2. School and participation

From the Metaplan to the Open Space Technology: integrating a participated process in schools

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Encouraging the participation of non experts and, in particular, of students in the scientific debate is the main contribution of the *Perception and Awareness of Science – Ethics and Polemics* Project to the «participatory turn» (Jasanoff, 2003; Lengwiler, 2008) that has characterised the evolution of studies on science in the last few years.

The entire course of our project was designed in view of this participative goal and of the preconditions to implement it. However, over the years, as the testing of the project in the secondary schools of several Italian cities progressed, after reflecting on it and on the cues that emerged from schools and research, we also tried to encourage the adoption of further, specific participative practices in the individual stages of the project.

Several participative practices were conceived through international practices[1]. The main problem consists in adapting and including one or more of these practices in a process that is consistent with the project's requirements and general methodology, and enhancing its goals.

To this end, first of all we identified the trickiest stages of the

[1] An overview of the main participative methodologies may be found at the Cipast website: http://www.cipast.org/cipast.php?section=1017.

Ethics and Polemics Project: the initial ones and the final ones. Indeed, right from the beginning it is necessary for each student to feel that his or her knowledge and intelligence are integral parts of the project's process and that in it he or she will encounter important new information but will also recognise parts of him or herself.

For this reason, on the occasion of the activities on Climate Change, seminars based on the Metaplan methodology were organised in a limited number of classrooms already in 2006. Why was the Metaplan chosen? In a nutshell: because it presupposes the existence of tacit knowledge and because it enables the alternation of moments of individual reflection with exchanges of ideas within groups. The *experiment* was led by Michela Mayer with the collaboration of Prof. Angela Fanti of "Francesco d'Assisi" scientific high school in Rome. The testing convinced us (researchers, students and teachers) and we permanently included it in the project's methodology, presenting it again a year later to all the classrooms of the schools in Rome and Milan.

Moreover, we took many other issues into consideration, also related to the project's final stages, and, in particular, to the possibility of ending it with a participated agenda autonomously created by male and female students. But we also wondered how to assess the teachers' point of view on the aspects of the didactics connected to the implementation of participated projects in schools, beyond the simple filling out of an evaluation sheet. Elena Del Grosso and I thus used an opportunely modified version[2] of Open Space Technology for both needs.

Between the two stages described, the pathways that had been predefined by the researchers were joined by other, spontaneous ones, autonomously conceived by schools or student groups. We

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[2] Changes concerned different aspects for the teachers' and students' OST. In both cases, in view of obtaining a result in the short time available for the seminars, it was decided to propose to all the groups to draft the final *instant report* following a predefined format (although the groups could choose not to follow it). The following took part in the teacher's OST: Grazia Maria Bertini, Sara Sidoretti (LC "Virgilio"), Daniela Donisi, Alessandro Freddo (ITIS "Leonardo Da Vinci" sez. Agraria Maccarese), Silvia Garibotti (IPSIA "Cattaneo"), Francesca Sartogo, Cesare Vettucci (ITIS "Enrico Fermi").

consider this another good example of participation. Precisely because these activities are self-defined and self-managed, we were not faced with a number of identical initiatives: many of the students involved, often guided by their teachers, improved the scientific documentation provided by the Cnr by creating multimedia presentations and clips, short essays and reports, and taking advantage of the project to become familiar with a culture of information. We cannot describe them all. Part of the material can be found on our website[3] (conceived by students of the following high schools: LC "Virgilio", IT "Fermi", IT "Da Vinci", LC "Giulio Cesare", LS "Plinio Seniore" and IPSIA "Cattaneo"), but I will leave it to Luciana Libutti to speak about the importance of these aspects in the educational process.

Other groups spontaneously organised meetings and seminars. This year, in particular, the students of two schools involved in the project, the IPSIA "Cattaneo" in Rome and the Istituto "Rinascita" in Milan, after taking part in the round table and public debate organised by the project with national and international experts on the Water Crisis, planned and held a conference on the same topic, in which they played both the roles of audience and speakers. I was able to take part in the conference of the IPSIA "Cattaneo" in Rome, and was satisfied and amused by the good combination of seriousness and irony attained by the students. Further on in the book, Alba L'Astorina's contribution relates the experience of the younger students of the Istituto "Rinascita" in Milan.

Bibliographical references

Jasanoff S., *Technologies of humility: Citizens participation in governing science*, in "Minerva", 41 (3), 2003

Lengwiler M., *Participatory Approaches in Science and Technology: Historical Origins and Current Practices in Critical Perspective*, in "Science, Technology and Human Values", 33, 2008

[3] http://www.irpps.cnr.it/com_sci/