

# **GOAL 1 FEST interaction:** **Facilitators - ECR – students - teachers**

## **Results of BRISTOL case study**

This document provides a preliminary analysis of the data collected through the workshops in Bristol by WP4. The analysis refers only to those insights related to WP2 Goal 1 (students' interaction with ECR and teachers), in order to contribute to the redesign of PERFORM engagement strategy with ECR and teachers. The last section provides methodological information that can be useful for framing the analysis.

This is a document for internal use for PERFORM partners.

### **OUTLINE**

- 0. General information and highlights of the results and analysis**
- 1. Observations during the workshops**
- 2. Students inputs (I): written survey**
- 3. Students inputs (II): focus group**
- 4. Teachers interview**
- 5. ECR group interview**
- 6. Methodological Annex**

## **GOAL 1 FEST interaction: Facilitators - ECR – students - teachers**

### **Results of BRISTOL case study**

#### **GENERAL INFORMATION:**

**School:** Fairfield High School

**Participants:** 27 students in one group, 2 teachers, 8 ECR, 2 facilitators.

**Setting:** The school had the participatory workshops in blocks of two at a time, which meant that participants, facilitators, teachers and ECRs shared a gymnasium space for 4 hours. This made the workshops rather intense, all the students were in a same space for an elongated amount of time, but also enabled a good amount of contact between students and FESTs.

#### *HIGHLIGHTS OF THE RESULTS AND ANALYSIS:*

- Students interaction with ECR depended on the subgroup and ECR skills for engagement. Since students wanted to get on with their busk they appreciated those ECR who helped with the busks, although some of them felt ECR could not help them at all. While a minority of students wished to have had more interaction with ECR, most students did not mind or not wish to have increased their interaction with ECR. Those students who did not enjoy interacting with ECR argued ECR talked about useless things and were not interested or not able to help them with their busks. Students' perceptions towards ECR role might be related to students' previous contact with science and scientists outside school: most of them had never or hardly ever visited a research centre and seldom visited science museum, and therefore might have low interest in science and do not be used to deal with scientists (association to be tested in further analysis).
- Although teachers' participation was moderately low during workshops because one was not very interested and the other only attended one session, half of the students perceived teachers helped them doing the tasks during the workshops. Both of them kept committed with the project, doing paperwork and supporting facilitators with logistics, and also met together with students to rehearse their scripts before the performance.
- ECR showed a very enthusiastic attitude throughout the sessions. Their interaction with students was higher when working with subgroups (in which ECR could participate fully with them by leading discussions, supplying information and ideas, asking questions) than during collective activities. Interaction between ECR and teachers was not observed.

- Differently than teachers, ECR were requested to get involved in implementing workshop activities by facilitators since the beginning which promoted their involvement. However, ECR were not clear on the objectives of PERFORM and the workshops as the information given during the training was not enough. Such lack of understanding, together with their reduced experience in working with students at schools, challenged their first interaction with students. Also, some ECRs were not properly introduced and hence their role may have gotten slightly mixed up by students.
- Although ECR enjoyed working alongside students and watching them performing the busks which they considered as an empowering experience for students, some of them expected to contribute more based on their own experience as a researcher and work more on science contents because they thought it would have been more scientific content in the workshops.

### *Proposals of improvement*

- Some students would have liked having ECRs that could help them with the busks instead of listening them talking a lot about other things they found useless. More attention should be given to provide students with the understanding of why ECR participate in workshops and why interacting with them can be useful so as they can understand the utility of ECR contributions.
- ECR would have liked more helpful interaction with the students because they often felt not involved enough in the development of activities and consequently felt that at some points they were not able to help the process.
- ECR appreciated a lot having social time and reflexive time in between the workshops, but also suggested some sessions of the training could overlap with the workshops, in order to have lesser gaps between sessions and keep in the loop.
- ECR would have like more space to discuss the progress of the process with the teachers and facilitators. Even though the process would benefit from more teachers engagement, they might not have the time to do so. Teachers reported they were fine with the amount of involvement in PERFORM since they couldn't have been more involved due to the amount of work they already had.

