP. Additional information: Checklist for a Data Management Plan (Digital Curation Center): The DDC synthesized requirements for Data Management Plans and best practices within the wider community. In this way, it offers a checklist that presents the main elements that researchers may want to cover when writing a DMP.
FAIR Data	Knowledge clip: FAIR data principles (video - 04:54 min. Ghent University Data Stewards): This video offers a general review of the FAIR data concept and the meaning of each of the principles (Findable, Accessible, Interoperable, Reusable). It also shows why Research Data repositories become a key infrastructure in compliance with these principles.

	How to make your data FAIR (text - 4 pp. OpenAIRE): Overview for researchers showing the fundamental principles of FAIR Data and identifying how to achieve a better approach to the performance of FAIR principles through different sections: introduction, what is FAIR Data? How fair is your data?

Figure 5. Research Data contents.

3.3.3 Questionnaire

Which of the following research data is based on its collection method?	
Numerical, textual, audiovisual, multimedia	Incorrect! These data types are based on their Nature. According to their collection mode, you can find experimental, observational, simulation, derived or compiled...
Spreadsheets, databases, images, maps, audio files	Incorrect! These data types are based on their Nature. According to their collection mode, you can find experimental, observational, simulation, derived or compiled...
Digital (born-digital or digitized) or non-digital	Incorrect! These data types are based on their Nature. According to their collection mode, you can find experimental, observational, simulation, derived or compiled...
Experimental, observational, simulation, derived or compiled… *	Correct!
What is RDM?	
It is the process of managing data collected and produced during a research project *	Correct!
It is a plan that demonstrates the researcher has established how	Incorrect! It defines a Data Management Plan, RDM is the process of managing data collected and produced during a research project.

to store, label and share data	
It is strictly the way to make data findable, accessible, interoperable and reusable	Incorrect! It defines a Data Management Plan, RDM is the process of managing data collected and produced during a research project.
It is a set of data that describes and gives information about other data.	Incorrect! It defines a Data Management Plan, RDM is the process of managing data collected and produced during a research project.
Select which of the following statements are true about Open data:	
Data owners have to ensure that all open data has been made anonymous and no one's privacy is threatened	Incorrect! All statements are correct.
Open data helps to find connections between different datasets to obtain new data not available individually	Incorrect! All statements are correct.
Open data manages standards for handling, storing and accessing data	Incorrect! All statements are correct.
All of the above are correct *	Correct!

Apache License, GNU General Public License (GPL), MIT license or Mozilla Public License, are common licenses specially defined for:	
Software *	Correct!
Open datasets	Incorrect! They are common licenses specially defined for software.
Copyrighted datasets	Incorrect! They are common licenses specially defined for software.
All of the above are correct	Incorrect! They are common licenses specially defined for software.
Select which of the following statements is true about the eiNa DMP:	
It allows you to create a DMP online in a collaborative and free way	Incorrect! All answers are true facts about the eiNaDMP.
It allows you to assign different roles to work with the DMP (editor, viewer…)	Incorrect! All answers are true facts about the eiNaDMP.
You can export the DMP in different formats (Docx, PDF, TXT, etc)	Incorrect! All answers are true facts about the eiNaDMP.
All of the above are correct *	Correct! All answers are true facts about the eiNaDMP.
According to Research Data Management, what does FAIR stand for?	
Flexible, Achievable, Inclusive, Respectful	Incorrect! It stands for Findable, Accessible, Interoperable and Reusable.

Findable, Achievable, Interoperable and Respectful	Incorrect! It stands for Findable, Accessible, Interoperable and Reusable.
Flexible, Accessible, Inclusive and Reusable	Incorrect! It stands for Findable, Accessible, Interoperable and Reusable.
Findable, Accessible, Interoperable and Reusable *	Correct!

Figure 6. Research Data questionnaire

3.3.4 Expected duration

The expected duration of the Research Data module is approximately **35 minutes**.

4. Accreditation

In order to accredit and recognize the work done by students, each of the modules described in Section 3 (and others to be developed in the future) is to be rewarded with a badge. The adoption of micro-credentials is being explored in other areas of EUTOPIA, as it allows recognizing learners' participation in various types of short, intensive and connected learning activities.

A badge is defined as a "type of digital badge that is verifiable, portable, and packed with information about skills and achievements"[1]. From now on, we will use the term Open Badges generically for this kind of credential.

This type of badge certifies that students have achieved a certain skill, and it is not merely an image, as it digitally contains all the data associated with who has granted it and why it was granted. Therefore, it is a new way to demonstrate learners' skills and aptitudes online, which at the same time improves their digital identity.

In order for learners to obtain their credentials after completing the modules, they must answer the corresponding learning questionnaires (as seen in Section 3) that automatically assess whether or not students reach a basic level of knowledge. Needless to say, these questionnaires are to be made available to students on the same platform where the different training materials are hosted.

A key decision for any institution that wishes to issue *Open Badges* is whether to create this functionality on an existing platform or license access to an external platform for this functionality.

- **Integrated in an existing platform:**

Open Badges by Mozilla, whose infrastructure of shared and open technical standards makes it easy for anyone to issue, obtain and display badges on the web provided that the structure and guidelines established by the Open Badges Standard are followed. The organization can start by assessing the Open Badges products certified by IMS, since many of these products also offer the possibility of integrating with your Moodle through open or your own APIs.

Example: The Smithsonian Quest initiative. This program "connects and rewards students from different regions as they learn through discovery and collaboration". Students take the activities online and receive incentives to continue through badges, which in many cases are "integrated with the content of online education lectures"[2].

- **Use of an external platform:**

[1] *InterPro - Badgr - Digital Badges.* (2021). Interdisciplinary Professional Programs, College of Engineering. University of Wisconsin Knowledgebase. <https://kb.wisc.edu/engr/interpro/page.php?id=112797>.

[2] *Smithsonian Quest Takes Learners on Journey of Discovery and Collaboration.* (2013). Smithsonian Office of Educational Technology. Smithsonian Institution <https://www.si.edu/newsdesk/releases/smithsonian-quests-takes-learners-journey-discovery-and-collaboration>.

Open Badge Factory, an innovative, user-friendly, and cost-efficient online platform that large and small organizations around the world use to create, issue and manage their *Open Badges*. In addition, once the institutions have configured their *Open Badges*, the students who wish to do so can use Open Badge Passport, a free and easy-to-use service property of Open Badge Factory, where they can receive, store and share (LinkedIn profile, Twitter, Facebook or other digital profiles, curriculum vitae…) their badges securely and without any requirement to demonstrate all the skills and qualities that they have acquired.

Example: The library of the University of Vic uses this platform to certify the online training courses of the Servei de Gestió Documental, Arxiu i Registre (Document Management, Archive and Registry Service) through its Moodle (Ubiqua).

It would be advisable to explore these options further in accordance with EUTOPIA outputs from the other Working Packages related with training. One option for study could be the Online collaborative spaces of the EUTOPIA website.

As a preliminary step while waiting on a policy decision on the use of badges, a test virtual classroom has been created in the UPF Moodle environment. This Moodle classroom has been used by UPF staff on a test mode. Further pilot testing is to be done involving students from all Eutopia universities, who are to be granted access to the UPF Moodle platform. UPF will issue certificates of achievement to students who participate in the pilot test and successfully complete it.

Feedback will be obtained from the pilot testers via a questionnaire. It will be taken into account before development of further modules.