Training guide and self- assessment tool. V. 1- Final

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List of Acronyms	
EOSC	European Open Science Cloud
FAIR	Open data principles Findable. Accessible. Interoperable. Reusable.
CS	Citizen Science
CSA	Citizen Science Activity
OS	Open Science
SE	South – Eastern

1. Aim and scope

Aim of this Project Result PR3A3 is to provide a short and practical *Guide* to CEOS_SE partners on training on Open Science (OS) and Citizen Science (CS), leveraging on the main lessons learned during the project and - not to reinvent the wheel - on useful reusable material.

Taking from chapter 6 of the PR3A2 *Activity Report*, the *Guide* will try to address the main challenges highlighted by the partners (namely communication, timing, and preparation of the material) in a suggestion mode, with a non-prescriptive approach.

This *Guide* aims at gathering and sharing good practices to try to solve common issues faced by the partners and to be useful also beyond the project.

This *Guide* will also try to adapt PR3A1 *Training and design implementation framework* concepts to better suit the real needs and challenges encountered during the delivery of the courses in PR3, and will also capitalise on the Conclusions of the PR2A3 study *Upscaling collaboration between academic and public libraries.*

The chapters have a twofold structure: an introduction based on theory coupled with real challenges, and a practical Checklist.

2. Before starting: planning, design and communication

Planning is crucial to deliver effective training; designing should be precise and at the same time flexible; communication is essential to get people involved, eager to participate and engaged.
In a word, they should immediately see "what's in it for me".

You can refer to the rich section of the *INOS Learning design framework*[1] (pages 16-42) recalled in the CEOS_ SE PR3A1 *Training and design implementation framework* to correctly plan the learning objectives and the most appropriate activity format for your audience.

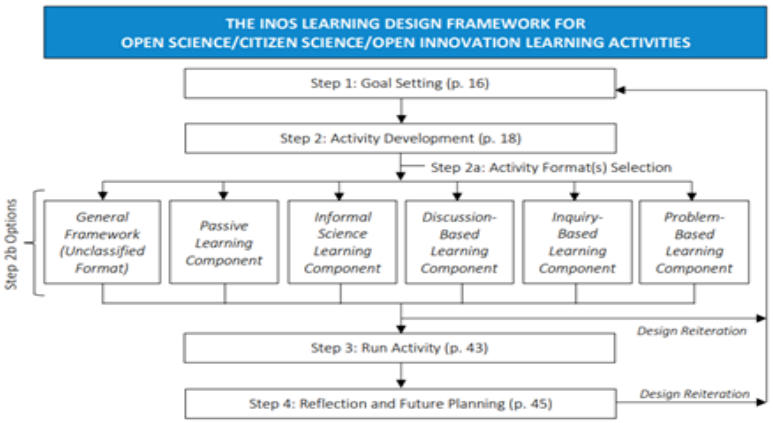

Fig. 1 INOS Learning design framework

In the CEOS_SE PR3A1 *Training and design implementation framework* you can also find a schema of the steps you need to carry out in order to give effective training, summarised in this table appositely created for the CEOS_SE project by Sara Cantarutti and Jessica Schinasi of UT (Fig. 2).

[1] Elisha Anne Teo. (2020). The INOS Learning Design Framework: Fostering the Educational Value of Open Science, Citizen Science and Open Innovation Activities (Version 1). Zenodo. https://doi.org/10.5281/zenodo.3932149

