|  |  |
| --- | --- |
| **Audience** | **Master’s students** |
| **Year of study** | **Secondary year of master’s studies** |
| **Number of ECTS credits** | **3.0 ECTS credits (workload of 75 to 90 hours)** |

“Doing and Experiencing Dialogical Reflection on Research and Innovation”

TABLE OF CONTENTS

Syllabus…………………………………………………………………………………………………………………………………3

Master's structure programme……………………………………………………………………………………………..6

Part 1: how to facilitate dialogue on R&I: dialogue approaches…………………………………..………..7

Part 2: planning dialogue activities………………….…………………………………………………………………..15

Part 3: doing and experiencing dialogical reflection: a dialogue experiment……………………..…18

Surveys after implementation…………….………………………………………………………………………………..21

Annexes

ANNEX 1. Observational Form for assessing a PE activity ……………………………………….23

ANNEX 2. PE activity Report Guide………………………………………………………………………….26

# Please remember that the resources at hand can (and should) be adapted to your specific needs and context. The HEIRRI resources have been designed to be flexible, so we encourage you to think about including local cases, adjusting the timings of the course to your needs, and also adapting some contents to your specific field or discipline.

**SYLLABUS**

|  |  |
| --- | --- |
| **Element** | **Description** |
| **Title** | Doing and Experiencing Dialogical Reflection on Research and Innovation |
| **Cycle** | EHEA: Second cycle  EQF level: 7  Degree level: Master |
| **Year of study** | Second year of master’s studies |
| **Number of ECTS credits** | 3.0 ECTS credits (workload of 75 to 90 hours) |
| **Learning outcomes (LO)** | On completion of this course students will be able to   1. explain methods to facilitate dialogue and discussions on research and innovation (R&I) with different societal actors; 2. adapt a dialogue approach to facilitate dialogue on a specific R&I process or development; 3. carry out a dialogue activity to discuss a specific R&I process or development and analyse the participants’ different perspectives on and assessment of the R&I issue under debate; 4. and to reflect on the quality of the dialogue and interaction facilitated through a dialogue activity. |
| **Mode of delivery** | The course combines different modes of delivery. The course teacher will give a short overview presentation in the first unit. In the remaining units, students themselves have to define the topics to be dealt with, namely the dialogue approaches and the topics to be discussed. Then students will have to prepare presentations in groups at home and present them in class. Supported by the course teacher, they will then have to identify an R&I-related topic and adapt a dialogue approach, both in class and independently at home. Furthermore, students have to actively participate in discussions and the dialogue experiments facilitated by their colleagues. |
| **Prerequisites and co-requisites** | Bachelor’s degree. Participants should know about research and innovation developments in their respective field and possibly other areas. |
| **Course content** | The course focuses on different interactive approaches to facilitate dialogue on R&I developments, and their societal implications and impacts. These include but are not limited to scenario workshops, consensus conferences, public Technology Assessment, Round Table, (Neo-)Socratic Dialogue, or World Café. The respective R&I developments to be discussed in the course should be selected and outlined by the students themselves. |
| **Recommended or required reading and other learning resources/tools** | Overviews of participatory methods, which can be used to facilitate a dialogue between different stakeholders:   * Elliott, J., Heesterbeek, S., Lukensmeyer, C., & Slocum, N. (2005). *Participatory Methods Toolkit. A practitioner’s manual* (2nd ed.). Retrieved 30 January 2017, from http://cris.unu.edu/participatory-methods-toolkit-practitioners-manual-second-edition * Rowe, G., & Frewer, L. J. (2000). Public Participation Methods: A Framework for Evaluation. *Science, Technology, & Human Values, 25*(1), 3–29. DOI:10.1177/016224390002500101 * Rowe, G., Marsh, R., & Frewer, L. J. (2004). Evaluation of a Deliberative Conference. *Science, Technology, & Human Values, 29*(1), 88–121. DOI:10.1177/0162243903259194   Possible approaches to facilitate a dialogue on R&I developments:   * Abels, G. (2007). Citizen Involvement in Public Policy-making: Does it Improve Democratic Legitimacy and Accountability? The Case of pTA. *Interdisciplinary Information Sciences, 13*(1), 103–116. DOI:10.4036/iis.2007.103 * Birnbacher, D. (1999). The Socratic method in teaching medical ethics: Potentials and limitations. *Medicine, Health Care and Philosophy, 99*(2), 219–224. DOI:10.1023/A:1009999523468 * Decker, M., & Fleischer, T. (2012). Participation in ‘big style’: first observations at the German citizens’ dialogue on future technologies. *Poiesis & Praxis, 9*(1), 81–99. DOI:10.1007/s10202-012-0119-0 * Felt, U., Fochler, M., Müller, A., & Strassnig, M. (2009). Unruly ethics: on the difficulties of a bottom-up approach to ethics in the field of genomics. *Public Understanding of Science, 18*(3), 354–371. DOI:10.1177/0963662507079902 * Gnaiger, A., & Schroffenegger, G. (2008). *Tool-Kit Scenario Workshop. TRAMS – Training and Mentoring of Science Shops*. Retrieved 30 January 2017, from http://fbi.or.at/download/2008\_Scenario\_Workshop.pdf * Levidow, L. (2009). Democratizing Agri-Biotechnology? European Public Participation in Agbiotech Assessment. *Comparative Sociology, 8*(4), 541–564. DOI:10.1163/156913309X461633 * Littig, B. (2004). The neo-Socratic dialogue. A method of teaching the ethics of sustainable development. In C. Galea (Ed.), *Teaching Business Sustainability. Volume 1: From Theory to Practice* (pp. 240–252). Sheffield: Greenfield Publishing. * Powell, M., & Colin, M. (2008). Meaningful Citizen Engagement in Science and Technology: What Would it Really Take? *Science Communication, 30*(1), 126–136. DOI:10.1177/1075547008320520 * Rowe, G., & Frewer, L. J. (2005). A Typology of Public Engagement Mechanisms. *Science, Technology, & Human Values, 30*(2), 251–290. DOI:10.1177/0162243904271724 * Science et Cité (n.d.). Dialogue science and society. Retrieved 30 January 2017, from http://www.science-et-cite.ch   More methods and approaches can be found online:   * Participedia (web): Participedia: Strengthen democracy through shared knowledge. http://participedia.net/ * RRI Tools (web): RRI Toolkit. https://www.rri-tools.eu/search-engine |
| **Planned learning activities and teaching methods** | At the beginning of the course, the teacher will give an introduction opening up issues of public participation in R&I, science communication, public understanding of science, etc. Then, students have to deliberate on and present different participatory dialogue approaches, e.g. consensus conferences, participatory Technology Assessment, or scenario workshops. These are followed by plenary discussions.  In independent group work supported by course teacher (desk research, group deliberation), students will design a participatory dialogue activity.  Finally, they will implement the activity with their student colleagues as participants. This implementation is followed by discussion and reflection on the possibilities and challenges with regards to such participatory dialogue approaches. The groups will write down and elaborate on their findings in a final report. |
| **Assessment methods and criteria** | The following activities and outputs of the students will be assessed:   * Group presentation on a dialogue approach. * Written outline of dialogue experiment design. * Group report on the participatory experiment |