These highlights provide a global view of the data collected from the different actors involved through the workshops (students, ECRs and teachers). The following sections provide more detailed information, organised according to the data gathering method applied (observation, surveys, focus group and interviews) and the actors involved.

## 1) OBSERVATIONS DURING THE WORKSHOPS

### *Highlights:*

- Male teachers' participation was negligible during workshops whereas female teacher actively interacted with students and facilitators in the only workshop she attended; he didn't seem interested whereas she showed an enthusiastic attitude with the project.
- ECR also showed a very enthusiastic attitude throughout the sessions.
- Differently than teachers, ECR were requested to get involved in implementing workshop activities by facilitators.
- Interaction between ECR and students was higher when each ECR worked with a subgroup of students than during collective activities in which students' reaction to ECR comments and questions was particularly low.
- ECR helped subgroups in the different activities and participated fully with them: leading discussions, supplying information and ideas, asking questions.
- Interaction between ECR and students in subgroups was challenging for some ECR, who might not feel well-prepared on how to do busks and ready to support with ideas the preparation of busks.
- Interaction between ECR and teachers was not observed.

Information gathered through researchers' observations is further complemented by students' responses to the surveys and focus group, together with the interviews with teachers and ECRs (see sections 2 to 5). Such data provide additional insights on the interaction between students, teachers and ECRs, which are relevant to have a global perspective of the data (see for instance, teachers' feedback in section 4).

### *Role of the teacher and type of interaction*

The science teacher, a male, attended the 3 sessions (PW1-2, PW3-4, PW5) and organised students' groups before PW1. The female teacher who teaches science and dance only attended the last 2 hours of the second session (PW3-4). During workshops, overall, their participation was negligible. Indeed, they were not asked for supporting in the preparation or implementation of the workshops by facilitators. The female teacher looked more motivated and enthusiastic about the project than her male colleague who showed little interest to get involved. She actively interacted with students during group discussions and activities, helping them and being aware of any need. She informally said she was happy with the project and the workshop. Differently, he spent the first workshop (PW1-2) marking books at side of the room and the second one (PW3-4) working on the computer most of the time. He only interacted with a group of students who were discussing about gender stereotypes and different treatment at school as part of the discussion about the 'science is a girl thing' video.

### *Role of the ECR and type of interaction*

All ECR showed a very enthusiastic attitude throughout the sessions. They all seemed to be very interested in the project and informally said they also enjoyed it. Differently than the teachers, ECRs were asked by facilitators to get involved since the beginning of PW1, by explaining about their subjects. The male ECR, who had expertise in public engagement, also told students how he got interested in his subject. On the discussion of the 'science is a girl thing video', a female ECR explained her experience of being a woman doing a PhD in one of the subgroups. Besides

this, no ECR personal stories were shared with all students, maybe because they were not asked for by facilitators or because an environment of trust was not created yet.

Interaction was also fostered through assigning each ECR one subgroup of students. Students were invited by facilitators to ask ECR questions and there was plenty of time for them to talk between activities. In general, ECR managed to help students' subgroups in the different activities and participated fully with them: leading discussions, supplying information and ideas, asking questions. In the first workshop (PW1-2), however, interaction was not a straightforward process because ECR were not all confident about joining subgroups and seemed to be not sure about exactly when and whether to join, and students sometimes responded to ECR presence by being a bit shy and not talking. Also, when ECRs initiated conversations or asked questions to the students, not all students in the subgroups gave answers. Interestingly from a gender perspective, in the first session the male ECR was the one looking more confident when he joined the subgroup, and mostly talked to boys, who also seemed to be very confident with him. Interaction between students and ECR when working in subgroups improved in following workshops, maybe because ECR and students were more confident with each other since they worked together in the previous session. In PW3-4 dialogue and discussion between them was achieved, both in the discussions of the gender-related activities and in the busking-related activities that students had to create, and an ECR performed with her subgroup of students in the breaking news exercise. In PW5, the ECR helped his subgroup in preparing a busking about sound by prompting questions about the topic, describing the ear and suggesting ideas to represent it such as the potential use of coloured liquid to show up vibrations. Another ECR brought props, photos and ideas to help her subgroup of students with the busks. However, interaction was challenging for some ECR since they hadn't done an extensive preparation on how to do busks. Also the students were engaged to varying levels, being the balance and the quality of interaction different from subgroup to subgroup, maybe because of the ECR skills to engage, including how much they were ready to support with ideas the preparation of busks.