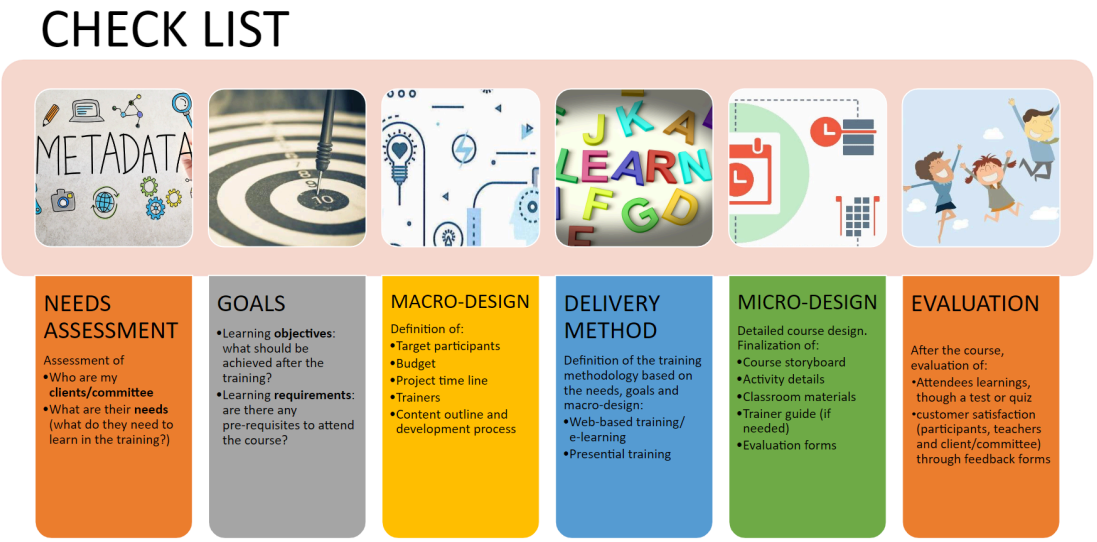

Fig. 2 Training checklist (S.Cantarutti - J.Schinasi)

It has to be stressed, taking into account the challenges resulting in PR3A2 *Activities report*, that

1. **Timing** has to be taken into consideration from different point of views, particularly:
    a. If your training or learning by doing activity **involve citizens, working hours have to be avoided** (see point 6.3 of the PR3A2 Activities report, page 114)
    b. Be **flexible and creative to match different stakeholders time needs**: see the solution proposed by NSK to coordinate the time of facilitators and researchers, by recording a video in which the scientist explained the topic in the form of a lecture (see point 6.6 of the PR3A2 Activities Report, page 116)
    c. **Avoid scheduling the activities near national holidays** - it was a reason of unsuccess at UT (see point 6.2 of the PR3A2 Activities report, page 113)
    d. Try to **couple your activity to other ongoing or well established events**, e.g. the international Open Access week, the Panellenic Academic Libraries Conference or the Croatian Book Fair (see points 6.3, 6.4 and 6.6 of the PR3A2 Activities report, page 113 and 116)
    e. Try **to match the duration of the course and the content**, balancing also with the attention potential of the audience: 2 hours was deemed too short to address CS topics, but more than 2 hours might be too much for many audiences. Try to reduce the content to a sort of "minimum viable information" bit (see point 6.3 of the PR3A2 Activities report, page 113)
    f. A **detailed course storyboard** or a detailed activity timetable might help - provided that you both stick to it in terms of timing and that you manage to be flexible in adapting according to the floor reactions or attitude
2. **Design** the training according to your audience, like
    a. **Design** your CSA activity, training or learning by doing in a way which must be **comprehensible to citizen**s (see point 4, page 159, of the PR2A3 study *Upscaling collaboration*)

b. Whenever it is possible and doable, **go for co-designing and co-creating** CSA activities and training, according to the ORION co-creation menu[2], which is suitable not only for research projects
c. Try t**o balance the training activity to different target groups** (e.g. academic librarians and researchers - see point 6.5 of the PR3A2 Activities report, page 115): we should learn to speak the language of the floor and target the message they can be sensitive to, to get their attention and interest - e.g. pointless to talk about citation increase in Open Science to administrators or citizens - and immediately see "**what's in it for me**"
d. **Try to test in advance the floor knowledge**, not to make them uncomfortable or worried about not having the requested skills (see point 6.7 of the PR3A2 Activities report, page 116); if useful you could send material in advance or send the references to knowledge hubs, Wikipedia entries, information leaflets
e. **Try to test at the beginning** - and schedule the time to do it - **the initial expectations of your floor** about the activity/course; check at the end of the activity/course if they were met or if there is some mismatch
f. **Test how widespread misconceptions can be** (e.g. in Open Science/Open Access) via interactive online tools like Mentimeter. It'a a way to catch attention and to start building new knowledge on top of it
g. **Try to connect to the UN Sustainable Development Goals - SDGs topics** as it might be relevant, appealing or engaging for a wider audience, and they can see the immediate benefit of participating (see point 6.6 of the PR3A2 Activities report, page 115)