“Doing and Experiencing Dialogical Reflection on Research and Innovation”

***Masters’ level workshop***

|  |  |  |
| --- | --- | --- |
| **Part 1** | **Activity** | **Duration** |
| **Unit 1** | Introduction to Public Engagement (PE) | 1h15’ |
| Overview of Dialogue Approaches | 45’ |
| **Unit 2** | Preparation of the presentation | 1h |
| Presentations | 1h |
| **Part 2** | **Activity** | **Duration** |
|  | Public Engagement Activity design | 2h |
| Poster Design | 1h |
| Poster and Post-Its Activity | 1h |
| **Part 3** | **Activity** | Duration |
|  | A dialogue experiment | 4h |

In this course, students will train how to consider societal perspectives in R&I by the means of dialogue activities. This programme is open for master’s students with different disciplinary background, in fact, this programme can be offered and adapted to an interdisciplinary course to promote interdisciplinary and heterogeneous teams and different perspectives.

**PART 1. HOW TO FACILITATE DIALOGUE ON R&I: DIALOGUE APPROACHES**

|  |  |  |
| --- | --- | --- |
| **Part 1** | **Activity** | **Duration** |
| **Unit 1** | Introduction to Public Engagement (PE) | 1h15’ |
| Overview of Dialogue Approaches | 45’ |
| **Unit 2** | Preparation of the presentation | 1h |
| Presentations | 1h |

**Unit 1. Introduction to public engagement (PE) and dialogue approaches**

**Introduction to public engagement (PE)**

The teacher presents a brief introduction on the concept of “public engagement” in the framework of science and technology. The presentation highlights the difference between simple communication of results (unidirectional communication) and authentic public engagement, which establishes dynamics to favour the inclusion of stakeholders’ opinions and expectations in the research and innovation process. The presentation also includes an overview of dialogue approaches. Here you can find a brief resume of some of them.

