**Participatory Workshop 3: Gender**

**Goal**

To develop the core of the students’ PERSEIA including gender issues worked in this PW.

**PW3 Specific Objectives:**

1.- To visualize social gender stereotypes affecting girls’ decision to start STEM studies - Detecting and reflecting on toxic cultural messages

2.- That students generate the main structure of their PERSEIA sketch: Introduction, Core, Final.

**PERSEIAs guidelines from T2.1 followed:**

EW2- Stereotypes

EW6 - Gender in STEM

**Description of the Participatory Workshop:**

**Warming Activity**

Take into account in this section the extra time needed to organize the students into the room.

Different kinds of bodies (**10’**)

The students walk in the room, randomly. They can interact with chairs, tables and objects if they want. But they cannot stay seated more than 5 seconds.

The facilitator will tell them (some of) 12 different adjectives, they are going to try to modify their body, and they way of moving, in order to fit these adjectives, and even exaggerate it. By doing so, the facilitator will ask them to see if they feel differently, and try to speak, to see if they speak the same way than when they act normally.

The 12 adjectives are distributed in 6 couples of contrary

* fast / slow
* soft / rigid
* Rythmic / non rythmic
* open / closed
* aerial / earthy
* direct / non direct (when they do an action)

By using 2 or 3 adjectives at one time, they can generate a character very quickly. The facilitator asks them to try.

**3.1-Catching-up with previous PW (15’)**

Which were the selected topics? Which kind of information/content the students have searched and prepared? How did they search for this information? Did they consider the checklist when choosing the information?

**3.2-Participatory Activity: Gender stereotypes (45’)**

Science bias because of (gender) stereotypes and (gender) Cultural/Peer pressure

*NOTE: Without explaining it to the students, it should be taken into account that the main objective of this workshop is to work on stereotypes and cultural pressures of GENDER. But this should not be explained to the students, since it usually provokes rejection by the male gender. We have to guide the workshop by saying that we are going to talk about cultural stereotypes and pressures that influence students not to choose STEM careers.*

In the activity we are going to simulate a job interview.

3 MALE students will be the interviewers.

4 students (2 MALE and 2 FEMALE**[[1]](#footnote-1)**) will be the job applicants. All four are applicants for the same job, but there is only one vacancy. They are going to compete for the job.

Point out to the students that they are going to compete for the work of their dreams, and try to generate an environment of high competition among the 4 applicants[[2]](#endnote-1).

Locate the 4 applicants out of the room, and let them to decide on their own the order in which they are going to do the interviews.

Situate the 3 interviewers in one side of the room, with chairs and tables, and one chair in front of them. One of the applicants will sit on this chair and will do the job interview. The rest of job applicants will stay out of the class, waiting for their turn.

THE INTERVIEW

Each interview may be 3 to 5 minutes long. The SciCom will be responsible for enforcing the times, and for cutting the interview if it becomes very long.

The interview will consist on ONE question per interviewer.

Interviewers will have a list of 4 questions, and they will have to choose one.

The list of questions is:

1. This is a job based on the development of super modern software and technology. Are you good at maths? Maths will be needed to get the job done properly.
2. This job involves many working hours. Do you want children soon?
3. In this job you will be in charge of a team of 25 workers. What are your main skills that will allow you to lead this great team of people?
4. In this job, once a week you will meet with the 3 most important directors of the company and you must justify in front of them the objectives achieved during the week and about what has not gone so well. What do you think about this methodology of work? Do you see yourself qualified for it?

After the interviews, the interviewers will decide which applicant will get the job, and will order the 4 applicants in order of convenience. (3 to 4 minutes).

GLOBAL DISCUSSION

A global discussion will be opened with all the students. SciCom, Teacher and ECR will drive the discussion, pointing out at least these topics:

* Are all the students agree with the decision of the interviewers? ECR will point that all the interviewers were males. Is it fair? Would the decision have changed if there had been women in court?

Here, the ECR will give data about actual state of things (e.g. about men / women ratio in science (in positions of responsibility) in UK/FR/ES) and also can share his/her particular vision about that.