3. **Collaborate and empower**, as many different skills are needed, try to create synergies within and outside your institution
    a. **Leverage on different people and skills** and be open to listening, compromising, team working (see points 4 and 7, page 160 of the PR2A3 study *Upscaling collaboration*)
    b. **Map the skills needed** in every stage of the activity or the training (including appealing communication and graphic skills to advertise) and match them to the skills of the project partners. Let people do what they do better - do not force partners in doing something they are not familiar with or keen on
    c. **Empower your colleagues and partners** by engaging them as trainers or facilitators: "The key to a successful CSA is collegiality" and enthusiasm, as recognized in PR2A3 study *Upscaling collaboration* (point 7, page 159)
    d. **Create any possible synergy** with other groups or units within your institution, leveraging on other colleague skills (see point 6.2 of the PR3A2 Activities report, page 113)
4. **Communicate in an effective way**, including
    a. **Go for the right (and appealing) title**: this was a mistake of the UT training, as it was not clear from the title that the course was a sort of "update" of the previous basic course the participants should have attended back in 2019
    b. **Find the right words to communicate what the course or the activity is about**: again, UT failed to involve public libraries before they could have perceived the course on Open Science as too focused on academia and research, thus out of their scope
    c. **Prepare promotional material** and adequate graphic materials to catch the attention of the public - being them citizens or researchers or fellow librarians. Avoid being

[2] ORION co creation menu
https://www.orion-openscience.eu/activities/co-creation/201711/menu-co-creation-tools

boring or too long. Try to engage them via direct questions, e.g. Do you know how much public money the library spends to give access to the most recent findings?

2.1 Planning, design and communication checklist

Planning

- Did you schedule the event (CSA activity or training) taking into account all the potential participants' needs?
- Did you check if there are suitable established events to couple with?
- Did you draft a timetable for your activity/course to see if content and timing fit?
- Did you plan your time slots taking into account breaks, Q&A, the right timing for group activity not to be compressed?
- Did you allow the right time for interactions?

Designing

- Did you check if any of the co-creation suggestions fits your activity/training?
- Did you check if your activity is comprehensible to citizens?
- Did you check if your language is not too technical?
- Did you check the initial knowledge of your floor?
- Did you share material in advance to get the floor prepared?
- Did you check the initial expectations of your floor? And will you check in the end if those expectations were met?
- Did you adapt your content and format to the potential floor, trying to speak the same language?
- Did you make immediately clear “what’s in it for me” to catch attention and get people involved/engaged?
- Did you check if you can link your activity/training to one or more UN SDGs, to show the concrete usefulness?

Collaborating

- Did you map the skills needed for your activity/training?
- Did you match them to those of your partners/teammates and involve them in designing/communicating/delivering the course according to their skills?
- Did you let people do what they know best?
- Did you try to create all the possible synergies?
- Did you involve new colleagues as trainers, empowering them?

Communicating

- Did you choose the right title for your activity/training, at the same time appealing and clear about the content?
- Did you communicate what the activity/training is about in the right language, with the right words not to be misunderstood?
- Did you share the timetable?
- Did you prepare appealing graphic material to advertise the event?
- Did you put the advertising material in the right place - physical and virtual?