During collective activities students' reaction to ECR comments and questions was low. In PW3-4, when one of the ECR took the lead and explained the maths problem of the unconscious bias video that students didn't understand from the video, students reacted by losing interest and turning back. But lack of interest could be a matter of the topic, since when later the same ECR performed a story telling with a random object she previously prepared as an example for the students to do so during the workshop, students kept attention.

No observations recorded about the interaction between ECR and teachers.

## 2) STUDENTS' INPUTS (I): WRITTEN SURVEYS

### *Highlights:*

- Half of students (11) considered teachers helped them doing the tasks during the workshops while 6 out of 20 reported no help by teachers.
- Students showed contrasting perceptions about their interaction with ECR. While a minority of them (5) wished to have had more interaction with ECR, most students did not wish to have increased their interaction with ECR, specially 8 of them.
- Perceptions towards ECR role might be related to students' previous contact with science and scientists outside school: most of them had never or hardly ever visited a research centre and seldom visited science museum, and therefore might have low interest in science and do not be used to deal with scientists (association to be tested in further analysis).

Students' responses to the focus group in Section 3 support these results and provide some insights to understand both negative and positive perceptions on their interaction with ECR during workshops.

### *Students' interaction with teachers*

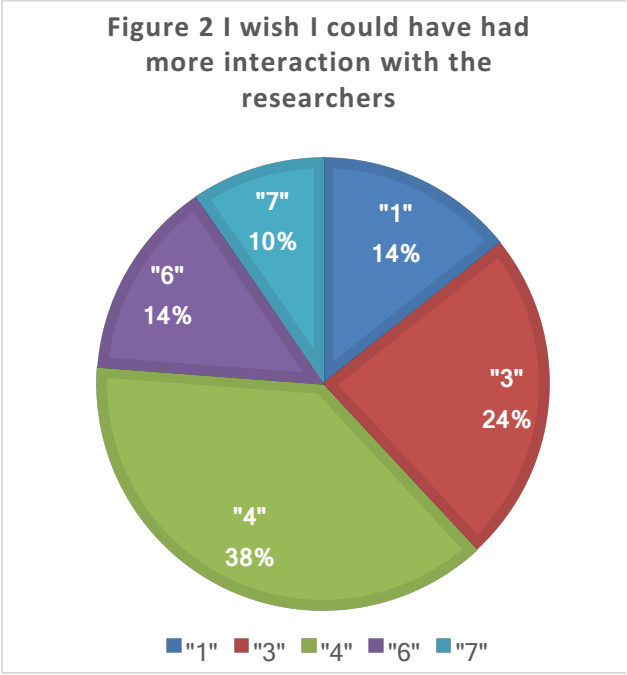
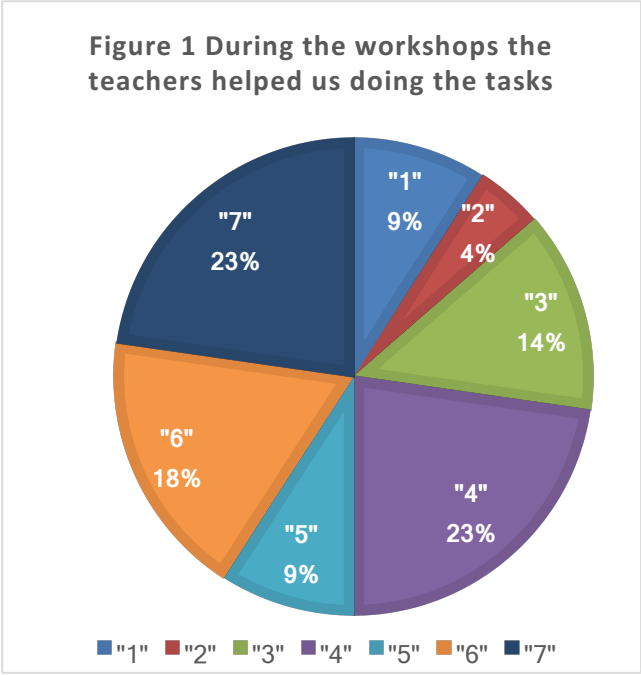
We analysed students' degree of agreement to a statement in the post-PERSEIA survey related to their interaction with the teachers (i.e., *"During the workshops, the teachers helped us doing the tasks"*). Of the 20 students who answered to the Post-PERSEIA survey, 11 students considered that teachers helped them doing the tasks during the workshops. It is mostly boys who reported teachers did not help them during the workshop (4 boys and 2 girls). However, 5 students' answers were neutral (Figure 1).