For the general introduction to Public Engagement see **the Power Point presentation: HEIRRI PE INTRODUCTION**.

**Overview of dialogue approaches**

***"Public engagement describes the myriad of ways in which the activity and benefits of higher education and research can be shared with the public. Engagement is by definition a two-way process, involving interaction and listening, with the goal of generating mutual benefit."-* UK**National Co-ordinating Centre for Public Engagement.[[1]](#footnote-1)

Here are some examples of dialogue approaches that can be used by the students.

1. **Citizen Science**

According to the Green paper on Citizen Science for Europe[[2]](#footnote-2), “Citizen Science refers to the general public engagement in scientific research activities in which citizens actively contribute to science either with their intellectual effort or surrounding knowledge or with their tools and resources. Participants provide experimental data and facilities for researchers, raise new questions and co-create a new scientific culture. While adding value, volunteers acquire new learning and skills, and deeper understanding of the scientific work in an appealing way. As a result of this open, networked and trans-disciplinary scenario, science-society-policy interactions are improved leading to a more democratic research based on evidence-informed decision making. Citizens are actively engaged in scientific work, so that scientific research is being done by the citizen and not just for the citizen.”

An example of Citizen Science is the online project Galaxy Zoo. It is a crowd-sourced astronomy project which invites people to assist in the morphological classification of large numbers of galaxies.

For more information or to explore the project, see:

<https://www.galaxyzoo.org/>

1. **Focus Groups**

The focus group is a qualitative method which is used profusely in qualitative research. In the framework of public engagement, it could be used to explore opinions and attitudes, to determine the preferences of people or to evaluate strategies and concepts. They are structured and directed, yet, allowing for the free expressions of opinions by the participants, they can gather a lot of in-depth information in a relatively short time.

According to the UK National Co-ordinating Centre for Public Engagement1, “focus groups have proved to be a highly insightful research technique for engaging a group of people with a question, product or idea. Bringing together a group to discuss a particular topic provides a more natural setting than one-to-one interviews, as it allows participants to share their stories and through discussion, enable new strands of thought to emerge. Focus groups can reveal a wealth of detailed information and deep insight. When well executed, a focus group creates an accepting environment that puts participants at ease allowing then to thoughtfully answer questions in their own words and add meaning to their answers. Therefore, this qualitative research method can generate rich data in a less resource intensive manner than interviewing.”

For more information on focus groups:

<https://www.publicengagement.ac.uk/do-it/techniquesapproaches/focus-groups>

1. **NeoSocratic Dialogue**

According to Littig and Griessler[[3]](#footnote-3), “NSD is a form of guided, systematic communication on basic moral issues carried out in a group of 8-12 participants”. In this sense, it is a form of joint ethical reflection. NSD empowers participants in their ability to argue consistently, to listen actively and to interact with other people in a constructive way.

Littig and Griessler3 say that “The starting point for a NSD is a fundamental ethical or philosophical question that should be answered not empirically, but by means of reflection. This question must be of personal relevance to the participants and be formulated in a way that allows them to identify examples in their own environments or professional practices in which it plays a central role. The dialogue itself initially draws on one (or a small number of) concrete experience(s) supplied by the participants, which they can all readily understand and relate to.”

NeoSocratic Dialogue follows a specific procedure, and participants have to abide by a set of rules. To read more on NSD, see[[4]](#footnote-4):

<http://www.ssoar.info/ssoar/bitstream/handle/document/541/ssoar-2004-littig-the_neo-socratic_dialogue_nsd_a.pdf?sequence=1>

1. **Science Café**

According to the Engage 2020 Action Catalogue[[5]](#footnote-5), “a Science Café is an event organised in an informal setting as a place of dialogue with participants coming from all walks of life and academia. It is a meeting of minds and a dialogue outside of the usual spaces, the bringing together of the general public and experts outside of an academic context. An expert presents a subject in a concise and open manner after which the floor is open for a discussion. The moderator facilitates the sharing of a wide range of views on the subject at hand.” Also, and instead of just one presentation, 3 or 4 people with different expertise can be invited to share with participants their experience and points of view (ideally, from diverse disciplines or representing different stakeholders). It is preferable not to talk about experts and non-experts, because all people attending the café (invitees presenting and the other attendees) have opinions and experiences upon which the rest can learn and reflect.