* Teacher will ask to the job applicants how they decided the interviews order. Discuss if girls were less competitive and aggressive than boys, and it results in a disadvantage for them in competitive environments. ECR can complement this point showing that science is also competitive, and that girls needs to be aware about that.
* Differences between boys and girls about the response in the maths question. Normally, girls show feelings of lacking self-confidence and being extremely perfectionist.
* About having children question: Highlight when the interviewers choose this question: when they are interviewing a boy or a girl? Compare the different responses and the perceptions of boys and girls: for boys to have children is not a problem, do not affect on their compromise with the jobs, but for girls yes. And there is an enormous social pressure to be mother.
* Management skills are well seen in men, but not in women: boss/bossy, persuasive/pushy, dedicate/selfish, neat/vain, smooth/show-off [<https://www.youtube.com/watch?v=B8gz-jxjCmg>]. Try to highlight how boys show themselves more self-confident as the important skills for management are associated to male gender, while girls do not associate management skills with their abilities.
* One of the feelings that causes girls do not choose engineer or maths is “fear of evaluation and failure”. Talk with the job applicants about the different perception that they have when they are asked about “weekly evaluation meetings”.

**3.3-Development of students PERSEIAs (30’)**

As the content is already chosen, now we will discuss how students are going to present it to their audience.

Divide students into SWGs and let them working on their PERSEIA sketch following a template (designed by TBVT).

ECRs, teachers and SciCom will be visiting the groups, ensuring that students are focused and assisting them.

The SciCom will explain briefly (5’) the activity. Students must find the main structure of their PERSEIA sketch, which is:

* Introduction - Here students should clarify the topic they are going to talk about with the object to approach the scientific content to their audience.

They can generate a scientific question or expose a scientific problem that they are going to answer/solve during their PERSEIA sketch.

# Ex. How the wood frog cheats death - Fergus McAuliffe (Ireland - FameLab 2013 Intl Final). Fergus uses the scientific question: “How clear is the line between life and death” in order to catch the attention of his audience and with the object of talking about anti-freeze mechanisms in frogs.

# <https://www.youtube.com/watch?v=eL4gfoTXuzQ>

* Core - Content development. Outline the inclusion of major scientific ideas within the structure of the monologue. This point will be working in depth at the next PW. At this point, students only need to know that in this section of their PERSEIA sketch is where they are going to allocate the scientific content that they prepared in PW1 and PW2.
* Ending - It must answer the scientific question or solve the scientific problem proposed in the introduction and close the story.

**Ex.** How the wood frog cheats death - Fergus McAuliffe. “Some living organisms actually don’t need a beating heart to be alive”

* Gender stereotypes Take into account previous considerations and address them in the PERSEIA. Be creative to do it. Some possibilities are:
* Just to name a few stereotypes during the PERSEIA sketch.
* Name the stereotypes through talk about scientists that have been affected by it (Ex. Alan Turing, Sophie Germanie, Emmy Noether…).
* Name the stereotype and show effective ways to overcome it.
* Students can find their own way in order to talk about that in their PERSEIAS.

Encourage critical engagement with gendered issues (in light of what they have just learned) that may have come to light in their PERSEIA, however do not feel the need to force the issue – gendered stereotypes may not feature and that is also OK.

**3.4-WP4 Assessment activity (15’):**

Individual reflection around students’ learning through the last sessions. Students will be provided again with their learning chart and asked to think about and individually answer it.

**3.5-Work proposal (5’):**

Before beginning PW4, students should have finished the following topics of the story:

* Introduction: Presentation of the main scientific question
* Ending: Resolve the question posted in the introduction
* A way to face (gender) stereotypes

Students have to decide the role of each person of the SWG in their PERSEIA sketch.

**RRI learning dimension topics faced:**

Feelings and emotions

Social and civic competences

Sense of initiative

Inclusiveness of students

Engagement

Ethical issues (Girls’ barriers)

Gender issues

Creative and critical thinking

Humanising science

**Students’ transversal competences worked:**

Learning to learn: Know some of the criteria of reliability

Social and civic competences (critical and creative thinking; sense of collaboration in the construction of science)

Sense of initiative: Critical thinking. Making decisions about the reliability of scientific information.

1. At this point it’s quite important that the 4 students don’t know each other very well, at least that they are not in the same group of friends. [↑](#footnote-ref-1)
2. TWIST – One size fits all [↑](#endnote-ref-1)