3. Content creation and delivering: tips&tricks

In delivering your training - and, before that, in creating/adjusting the content for your targeted audience - you can refer to chapter 2 of the P3A1 *Training and design implementation framework* , particularly bearing in mind some of the *FOSTER Open Science Training Handbook*[3] expectations about a trainer:

- be enthusiastic;
- understand the importance of research transparency and reproducibility;
- show familiarity and knowledge with the research process and research outputs that can be shared, including data, code and software, papers, communication, workflows, grant applications, and data management plans;
- be aware of the policies, regulations and laws that could affect researchers when performing Open Science (and Citizen Science!)
- be able to teach and have a profound knowledge in Open Science (and Citizen Science)

It is also helpful to bear in mind some general suggestions, like

- stay connected! Always try to keep the contact with the group, check your pace and those of the others
- be careful not to overload the participants with too much and/or too difficult content
- be open for feedback at any time but avoid or actively break-up never-ending discussions
- breaks: Always give enough space for breaks. The longer your course, the longer and more often your breaks
- prepare short, middle and long versions of your exercises to become flexible if the discussions are more or less intensive
- be prepared for difficult students and consult some troubleshooting guidance before the course
- wrap-up / meta view: at the end of each module, use again Mentimeter (or similar) to a) test some knowledge b) see which 3 concept the session left in their minds
- at the end of the training it might be worth it to recap: tell your participants what you did and why you did it. This will also make the evaluation easier

And do not forget the final recommendation: enjoy the session yourself!

3.1 Content creation and delivery checklist

In content creation and in delivery you can make use of some tips and tricks that the project participants discussed during the LTTA event in Zagreb, in September 2022, reported here in the form of a checklist.

Content creation

- Did you stress/highlight “what’s in it for me” for the audience?
- Did you try to connect/relate to their daily workflow/experience?

[3] Sonja Bezjak, April Clyburne-Sherin, Philipp Conzett, Pedro Fernandes, Edit Görögh, Kerstin Helbig, Bianca Kramer, Ignasi Labastida, Kyle Niemeyer, Fotis Psomopoulos, Tony Ross-Hellauer, René Schneider, Jon Tennant, Ellen Verbakel, Helene Brinken, Lambert Heller, Open Science training handbook (2018), https://open-science-training-handbook.github.io/Open-Science-Training-Handbook_EN//

- Did you start with the "why" - to make participants understand it's not just the umpteenth administrative burden, there is a reason why they should care?
- Did you go for the "how" only after the "why"? If not, your lesson will just be seen a set of non-understandable, imposed rules
- Did you provide data? e.g. researchers do not have a clue on how much libraries are spending in subscriptions, and upon this wrong assumption they are against Open Access fees
- Did you substantiate any assertion with sources? Did you put the source link into the slides?
- Have you been appealing? use relevant, eye-catching, up-to date examples the audience can relate to
- Did you present best practices? e.g. of libraries involved in CS activities

Getting started

- Did you start with a Mentimeter (or similar online quick survey tool)? You should assess
    - the starting knowledge level about the topic(s)
    - how much "false myths" are widespread among the audience
    - what are the learning needs ("I expect to learn about…") - and remember to check in the end if you properly addressed them all
- Did you ask questions to make the audience think/reflect? In a course on Open Science, you could ask researchers "why do you do research?" and make them reflect: is the current system still matching their initial choice/approach or does it clip their wings?
- Did you start with "take home messages"? Highlight the concepts you want them not to forget, now that minds are clear and not tired
- Did you clearly state at the beginning of each module the learning objectives ("what are we going to learn")? - and some key messages of the module, if applicable
- Did you give clear "housekeeping" messages? how will you manage/take the questions; timetable and breaks; short "code of conduct" such as be respectful…

Slide tips

- Did you avoid slides full of text and small size font?
- Did you avoid backgrounds or colours that can put sight-impaired people not at ease?
- Did you try make use of photos as background or content? e.g. using eye-catching, context sensitive photos[4]
- Did you try to use catch phrases? e.g. "too easy not to do" referred to OS practices support
- Did you try to use jokes or unexpected images/cartoons? when people laugh, they learn and remember better, and you enjoy teaching
- Did you try to be concrete? e.g. use images or examples the audience can relate to
- Did you insert a slide with the programme of the course ("what are we going to see?")? If you have different modules, did you insert as many slides you need to

[4] You can use Elena Giglia's set (CC BY) on Flickr, https://www.flickr.com/photos/eg65/albums/72157719425381062 or any photo on Unsplash (https://unsplash.com/)

clearly show the progress in the scheduled path - use the same graphic highlighting changes as the modules go on?