### *Students' interaction with ECR*

We also analysed students' degree of agreement to a statement in the post-PERSEIA survey related to their interaction with the ECRs (i.e., *"I wish I could have had more interaction with the young researchers (names in each school)"*). In the case of ECR, only 5 students answered they wished they could have had more interaction with the ECR, whereas 8 provided a neutral answer and the other 8 a negative one. Three didn't wish to have had more interaction at all (Figure 2). These different answers suggest students had contrasting perceptions about the presence and role of ECR in the workshops. Indeed, in the open questions of the post survey, for instance, one student reported that what he enjoyed the most was "to talk to researchers" whereas two students reported that what they enjoyed the least was "loads of talking to the researchers" and "listening to researchers talks".

In the next section, students' focus group results deepen in this point. We will also test in further analysis if such different perceptions about the interaction with ECR are related to the students' previous contact with science and scientists outside school. As Figures 3 and 4 show, students were also asked about the frequency with which they visited scientific sites. Results show that 18 out of 26 students seldom visit science museums (once or twice a year) and 6 of them never. Only two students reported visiting museums on a monthly basis suggesting a very supportive family context in relation to science that is marginal at the group level. Similarly, the

vast majority of students, 18 out of 26, never visited a research center, and only 8 did it on an annual basis.

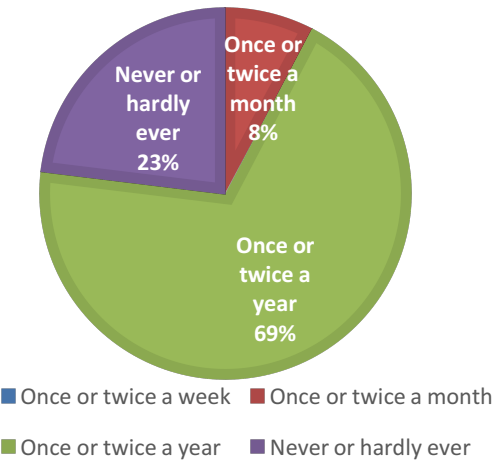


Teacher Interaction			
	Frequency		
	Whole sample	Boys	Girls
1 (disagree)	2	2	0
2	1	1	0
3	3	1	2
4 (indifferent)	5	1	4
5	2	2	0
6	4	1	3
7 (totally agree)	5	2	3
Total	22	11	11

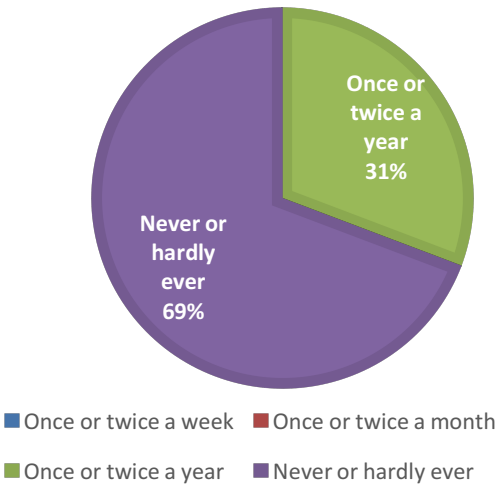
Researcher Interaction			
	Frequency		
	Whole sample	Boys*	Girls
1 (disagree)	3	1	2
2	0	0	0
3	5	2	3
4 (indifferent)	8	3	5
5	0	0	0
6	3	2	1
7 (totally agree)	2	2	0
Total	21	10	11