An example of a Science Café is *Cafe Scientifique*. **They describe themselves as** “a place where, for the price of a cup of coffee or a glass of wine, anyone can come to explore the latest ideas in science and technology. Meetings take place in cafes, bars, restaurants and even theatres, but always outside a traditional academic context.”

For more information, see: <http://cafescientifique.org>

For more information on the organization of Science Cafés, see:

<http://sciencecafes.org/for-organizers/>

1. **Science Shop**

According to *Living Knowledge[[6]](#footnote-6)*, “Science Shops are not “shops” in the traditional sense of the word. They are small entities that carry out scientific research in a wide range of disciplines – usually free of charge and – on behalf of citizens and local civil society.“

Science Shops are a type of interface between researchers and society, organisations created as mediators between citizen groups (trade unions, pressure groups, non-profit organisations, social groups, environmentalists, consumers, residents association etc.) and research institutions (universities, independent research facilities). Science Shops are important actors in community-based research (CBR).

For an example and more information on Science Shops, see:

<http://www.livingknowledge.org/>

1. **Science Theatre**

Science Theatre is a creative way to bring complex topics to life; often to audiences who would not take part in a more traditional process. Usually the educators or artists present a play which is followed by a workshop. The aim of this is to allow participants to put what they have learnt into practice.

According to the Engage 2020 Action Catalogue5, Science Theatre can be used to transmit knowledge. It can also be used to spark rich discussions around the social, ethical and political dimensions of a scientific or technological development and is often inspired by a social crisis that is a result of scientific advancement. Science theatre uses the medium of participative theatre to explore different views on scientific issues and ideas.

There is no specific method to apply Science Theatre, as it can be based on almost any topic of research related to Science, as long as the main idea is well transmitted and understood by the public, or providing that the dialogue approach creates debate among the spectators. The method can allow complex scientific issues to be explored in a more creative way, allowing for the topic to be expressed as desired.

For an example of Science Theatre see: <http://www.curiousdirective.com/>

1. **World Café**

According to the Engage 2020 Action Catalogue5, “the World Café method is conducted in a workshop format which follows the principle of a good conversation, where anybody is able to talk about things that matter to them. The method design is based on the normative assumption that people already have within them the wisdom and creativity to confront even the most difficult challenges.”

World cafés are based on seven design principles and a simple method[[7]](#footnote-7), which you can see at:

<http://www.theworldcafe.com/>

**Total duration of the activity: 2 hours**

* Presentation of the course design and solid introduction to Public Engagement (1h15’)
* Presentation of different dialogue approaches (45’)

**Unit 2. Dialogue approach presentations**

**Goal:**

*The aim of this unit is for students to learn about different dialogue approaches and how they are planned and organized.*

**Learning outcomes:**

After successful completion of this unit students are expected to be able to:

* Explain methods to facilitate dialogue and discussions on research and innovation (R&I) with different societal actors

**Material:**

* Cardboards
* Colored pens

**Description of the activity:**

**Preparation of the presentations**

After the presentation session about public engagement and different dialogue approaches earning, the students will form working groups of around five participants and choose one of the approaches.

Students can choose one of the dialogue approaches that have been explained in class, or propose a new approach, that needs to be approved by the teacher. It is advisable that students look for examples of dialogue approaches that they know personally or examples from their field of knowledge. The teacher can also look for local examples to encourage students to better assess the viability of the selected approaches.

Once the group are formed and the students have chosen a dialogue approach, they should read appropriate literature on the dialogue approach and do additional research in the first part of Unit 2. Then, in the next session they have to present their findings to the class in whichever format they prefer.

**Presentations**

The groups present to the rest of the class the dialogue approach they have selected. The main goal of this presentation is to explain a dialogue approach, how and when this dialogue approach can be used, examples of this dialogue approach, how can be this dialogue approach be implemented and which are the contributions of using such a dialogue approach.

**Total duration of the activity: 2 hours**

* Preparation of the presentations (1h)
* Presentations (1h)

**Teacher’s role: how can the teacher facilitate the activity?**

During the first part of the unit, the teacher should briefly explain different dialogue approaches. For more dialogue approaches, consult the Engage 2020 Action Catalogue5: <http://actioncatalogue.eu/>.

The teacher can help guide the students with their presentations. The teacher should be available in case of doubts or problems.

The teacher can suggest some examples for the student’s presentations. This may make it easier for the students to organize their key points while studying the dialogue approaches, therefore helping them to make better presentations, by allowing them to be clearer and more concise.