Feedback

- At the end of each module, did you insert a Mentimeter (or similar) to create a word cloud to fix the 3 concepts the audience got after the session?
- At the end of each module, did you insert a short test (e.g. 3 easy questions) to check if the information reached the recipients?
- Did you check if the initial learning needs were met?
- Did you enjoy the training session?
- How was the overall atmosphere? How did you feel the participants' mood? Engaged, interested, annoyed, argumentative?

4. Post-training: assess, reflect, re-design

It is crucial to assess, reflect and if needed re-design your activity/training course, both as a trainer and as organisers.

It should be done both formally via questionnaire (see below) and informally.

Informally, during delivery, as a trainer you should assess if the key concepts were conveyed and if the audience got and retained the information, as suggested, via Mentimeter (or similar) inserted into the slidedeck (see above, par. 3). Via Mentimeter you can also get a first, quick feedback on the usefulness of the course or the overall satisfaction.
You should also stay always connected to the audience, feel the general mood and responsiveness, adapting your time and pace to it.

4.1 Trainer's/organiser's checklist

As a trainer, you should reflect on a series of elements detailed in the UT Learning Unit self assessment tool developed for the MasterExpert course[5]. You can use the list both to self assess and/or it would be helpful to ask one of the attendants (or your colleagues within the organisation) to observe your training delivery and see whether:

- Did you make the learning objective(s) clear?
- Did you identify a working method?
- Did you schedule the time slots for each and any topic and contribution?
- Did you communicate in a synthetic and clear manner?
- Did you pay attention to all the participants' contributions?
- Did you achieve your training goals?
- Did you check the overall satisfaction about the training course?
- Did you communicate in a logical, sequential, complete manner?
- Did you stick to the topic(s)?
- Did you devote time and room to other participants' views?

[5] Scientific coordinator of the master Expert was professor Anna Castellano, University of Turin. The document is intended mainly for internal use, so no URL available.

- Did you check the mutual understanding?
- Did you often ask "why, when, how, who"?
- Did you use examples, metaphors, anecdotes?
- Did you synthesise any time it was possible?
- Did you adapt your language to the floor?
- Were you attentive, engaging, emphatic?
- Did you listen, without interrupting?
- Did you refer to the agenda whenever possible?
- Did you prioritise the training topic(s)?
- Did you stick to the topic(s) without digressions?
- Did you balance the communication, stressing the right topic(s) and avoiding a plane, boring style?

The *INOS learning framework*[6] provides a checklist for organisers to:

A. Gather all activity evaluation information. This includes:
    a. Learning evaluation information and data
    b. Testimonials and observations from demonstrators
    c. Records of live feedback from and observations of participants
    d. Records of challenges, interventions and outcomes during the activity
B. Discuss and analyse activity evaluation information to identify:
    a. Strengths of activity design to deliver learning goals/objectives
    b. Weaknesses of activity design to deliver learning goals/objectives
    c. Interventions during the activity that were successful or unsuccessful
    d. Difficulties organisers/demonstrators faced in facilitating the activity
    e. Technical or logistical difficulties
C. Discuss and establish strategies for improving future activities
    a. Alterations and additions to the activity's design
    b. Contingency plans for possible challenges in future activities
    c. Professional development activities for organisers/demonstrators to address difficulties and challenges when facilitating the activity, such as via:
        - Professional development courses/training
        - Gaining additional personal experience
        - Learning from experience of organisers of other similar activities

You can also find a chart in the *INOS Learning framework* (fig.3) to mark strengths and challenges of the delivered activity to help trainers reflect and adjust or re-design:

[6] Elisha Anne Teo. (2020). The INOS Learning Design Framework: Fostering the Educational Value of Open Science, Citizen Science and Open Innovation Activities (Version 1). Zenodo. https://doi.org/10.5281/zenodo.3932149, page 47

REFLECTION AND FUTURE PLANNING TEMPLATE (POST-ACTIVITY)	
STRENGTHS OF ACTIVITY	
Strengths	Elements to keep for next activity
CHALLENGES OF ACTIVITY	
Challenges	Strategies to manage challenges for next activity

Fig. 3 INOS assessment chart

4.2 Participants checklist

To formally assess the participants' views, it is recommended to adopt a two-step evaluation, *ex-ante* and *ex-post*, via questionnaires tailored according to the nature of the activity (see Annex 1 for the CEOS_SE questionnaire templates).