\*One boy did not answer to this question

**Figure 3 Figure 1 How often do you attend a science museum, science festival or scientific exhibition?**



**Figure 4 How often do you visit a research centre (for instance, within a university)?**



VISITING MUSEUMS, FESTIVALS, EXHIBITIONS				
	Once or Twice:			Never or hardly ever
	A week	A month	A year	
Total	0	2	18	6
Boys	0	1	8	3
Girls	0	1	10	3

VISITING RESEARCH CENTER				
	Once or Twice:			Never or hardly ever
	A week	A month	A year	
Total	0	0	8	18
Boys	0	0	4	8
Girls	0	0	4	10



### 3) STUDENTS' INPUTS (II): FOCUS GROUP

#### *Highlights:*

- Students remembered the names of two ECR but were not able to recall the names of other two ECR. Few students identified the facilitators as the researchers, instead of the ECR.
- Those students who enjoyed working with the ECRs explained they appreciated ECR helped them with their busks.
- Those students who did not enjoy interacting with ECR argued ECR talked about useless things and were not interested or not able to help them with their busks.
- Overall students wanted to get on with their busk so they would have appreciated more help by ECR with the busks.
- Students did not mention that ECR influenced their science perceptions during their discussions about the topic.

#### *Relationship between students and ECRs*

Some students remember the names of two ECR and it took a while for the others to actually remember ECR. Three of them (from two subgroups) said they did not even know their ECR names, and one of them mentioned the ECR in her subgroup did not tell her name. Some students initially thought the researchers were in fact the facilitators.

Students confirmed results from the post-survey about the sentences "I would have liked to have more interaction with the ECRs" and "lots of talking by the researcher" since they gave different opinions, and mainly negative. For instance, two girls from the same group said the ECR talked too much about useless issues and didn't help them at all. These students also remarked that even if the researcher may have been trying to help them, they felt it was hindering their process, and that they were not interested in what the researcher was saying:

*"Well they were just talking about that wasn't like necessary"*  
(UK1126)

*"She didn't do anything"*  
(UK1118)

*"Yeah she just sat there"*  
(UK1126)

*"Like after the first session just talking to her she kind of just like moved away"*  
(UK1118)

By contrast, two male students who were not in the same subgroups said that they liked working with the ECRs because they had helped them in their busks. One of them explained the ECR did not say a lot about science stuff but instead was actively trying to help them construct their busk and it was really helpful:

*"They helped us. Our one (ECR) was really helpful. She did most of it"*  
(UK1123).

A girl from another group raised the issue that their ECR was very nervous and very shy and was not fluent in English. Although she had a lot of barriers the ECR tried to help this subgroup:

*"We asked her to help us and she bring in sheets to help us with our busks"*  
(UK1103).

Overall students wanted to get on with their busk and to prepare it in the best possible way. Therefore, they appreciated ECR help with the busks.

#### *ECR influence in students' science perception*

Students discussed about their perceptions and attitudes towards science, and particularly scientific experiments, but did not mentioned ECR.

#### 4) TEACHERS' INTERVIEW

##### *Highlights:*

- Teachers were in charge of paperwork and control surveys.
- Teachers met together with students to rehearse their scripts before the performance.
- Teachers were fine with the amount of involvement in PERFORM since they couldn't have been more involved due to the amount of work they already had.
- Male teacher would be interested in doing the workshops again with the same help of facilitators and students' mentors.
- Female teacher would be keen to receive trainings from PERFORM to improve her science teaching.