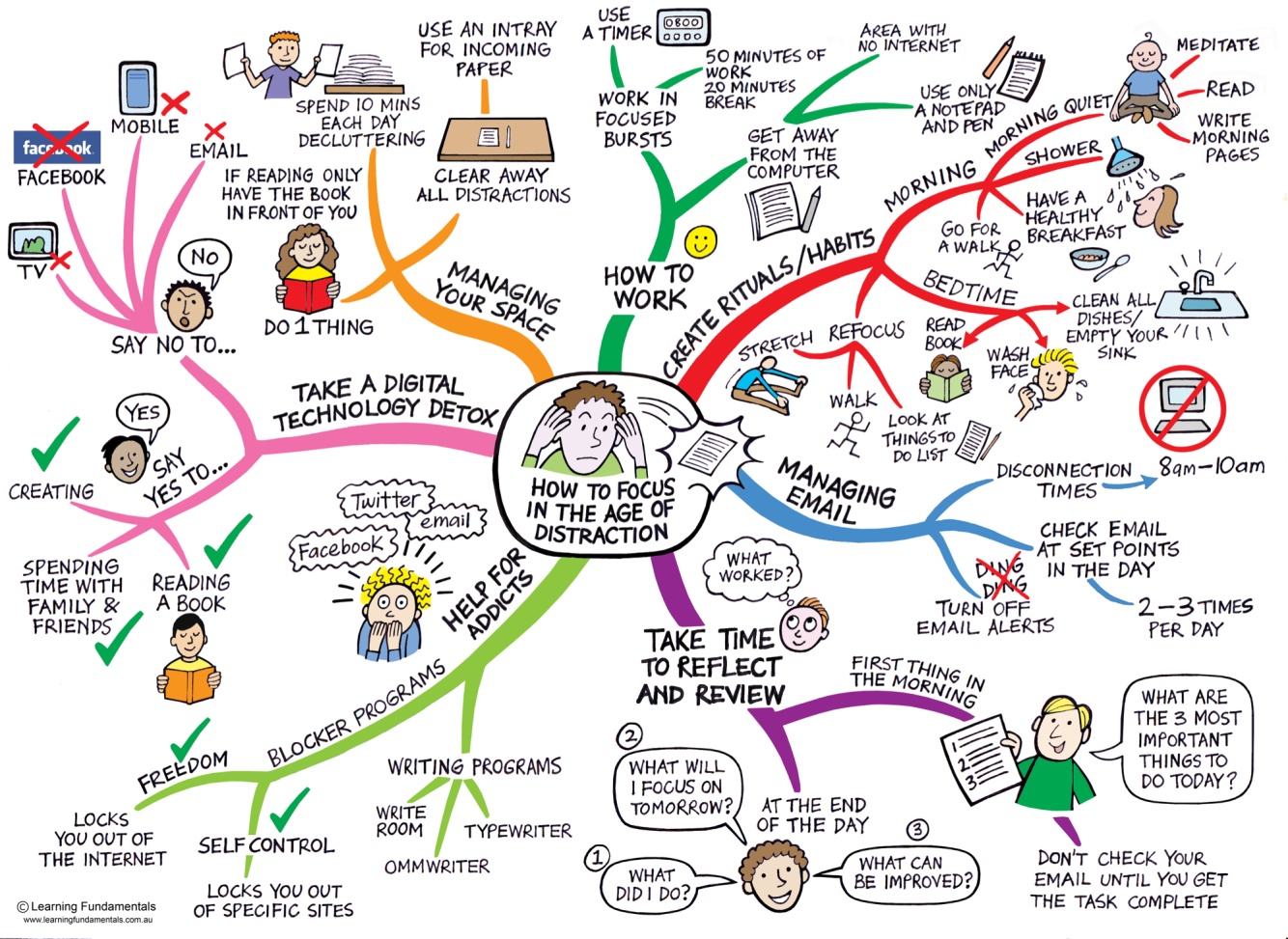
To guide this activity, it is useful to control the timing of the oral presentations

Some suggestions for the student’s oral presentations are:

* **Mind Maps**

**Concept:** this technique is used to explore a general idea, to obtain a holistic vision of RRI and also obtain a visual analysis so as to identify areas for improvement. The ideas in this methodology can be represented by words or by images.

**Methodology:**

1. Draw the main idea (the dialogue approach) in the centre of the page.
2. The key points related to the dialogue approach come out of the central image, like branches. From these key point branches, key images grow, representing the components of each key point. Each branch must have a word that associates the key image/images with the main idea in the middle. These are the associations.

