



Public Report on the 1st Online Discussion Event for Policy Makers

Author

Silvia Panzavolta, Emilio Balzano

Project Title: DESIRE

Project Number: 519113-LLP-1-2011-1-BE-KA4-KA4MP

Grant Agreement: 2011-43816/001-001



The DESIRE project has been funded with the support of the Lifelong Learning programme of the European Union. This document reflects the views only of the authors, and the Commission, cannot be held responsible for any use which may be made of the information contained therein.

Table of Contents

1. Quantitative description of the 1st ODE for Policy Makers	Error! Bookmark not defined.
2. Qualitative description of the 1st ODE for Policy Makers	Error! Bookmark not defined.
2.1 Introduction.....	2
2.2 Adoption of innovation and STEM Projects Impact.....	3
2.3 Strategies for effective dissemination of project outcomes.....	3
2.4 Effectiveness of dissemination activities. Examples and Models.....	4
2.5 Participation.....	6
2.6 Conclusion.....	7

1. Quantitative description of the 1st ODE for Policy Makers

ODE title: Discussion event for policy makers

Target: Policy makers

Date: 15-17 October 2012

Number of invitations made (if possible, please specify typology of invitees)

Total: 21 + members of the EUN Steering Committee. Invitees are policy makers, researchers or professionals, participating in national Ministry of Education boards or commissions.

Target type A: NC

Target type B: NC

Target type C: NC

Number of actual participants per day (if possible, please specify typology of invitees)

Total: day 1: 2; day 2: 8; day 3: 6

Target type A: NC

Target type B: NC

Target type C: NC

Drop-outs¹ per day: 2 on day 3

Number of posts per day: day 1: 4; day 2: 14; day 3: 8

Ratio participants/post per day: on the average, 2 per participant.

Silent viewers per day: all participants posted at least 1 message

2. Qualitative description of the 1st ODE for Policy Makers

2.1 Introduction

This report is a summary of the first policy makers Online Discussion Event, which took place in the period from 15 to 17 October 2012.

The participants were invited by the moderator especially for the considerable experience in European projects management and in interacting with policy makers. In particular, all participants agree on the need to understand how to make effective and usable results from innovation projects in STEM, All are interested in understanding how to overcome the distance that exists between research and practice, including proposals for innovation and practice.

During the three day event the participant discussed on the results of several European and national science education projects and the related dissemination strategies. In particular, participants were asked to refer to both their direct experience and what emerges from reports and results of research on the processes of innovation, with the aim to exchange views on how to have a real impact on teaching mathematics science and technology in school.

¹ Meaning people that said would be present and that were not there.

Due to the nature of the topics covered in the three days of discussion there have been continuous overlapping among the sub-topics. So in this report, indications emerged not faithfully according to the timeframe of interventions but are rearranged into three content areas. The event was also attended by two people from Latin America on behalf of groups of projects closely related to the issues under discussion.

The following sections contain summaries of the discussed themes from each of the three days and the outcome of the discussions.

2.2 Adoption of innovation and STEM Projects Impact

On the first day the discussion was stimulated by an assertion:

“Resources and best practices that emerge from science education projects have a poor diffusion in classroom practice. Many reports on STEM teaching show that even if teachers positively evaluate innovative proposals, they are reluctant to adopt change if the proposed innovation does not resonate with their conceptions, beliefs and professional experience.”

About the difficulty of adopting innovative proposals, from the discussion highlighted the need to discuss about the nature of academic research and the necessity to involve teachers in research activities and not as a target group

“ In my opinion, resources and best practices that emerge from science education projects have a poor diffusion in classroom practice, because teachers are not really involved in these projects as actors. Usually the academic researchers does not consider teachers conceptions, professional experience and real needs to delineate the innovative proposals. The delineation of innovative projects in science education should emerge from the school community, anchored in their issues. This means that the academic community, including students, should be closer to the school since the beginning of teacher training programs.”

“I would like to discuss about the actual feasibility of making teachers' job a research activity.

This should involve a re-thinking of several structural aspects in school organisation, but above all a change in the current cultural background, which research in (science and maths) education is carried out. Especially, what role should different stakeholders play and what contribution are they able to do, with regards to that possible change of perspective?”