##### *Role of the teachers and engagement*

The female teacher (dance and science) was asked to lead PERFORM in Fairfield High School by her Head of Department due to her experience in teaching both science and performing arts. Differently, the science teacher reported he "*was informed about PERFORM*" in Sept 2015 by the performing arts teacher, which might suggest he had no choice to participate.

Both teachers were in charge of organizing the work space and paperwork for workshops due to students being off timetable, as well as of organizing other students' completion of the control surveys. They also met together with students to rehearse their scripts. This sharing of responsibilities was perceived by her (dance and science teacher) as crucial to be able to lead and implement PERFORM at the school due to her workload (e.g., other responsibilities as a teacher, Head of House and Summer School Coordinator). In this sense, both teachers agreed they were fine with the amount of involvement in PERFORM so they wouldn't have been more involved due to the amount of work they already had.

Although he (science teacher) was not sure to become further involved in PERFORM, he would be willing to repeat the workshops only if SMS and students' mentors provide same support than this time. By contrast, she (dance and science teacher) would be keen to receive trainings from PERFORM to improve her science teaching but she will not be interested in doing the workshops again because she will teach more dance than science next year.

## 5) ECR GROUP INTERVIEW

### *Highlights:*

- ECR were not clear on the objectives of PERFORM and the workshops as the information given during the training was not enough. Such lack of understanding, together with their reduced experience in working with students at schools, challenged their first interaction with students.
- Some ECRs were not properly introduced and hence their role may have gotten slightly mixed up by students.
- ECR would have liked more helpful interaction with the students because they often felt not involved enough in the development of activities and consequently felt that at some points they were not able to help the process.
- Some ECR expected to contribute more based on their experience as a researcher and work more on science contents because they thought it would have been more scientific content in the workshops.
- ECR enjoyed working alongside students, contributing to discussions, helping them with their busks and watching them performing the busks which they considered as an empowering experience for students.
- ECR appreciated a lot having social time and reflexive time in between the PWs
- ECR suggested some sessions of the training could overlap with the workshops, in order to have lesser gaps between sessions and keep in the loop.
- ECR would have like more space to discuss the progress of the process with the teachers and facilitators.

This analysis is based on the reflection session with ECRs conducted by researchers from University of Bristol. Results on the interaction between ECR and students are supported by observations during workshops.

### *ECR interaction and relationship with the students*

8 ECRs participated in workshops, 7 females and one male. The ECRs were assigned to a subgroup of students that was pre-determined by the teachers. But two of the ECR did not attend all the sessions and two groups of students ended up mixing together.

Some ECRs were not introduced and hence their role may have gotten slightly mixed up. As an older ECR states, he often got confused with more senior members of staff. Also, as recalled by observations, the ECRs highlighted how their first contact with the students was rather uncomfortable, firstly because they had no idea of what the project was about, the information was scarce and of little clarity. In addition, for some, going into a school was a daunting perspective, a few had never gone to do any work into schools and found the first session rather nerve wracking. However, once there, they saw that the young people were not as challenging as they may have thought.

The male ECR remarks that they liked being able to work alongside students in their projects and they really liked it when they finally saw them busking by themselves and when students achieved to empowering themselves in front of other young people: *“when name of a student walked away and started engaging random people by herself, she was busking then. And she was explaining the science and that was I think – my proudest moment was when she was like – I was like, she’s going herself! And she’s talking to as far as I can tell people outside of her*

*friendship group, and she's taken straws and she's talking to people about vibrations and sound. And like that was it for me, I was, yeah, that was a busk in my mind."*

However, they also felt that at some points they were not helping the process, instead potentially hindering the engagement with science with some debates. Two female ECR mentioned: *"It was certainly interesting to engage with the children but I'm not entirely sure whether all the things did have the desired effect. When we watched that film about – the terrible one, where some of the people we talked with actually said it had made them want to do science less. I'm not sure whether the stuff we talked – the reflective work we did around it, whether that was enough to counterbalance it."*

*"They were particularly put off in our group because there were some statistics that someone said, like forty-one percent are women, and they were like, "That's rubbish, I don't want to do science if..." like they were all quoting the things that we'd said beforehand, which was supposed to inspire them. Instead they were like, "Oh no." And then the video kind of put the nail in the coffin."*

ECR felt that at some points it would have been really good to be able to round up the students and be able to have a discussion with them, maybe at the end of the workshops or at some point nearing the end, and gather more their thoughts on how was this process for them.