Here is an example of a Mind Map:

* **Pechakucha 20x20**

Pechakucha 20x20[[8]](#footnote-8) is a presentation format in which the students show 20 images or slides, each one for 20 seconds, so the total duration of the oral communication is about 7 minutes. The images advance automatically and the presenter talks along to the images. In this way, the student has to limit themselves to the duration of each slide, for the presentation to be coherent and understood by the rest of the class.

* **5x5 Presentation Model**

The 5x5 presentation format is a communication tool where the presenters have 5 minutes to present 5 slides to explain the Public Engagement activity. They have one minute per slide, so it has to be simple and clear. This format is shorter, but each slide can contain more information than the Pechakucha method.

**PART 2: PLANNING DIALOGUE ACTIVITIES**

|  |  |  |
| --- | --- | --- |
| **Part 2** | **Activity** | **Duration** |
|  | Public Engagement Activity design | 2h |
| Poster Design | 1h |
| Poster and Post-Its Activity | 1h |

**Goal**

*The objective of Part 2 of this learning programme is for the participants to plan and develop a dialogue activity.*

**Learning outcomes**

After successful completion of this module students are expected to be able to:

* Adapt a dialogue approach to facilitate dialogue on a specific R&I process or development
* Evaluate the suitability of different dialogue approached for different situations
* Design a dialogue approach

**Materials:**

* Cardboards
* Colored pens
* Post-its

**Description of the activity**

**Public Engagement Activity design**

The students have to elaborate a project of a dialogue activity themselves. They should select an R&I development that is potentially controversial or gives rise to questions that could be dealt with in a deliberative setting.

Once they have selected a topic and a dialogue approach, students will outline a concrete design for a dialogue activity to promote discussion on the R&I development and linked societal, economic, cultural etc issues. They should describe the topic, potential target groups/participants, and the procedural design. The students should use the dialogue approach they chose and researched in Part 1 (unless they consider that another approach is more appropriate for the specific research topic selected, which has been approved by the teacher in Part 1).

They have to reflect and identify the purpose, the specific goals and relevance of the activity as well as potential challenges if implemented in a real, non-experimental setting with different societal actors participating. They have to deliberate on the wider implications and impacts of facilitating a societal dialogue on controversial R&I issues, e.g. on the public discourse, political decision-making processes, technological progress, etc. They also have to reflect the impact certain design decisions have on the implementation, output, and outcome of a dialogue activity, e.g. the effect of certain selection criteria for participants (Who is a stakeholder?), external factors affecting the inclusion/exclusion of certain groups (education, financial means, etc.) and so forth.

Some questions that can be useful to design the Public Engagement activity are:

1. Is the chosen topic the right issue to perform a PE activity?
2. Which is the purpose of my PE activity?
3. Which are the specific objectives of the activity?
4. Which is the target public for the PE activity?
5. Have the targeted public needs been identified?
6. How this PE activity will be implemented?
7. What are the expected results from this PE activity?
8. Why is this PE engagement activity relevant?
9. How the input of different actors is planned to be used?
10. Which will be the impacts of this PE activity?
11. Is this activity original? Why this activity is different from other PE activities?
12. Is the PE activity design realistic?
13. Which are the limitations of the PE activity?

**Poster Design**

In the second part of the activity, each group has to design a poster explaining their PE engagement activity. Each poster ought to contain:

* The title of the activity
* The purpose and the specific goals of the activity for each group of stakeholders participating (also including the activity organisers)
* The targeted audience
* The description of the activity (formats, duration, ideal location, and other considerations such as an approximate idea of the number of participants and the Budget required)
* The expected outcomes of the activity and the impact on each group of participants
* The assessment method of the PE activity

**Poster and Post-Its Activity**

After each group has designed the poster, a poster session will be performed. So, each group will explain their poster and their activity to, at least, two other groups. The other groups will add, at the end of the poster presentation, one idea or more, written on a post-it, to improve the PE activity. Each group will have to add the ideas of improvement to their activities.

**Total duration of the activity: 4 hours**

* Public Engagement Activity design (2h)
* Poster Design (1h)
* Poster and Post-Its Activity (1h)

**The teacher’s role: how can the teacher facilitate the activity?**

The teacher should answer questions, suggest further reading, and guide the students towards exemplary cases that could possible help them in relation to their dialogue activity.

See programme **“Doing and Experiencing Dialogical Reflection on Research and Innovation”** for syllabus adaptations 1 and 2.