2.3 Strategies for effective dissemination of project outcomes

The debate has been prompted by a statement on the involvement of teachers in educational innovation projects

“Several researches and experimentations show that teachers should be involved in the design and evaluation of the proposed innovation. It is not enough the initial training on the proposal. Required changes must be supported by an ongoing relationship with researchers and experts who have, among other things, involve teachers to promote the exchange of experiences in school”

In the discussion has been shared the need for an educational research that involves teachers in an active way also for the dissemination of good practices. Then they dealt with issues that concern the

government of the school, the role of the community and the interaction with the relationships with the policy makers.

“We need to work on both directions: with a 'contamination' strategy involving more group and more teachers, and with a systemic strategy fighting for change some of the conditions of teachers work (more time for study and research, for following training courses, for participating to projects...) and for achieve more visibility and recognition for innovation in science education.”

“I propose two things 1. The governments have to provide motives to teachers to be involved to. And if there is no money, they have to give academic and vocational motives. 2. We need one period of time to develop out projects and the same period to disseminate it among teachers. Also, we need to educate/ train mentors and they will disseminate the results in their turn.”

“ Whilst the focus is always put on the teachers, the Head of the school institute has a very important function in supporting or hindering the innovation. I think that the selection of these professional figures should be done with great attention to their crucial role in promoting change and they should be always directly involved also by researchers when promoting research-action projects. The responsibilities of the Head do not end in just giving their agreement to innovative projects, or to educational programs offered by external agencies: they consist in an active participation with pedagogical competences, in managing the organizational aspects, in making the teachers a community which shares objectives and policies.”

“ So ... my proposal is to:

- organize cluster of discussing teachers (in presence and at distance)*
- reflect on the discussions e help for some meta-conclusions (a coach can help in this sense)*
- compare pre-discussion ideas with those after discussion and look at the impact.*

Cooperative discussion oriented to reach a common idea are the way in which people grow in professional development, producing modification in the perception of the problems and in the way of thinking”

“I have not definite suggestions but in these years I matured the belief that while we have strategies - slow but effective - to involve teachers in STEM research, we have very few strategies to 'mainstream' what we have found and to convince the policy makers that changes are not only possible but absolutely necessary”

“Many projects - especially in Latin America - showed how involving the communities could be useful for supporting STEM implementation and innovation. “

2.4 Effectiveness of dissemination activities. Examples and Models

The discussion on the last topic was stimulated by summarizing some of the issues raised above and suggesting some questions about successful examples and possible models of dissemination.

“... despite the different experiences from which we come, we are all aware of the complexity of the topics ... almost all share the fact that innovation must take into account how people learn, the actual teaching conditions, the needs of teachers, the socio-cultural aspects, etc. ... schools are

regarded as complex systems of interacting dynamics. In the dissemination process, teachers are not the target of an intervention based on assumed evidence but the protagonists of a participative process in which they work together with researchers, experts, policy makers as peers at all stages of the process. Discussion about curricula, teaching methodologies, assessment and more generally about priorities in STEM should be part of an open debate on issues that are related to cultural specificities of local communities. A possible strategy could be the construction at both the local and central level of consulting commissions involving teachers, researchers, students' families, school principals and administrators, and all the other relevant actors. What are, in your experience, examples and transferable models of educational innovation that you think are effective?

The interventions focused on different topics and in particular on the conditions for implementing the innovation and some experiences in Traces project

“Experience shows that it is important, in addressing to teachers, to avoid mistakes already made several times with pupils: in order that significant changes can be obtained, it is important that the "asymptotic" goals of the proposed changes are modulated in structure and time according to the actual (teaching) conditions one strives to change. What has to be changed, in fact, are mostly quite profound "ways to look at" different components of the teaching habit: cultural structures, pupils' cognitive dynamics, cooperation with colleagues, roles possibly played by technologies, classroom handling and gestures, ... and so on. In order such aspects coherently produce an effective impact on pupils, they must be gradually (re)appropriated by teachers as driven to reciprocal resonance: in practice, this means a gradual (guided) drift from the actually practiced teaching modes to new, more satisfying ones. “