### *ECR's role in the workshops*

ECR most consistent remark was that they felt not involved enough in the process, at some points they felt they were just sitting there. Female ECR :*"But I have also missed out because sometimes we were just sitting there where they have to, I don't know, prepare the scripts or something like this, and you were like, what do I do here?"*

As mentioned above, the role ECRs had in the workshops was not determined from the onset and, as such, was understood through the practice of taking part in the workshops. ECRs commented they thought there would be more scientific content in the workshops and in their role as well, like this female ECR mentioned: *"I thought our job was to go there and mostly do our research – like teach them about our research or more outreach sort of thing. I felt that was a bit lacking. We were there talking science but most of the time as I said I was also just there and kind of guiding them through the process, but not really talking about science/science".*

ECRs ended up trying to help students in the best possible way they could through contributing to discussions and the process of producing a busk. One ECR comments that she got so into trying to make a busk that she found herself trying out different things at home in order to be able to better support the group she was in.

A ECR comments that she felt her role was not only to work in the schools as a helper but to be working alongside PERFORM researchers with regards to her own reflexivity while taking part in the training, activities and workshops. She felt her role was intertwined with the training they had beforehand and that the school was an extension of their own process of learning about RRI values: *"I felt like maybe if our role was a little bit more defined in the sense that you are constantly learning, so when you're going to work with the kids you're also trying to learn about that and it's us being reflective learners."*

### *Training needs to foster interaction with students*

They were appreciative of the opportunity the training and the community of PERFORM researchers from UoB and other ECRs provided for informal conversations to further their reflexive engagement in the process. Even if they found the process quite intense, all the interviewees said they were glad to have done it.

However, the training had a very clear lack according to the ECRs, the general lack of clear information about the what, how, whys of the project: *"I think it was only when we really started that I actually got an idea of what we were actually doing (laughs). They said that they felt the information given was confusing, unclear and of little help to know exactly what PERFORM was about and what were the requirements they had to fulfill."*

A female ECR felt the training should be more hands on, maybe with some preliminary readings or some work to prepare for it: *"For me, for some of the trainings I felt that it was passive, in that people were coming here, they were asking us and asking things to do in group, but I think I would have been more engaged if I had been given some maybe article to read beforehand, so to discuss, to be prepared. In some of the sessions I was engaged but not that engaged, so I think it would have been good to have something like this."*

They also spoke about the disconnection between the RRI values given at the training and then how they could integrate it in the resulting busks. The ECRs felt that the performance part of the workshops were rather disconnected from ethics and gender issues and, although they liked it a lot and enjoyed taking part in it, felt this should be addressed overall.

### *ECR proposals to improve the educational process*

ECRs would all have liked two things overall, the first one is to be able to know better what the project was about and their defined role in it from the onset instead of having such an experimental and unclear approach to PERFORM.

The second one is that they would have liked to have more time to talk science with the students, may it be their research (which they encouraged) or generally relate the project to science much more.

In addition they said they would have liked to have a space where to discuss with the other people involved in the process, about the people who came to have a debate with the group and also with the teachers, having a space to talk about the young people with the latter.

## 6. METHODOLOGICAL ANNEX

### *WP4 methodological approach and evaluation target*

We have implemented a mix methods approach, combining different qualitative and quantitative data collection methods, data sources and analysis strategies (triangulation). These have been applied during different moments of implementation of the project: before, during and after the PERSEIAS participatory process.