**PART 3: DOING AND EXPERIENCING DIALOGICAL REFLECTION: A DIALOGUE EXPRIMENT**

|  |  |  |
| --- | --- | --- |
| **Part 3** | **Activity** | Duration |
|  | A dialogue experiment | 4h |

**A dialogue experiment**

Students have to implement and simulate their activity with one part of the students as organizers, another as participants, and a third part as observers/evaluators. Thus, students do not only have the possibility to organize and conduct a dialogue experiment themselves, but also to actively participate in and experience such an activity.

**Goal:**

*The objective of Part 3 is for the participants to carry out a dialogue activity, and to experience a dialogue activity both as an organizer and as part of the public.*

**Learning outcomes:**

After successful completion of this module students are expected to be able to:

* Carry out a dialogue activity to discuss a specific R&I process or development
* Analyse participants different perspectives on and assessment of the R&I issue under debate
* Reflect on the quality of the dialogue and interaction facilitated through a dialogue activity

**Materials:**

* PE activity design (from part 2)
* “Observational form for assessing a PE activity” at the Annex of the document.
* “Public Engagement Activity Report Guide” at the Annex of the document

**Description of the activity**

In this activity, the students will carry out the dialogue activity they have planned in parts one and two of the course. If feasible the students could invite some external stakeholders or other relevant actors.

See programme **“Doing and Experiencing Dialogical Reflection on Research and Innovation”** for syllabus adaptation 3, on inviting societal actors and relevant stakeholders to participate in the dialogue.

During the PE activity, there will be three groups: organisers, participants and observers/evaluators. The students acting as organisers should take into account the different roles of organisers, such as who is the moderator, who does the internal evaluation, who takes minutes of the session, etc.

The students acting as participants in their classmates’ activities should prepare for their role beforehand. It is important for the students to play the role of the type of public that the activity is aimed at. They should be informed with a certain amount of time so as to allow preparation for the role. At the end of each dialogue experiment, there should be an ad hoc round of feedback and discussion on the positive and negative aspects of the respective activity and the way of implementation. The comments should be collected by the student group implementing the activity and discussed in their final report.

The students (and the teacher) acting as observers/evaluators will assess the activity with the “**Observational form for assessing a PE activity**” **at the annex of the document**. The students that will act as observers have to read, before the simulation, the PE activity design that their classmates had done before. They will also have the Observational form before the activity to have a look at it and know what they have to assess. The students acting as observers can collect field notes during the simulation to fill, after the activity is done, the observational form.

Students complete the course by handing in a group report describing the implementation as well as the results of the activity. They should describe how their initial plan worked out, what challenges they had to face and how they dealt with them, but also reflect on the positive aspects of facilitating a dialogue. This includes dealing with the feedback gathered from the participants in the dialogue experiment. To have more information, **see the “Public Engagement activity report guide” at the annex of the document**.

Besides this reflection on procedural aspects, they should outline the major strands of discussions facilitated by the dialogue, analyse the different perspectives and assessments of the R&I issue as well as the broader insights they gained with respect to the chosen topic. They should then also think about how the output could affect the set up or further development of the considered R&I issue, how the involved institutions and scientists, but also policy makers or civil society could use it in a meaningful way; they should reflect on the possible impact of their dialogue activity.

**Total duration of the activity**

4 hours to perform all the students’ PE activities.

**The teacher’s role: how can the teacher facilitate the activity?**

During this activity, the teacher will act as an observer. These are some tips that can be useful:

* Leave some space so that students can perform the activity calmly, do not intervene during the performance.
* Control the timings of each activity.
* Encourage other students to participate and give feedback to their colleagues.

At the end of each PE activity, the teacher must ask for a brief reflection to all participants (PE organizers, PE public and observers) about how have they felt and how do they value the reached outcomes.

**SURVEYS AFTER IMPLEMENTATION**

The HEIRRI project has developed surveys for post-project application of HEIRRI training programmes and materials. These surveys follow the design used for pilot evaluation, with a few additional open-ended questions, based on adaptations, difficulties encountered and opinions on the future of RRI in education.

Please respond to the relevant surveys after using the teaching resource at hand:

1. Survey for students: <https://www.surveymonkey.com/r/3PBQYZN>

2. Survey for teachers: <https://www.surveymonkey.com/r/3P37NG7>

For public engagement events:

3. Survey for the public (museum events): <https://www.surveymonkey.com/r/36L8Z6R>

4. Survey for facilitators (museum events): <https://www.surveymonkey.com/r/3P6WY2V>

Please remember that the resources at hand can (and should) be adapted to your specific needs and context. The HEIRRI resources have been designed to be flexible, so we encourage you to think about including local cases, adjusting the timings of the course to your needs, and also adapting some contents to your specific field or discipline..