Preliminarily, the partners agreed on a number of indicators and targets to be achieved. This is the first step. Indicators of course should be measurable and relevant, such as number of training courses delivered, number of participants, % of positive evaluations (=>4 out of 5). % of negative evaluations (=<1)...

Questionnaires can then be used to check if indicators were met and/or where the gaps are.

In CEOS_SE PR3 we referred to Marzano and Pickering's[7] 5 learning dimensions. If you need an extensive assessment you can use them all, if not you can adapt. They are:

1. Attitudes and perceptions
2. Acquire and integrate knowledge

[7] Robert J. Marzano - Debra J. Pickering, *Dimensions of learning, Dimensions of learning: teacher's manual,* 2nd edition Aurora (Co) : McRel, 1997.

3. Extend knowledge
4. Use knowledge meaningfully
5. Habits of mind.

To assess participants' expectations and satisfaction it is recommended

- to state in a short Introduction the aim of gathering responses and whether the questionnaire will be anonymous or not; who is going to manage the data (according to GDPR)
- to use a Lickert scale 1 to 5, to better graduate the feedback
- to codify/identify questions (e.g. 1.1, 1.2 or A1, A2…) to analyse and compare the answers in an easier way
- to translate into national languages in case of common project questionnaires, like in CEOS_SE
- to leave free text boxes to comment/suggest.

Useful elements in an ***ex-ante*** **questionnaire** are

- Age and sex
- Professional role and affiliation
- Perceived level of knowledge about the topic(s) - one question each
- Expectations / topics
- Expectations / feelings
- Motivations to attend the activity
- Where did they find the information about the activity
- Easiness of registration
- Issues during registration
- GDPR consent for images to be taken during the course
- GDPR consent for data storage and its purpose

Useful elements in an **ex-post questionnaire**[8] , to be divided into sections, are

Communication

- Timely communication about the activity/training
- Effective communication about the activity/training
- Clear communication about the training objectives

Delivery

- Adequate coverage of the expected topics
- Was there any topic which should have requested more time?
- Was there any topic which should have requested less time?
- Adequate level of the training course (or too difficult, too basic…)
- Adequate scheduling of modules/breaks
- Adequate time for hand-on modules
- Adequate duration of the course
- Adequate language

[8] Some suggestions come from the UT Training Unit final questionnaire.

- Adequate training material
- Adequate venue (accessible, comfortable…)
- Adequate timing (with respect to working activities/agenda)
- Adequate tech tools

Satisfaction

- Overall satisfaction of the training
- The training met the expectations
- The training contributed to my upskilling
- The training was useful
- The training increased my knowledge
- The trainer was clear
- The trainer was effective
- The trainer was engaging
- The trainer was respectful

Usability

- I can apply what I learned in my daily job
- The training material is easily findable and accessible
- The training material is properly licensed to be reusable

5. Conclusions

This Guide is intended as a daily working tool and not as a theoretical dissertation on training. It stems from the long standing experience in delivering training courses by the Open Science Unit and the Training Unit at UT, which willingly shared their suggestions and good practices.

It can be used as a living document to add suggestions and tools other partners find useful.

References

Elisha Anne Teo. (2020). The INOS Learning Design Framework: Fostering the Educational Value of Open Science, Citizen Science and Open Innovation Activities (Version 1). Zenodo. https://doi.org/10.5281/zenodo.3932149

ORION co creation menu
https://www.orion-openscience.eu/activities/co-creation/201711/menu-co-creation-tools

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https://www.flickr.com/photos/eg65/albums/72157719425381062

Robert J. Marzano - Debra J. Pickering, *Dimensions of learning, Dimensions of learning: teacher's manual,* 2nd edition Aurora (Co) : McRel, 1997.