This document contains data gathered from the different actors involved in the PERSEIA (secondary school students, their teachers and early career researchers), through specific assessment methods: observations of the workshops, two written surveys to participating students, one focus group with students, one online survey to the teachers, and one group interview with ECR. Table 1 summarises these methods and their focus of our analysis in relation to Goal 1.

We have conducted a descriptive statistical analysis of students written surveys using the statistical software Stata. We analyzed students' answers by looking at the frequency of each score (from 1 to 7 in the Likert items; and according to frequency categories in Q2) for the whole sample of students. We have then analysed responses according to sex.

For the rest of the assessment methods, we have conducted a qualitative analysis. Most specifically we have conducted a conventional content analysis. Content analysis was chosen among the different analysis traditions as it helped us explore participants' answers in detail and identify themes, patterns and meanings related both to the contents addressed and participants' experience of the workshops. The analysis was supported by the software Atlas.ti and guided by a list of key dimensions and topics related to Goal 1 (see Table 1) which allowed us to identify emergent codes and categories of analysis.

Table 1. Assessment methods applied, general objectives and connection to the analysis of GOAL 1.

Assessment method applied	General objectives	Target	Focus of our analysis in this document (items included for analysis of GOAL 1)
Observation	Examine the PERSEIA participatory process as it happens and track group processes and RRI requirements during the sessions (e.g., group decision-making, students' inclusivity and participation, engagement, attitudes)	Students ECR Teachers	Inclusion of ECR personal stories Role of the ECRs involved and interaction with students Role of the teachers involved and interaction with students Interactions between ECR, teachers and facilitators Impressions shared by teachers and ECR after the session (if any)
Written surveys Pre- PERSEIA (n=26) Post-PERSEIA (n= 22)	Obtain basic demographic data  Explore initial attitudes and perceptions towards science and STEM careers, with an emphasis on RRI-related dimensions, and potential changes after the implementation of PERSEIAS  Explore participants' perceptions towards the PERSEIAS process	Secondary school students	Survey pre-PERSEIA: <i>Q2 How often do you do these things?</i> d) Attend a science museum, science festival or scientific exhibition, for instance e) Visit a research centre (for instance, within a university)  Survey post-PERSEIA: <i>Post LIKERTQ5: I wish I could have had more interaction with the researchers during the workshops (names)</i> <i>Post LIKERT Q4: During the workshops the teachers helped us doing the tasks</i>
Focus Group (n= 8)	Explore in-depth the impact of PERSEIAS and its RRI approach in students' transversal	Secondary school students	Students perceptions of the interaction with ECR in the workshops: Reaction to the statements: I would have liked to have more interaction with the researchers. Loads of talking by the researcher.



	<p>competences, attitudes towards science and STEM</p> <p>Explore participants' perceptions towards the PERSEIAS process in terms of their own learning and experience.</p>		<p>I liked listening to the researchers talk about their experience with science.</p> <p>Discussion: Why? How was the interaction with ECRs? Who did you interact with? What have you learned from them? What was the dynamic?</p> <p>Influence of the interaction with ECR in students' perceptions of science (mentions to ECR when sharing their perception of science after PERFORM)</p>
Written online survey (n= 2)	Explore teachers' perceptions about the PERSEIA participatory process, including: their involvement in the process, students' attitudinal changes and improvement in transversal competences, and willingness to continue implementing the project.	Secondary school teachers	<p>Questions about their role and engagement:</p> <p><i>What has been your role throughout the process and what workload has it generated?</i></p> <p><i>Would you have been more involved if you had had the chance to? How?</i></p> <p><i>Would you like to repeat these workshops in your school on your own?</i></p> <p><i>Are you interested in maintaining your involvement with PERFORM (e.g. attending a forthcoming teachers' training, giving advice on new activities, etc.)</i></p>
Group interview (n=8)	Explore ECRs' perceptions about the PERSEIA participatory process, including their involvement and the interaction with students.	ECR	<p>Reflection session conducted by WP3 researchers. Interventions related to:</p> <p><i>ECR interaction and relationship with the students</i></p> <p><i>ECR role during the sessions</i></p> <p><i>Training needs to foster their relation with students</i></p>