**ANNEXES**

* ANNEX 1. Observational Form for assessing a PE activity
* ANNEX 2. PE activity Report Guide

**ANNEX 1. OBSERVATIONAL FORM FOR ASSESSING PE ACTIVITY**

**Stakeholder’s background**

|  |
| --- |
| Do you consider that the different publics/participants have the basic knowledge necessary to discuss the subject at hand?  If they don’t have this basic knowledge, how have the organisers addressed the situation (for example, have they provided with some sort of introductory explanation, or have they limited the debate topics to very essential matters upon which everyone has an opinion, etc.)? |
| Group of Stakeholders 1:  Group of Stakeholders 2: |

**Sharing the purposes of R&I**

|  |
| --- |
| Is the purpose of the activity shared with clarity? |
|  |
| Is there a clear explanation about how the input of different actors is going to be used and how they will receive feedback? |
|  |

**Dialogic strategies**

|  |
| --- |
| What type of participation is required from public?   * + Ask questions to the expert   + Express their own opinions   + Provide knowledge   + Provide new ideas   + Other: |
| What type of dialogue is generated during the PE activity?   * Totally directed by the investigator * The investigator assumes the expert role * The investigator’s and the public’s role are symmetric. * The dialogue is directed by the public. * Other: |
| Which percentage of participants have been actively engaged during the activity?   * + 0-25%   + 25-50%   + 50-75%   + 75-100% |
| Do you think that the expected results have been achieved through the participation techniques? |

**Openness of activity**

|  |
| --- |
| Is it possible to raise different issues with regard to the topic? |
|  |
| Is it possible to voice concerns? |
|  |
| Was it possible for each and every one to participate in discussions or were certain voices silenced? |
|  |

**Expectations vs Outcomes**

|  |
| --- |
| What did you expect before the activity? |
|  |
| Were your expectations met (in a positive way) or even succeeded? |
|  |

**Improvement proposals**

|  |
| --- |
| What would you have done differently if you were the moderator? |
|  |

**ANNEX 2. PUBLIC ENGAGEMENT ACTIVITY REPORT GUIDE**

Students complete the course by handing in a group report describing the implementation as well as the results of the activity. They should describe how their initial plan worked out, what challenges they had to face and how they dealt with them, but also reflect on the positive aspects of facilitating a dialogue.

Besides this reflection on procedural aspects, they should outline the major strands of discussions facilitated by the dialogue, analyse the different perspectives and assessments of the R&I issue as well as the broader insights they gained with respect to the chosen topic. They should then also think about how the output could affect the set up or further development of the considered R&I issue, how the involved institutions and scientists, but also policy makers or civil society, could use it in a meaningful way. In addition, they should reflect on the possible impact of their dialogue activity. Here we add some questions to guide the final report. **We would like to highlight that this is just a report suggestion and some indications, each teacher of the course can adapt the final report to their course needs and their beliefs.**

-How would you describe your PE activity?

-How the PE activity implementation worked out?

-Which challenges and limitations have you faced during the implementation?

-Can you propose solutions to these limitations?

-Which have been the results of your activity?

-Which discussions have arisen during the dialogue activity?

-Which perspectives about the R&I topic have flourished during the activity?

-Have you gained new insights?

-Which have been the outputs of the activity?

-Which are the possible impacts of the dialogue activity?

-Which are the positive and negative aspects of facilitating a dialogue?

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3. Griessler, E., & Littig, B. (2006): Neosokratische Dialoge zu ethischen Fragen der Xenotransplantation. Ein Beitrag zur Bearbeitung ethischer Probleme in partizipativer Technikfolgenabschätzung. In E.Buchinger & U. Felt (Eds.), Technik-und Wissenschaftssoziologie in Österreich. Stand und Perspektiven. Österreichische Zeitschrift für Soziologie. Sonderheft 8/2006(pp. 131-157). Wiesbaden: VS Verlag. [↑](#footnote-ref-3)
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5. Engage 2020 Action catalogue <http://actioncatalogue.eu/> [↑](#footnote-ref-5)
6. Living Knowledge, the International Science Shop Network <http://www.livingknowledge.org/> [↑](#footnote-ref-6)
7. The World Café Community Foundation <http://www.theworldcafe.com/> [↑](#footnote-ref-7)
8. Klein Dytham Architecture (n.d.). *Pecha Kucha*. Available from www.pechakucha.org [↑](#footnote-ref-8)