Annex 1

CEOS_SE questionnaires

Ex ante questionnaire - Train the trainers

Introduction	Scope of this questionnaire is to gather some essentials information on participants to the activity and to assess their initial knowledge of the topic
General information	
	Affiliation
	Library
	Age:
	a. (20-30)
	b. (30-40)
	c. (40-50)
	d. (50-65)
	Librarian community group
	a. academic librarian
	b. public librarian
	c. Documentalist
	d. National library librarian
	e. School librarian
	f. other

	Role held in the library and main duties
	Already involved in OS/CS activities
	Yes
	No
Level of knowledge	How do you rate your personal knowledge of OS?
	a. Limited (e.g. little to no knowledge of the topic)
	b. Basic (e.g. have heard of the topic before and understand basic concepts)
	c. Intermediate (e.g. I know quite well the topic I already have competencies that allow me to support OS)
	d. Advanced (e.g. university-level knowledge of the topic)
	How do you rate your personal knowledge of CS?
	a. Limited (e.g. little to no knowledge of the topic)
	b. Basic (e.g. have heard of the topic before and understand basic concepts)
	c. Intermediate (e.g. I know quite well the topic I already have competencies that allow me to support CS)
	d. Advanced (e.g. university-level knowledge of the topic)
Expectations/ motivations	What are the topics do you expect will be covered by this training activity?
	What is your motivation in attending this course?

Ex post questionnaire - Train the trainers

Questions. Part A
From 1 to 5 how do you evaluate this training course? (1= not useful- 5= extremely useful)
From 1 to 5 how much do you think your knowledge on OS/CS issues increased?(1= I dont't think I learned something new 5= I think I acquired new and relevant competencies)
From 1 to 5 how much of what you have learned you will be able to apply in your work? (1-I will not be able to apply these competencies in my work; 5= I will use these competencies in my daily activity)
Do you think the level of the course was: (a. adequate; b. too difficult; c. too easy d. too theoretical e. too practical; f. uneven; g. other)
Do you think the duration of the course was: (a. adequate; b. too long; c. too short; d. other)?
What arguments/themes do you think should have been treated more in-depth?
According to you, what arguments/themes were superfluous?

In general, from 1 to 5 how much do you rate the course and its impact on your work? (1= I think the course was neither useful nor interesting 5= I found the course extremely useful for my work and interesting)
From 1 to 5 how much were your expectations about this course satisfied? (1= I was disappointed 5 = I was completely satisfied)
Questions. Part B
What do you think about academic libraries becoming involved in citizen science projects and activities?
Do you think your library should become more involved in CS projects and activities?
If yes, why?
Does your leadership support the idea of your library becoming involved in public engagement activities?
How do you envisage the future role of academic/public/national libraries in your country?

Ex post questionnaire - Learning by doing

Introduction	Scope of this questionnaire is to assess participants' motivation adìnd level of satisfaction of the learning by doing activity, their general attitude towards Citizen Science and the probability they should take part in future CS projects and initiatives.
General information. Part A	
	Age
	Sex
	Stakeholders' group:
	a. Reseacher b. University student c. School student d. Librarian e. Administrative f. Teacher g. Funder h. Policy maker i. Other
Questions. Part B	
	From 1 to 5 how much did you like taking part in ---------- [insert the denomination of your

	planned activity] ? (1= I didn't like it at all – 5 = I liked it a lot]
	Was it fruitful taking part in ---------- [insert the denomination of your planned activity] ? (1= Absolutely not – 5 = Yes , at all]
	Is this the first time you took part in a citizen science activity?
	(optional) If not, how many times have you taken part in a citizen science activity or volunteered in a CS project?
	How new was the concept of citizen science to you?
	Why did you decide to take part/volunteer in the ---------- [insert the denomination of your planned activity] ?
	Please explain in a few words what you liked most about ----------[insert the denomination of your planned activity]
	What were the main difficulties in taking part in the ---------- [insert the denomination of your planned activity] , if any?
	Is there anything to be improved in the organisation and/or in the activity itself?
	Please explain in few words why according to you citizen science is important for the society and for science
	If the library will organize citizen science activities in the future, will you be willing to take part in it?