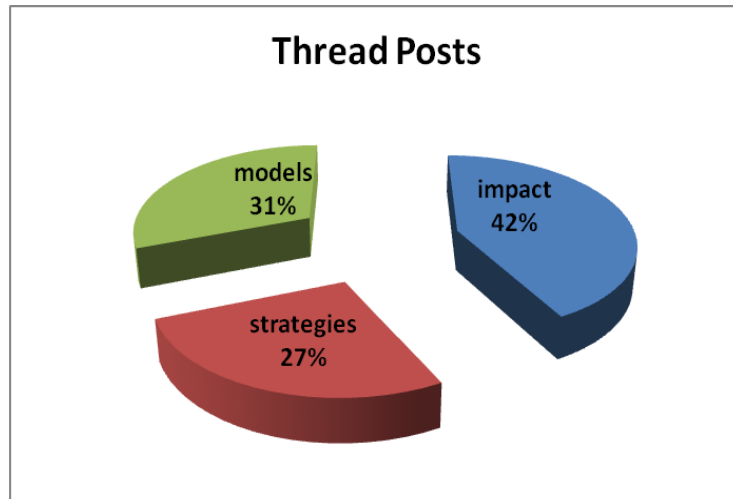
“As demonstrated by the TRACES project, and many others, if the researchers really listen to teachers needs and possibilities, it is relatively easy to fill the gap between research and school practice. This require big efforts, collaborative strategies, follow up, but it works. The point is that this not change the system, and not transform the local and national 'culture' about science education”

“we need to support and to involve teachers, but we need also to ask for the recognition of educational research, and for orienting educational research to educational practice. In many countries, and Italy is one, educational research is not really valued, not at school as a teacher quality, not at the universities. An European position on this point could be an important policy move: research is an intrinsic component of education. If education want to be effective while contexts and students competencies change, continuous innovation and teachers lifelong learning are needed, and this is not possible without research”

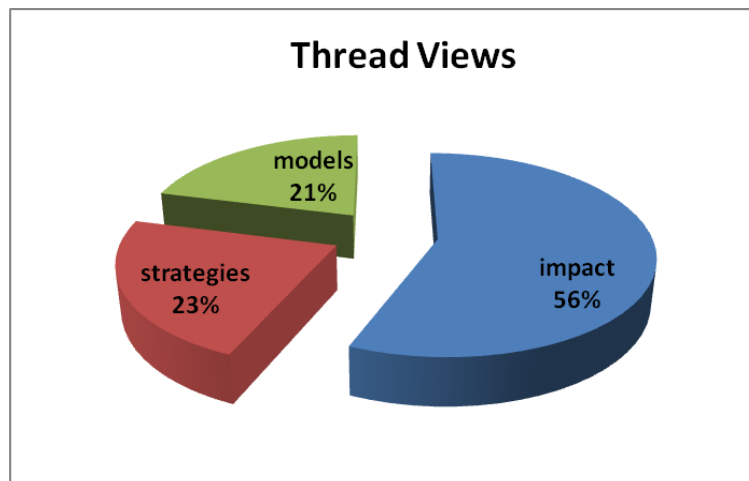
“I have participated in TRACES Project and the focus of my research work is Physics Teacher training (initial, in service and continuous). In our research group we strongly believe in the effectiveness of teachers involvement in innovative projects and researches if we want to really change real teachers practice at schools. We think that the research projects and innovative proposals need to be planned in a way based in real teachers needs, doubts and interests. In our Case Studies this was the case and teachers involvement was really interesting. It is true that we need to reach a bigger audience if we really want to change Science Education in our countries. And this involvement is connected with better working context, social recognition and a better salary on one hand and better schools, with internet access, good libraries, buildings and so on. This should be policy makers duties.”

2.5 Participation

Along the three days event, there were 26 posts. The percentage of the posts per theme is shown in the next figure



In contrast, the total number of views of posts was high (857 views). The high number of views and the distance between the numbers of views and posts confirms both the interest and the complexity of the subjects discussed. The percentage of the views is shown in the next figure.



The event has not involved a large number of participants . However, interventions were all very articulate and expressed views consistent with what emerges from major U.S. and European reports on the "state of the art" on STEM teaching.

2.6 Conclusion

The impact on the STEM teaching of European projects is very poor. On the one hand we need to understand that innovation proposals are accepted only if they resonate with the practice and ideas of teachers; on the other hand, it is necessary to involve the whole school, regarded as complex system of interacting dynamics and not isolated teachers, in local and national dissemination plans. Plans should be aimed at knowledge, selecting, and sharing of best practices that are well suited to the context. Schools must be open places of permanent experimentation and teachers should be involved in the design and evaluation of the proposed innovation. It is not enough an initial training, in order to allow the adoption of innovative proposals. Required changes must be supported by an ongoing relationship with researchers and experts who have, among other things, to involve teachers to promote the exchange of experiences in school. External stimuli are needed but teachers must build themselves, working with other teachers and researchers, proposals for educational innovation: without experimentation and research it is impossible to adopt any proposed change. If it is true that sometimes policy makers are more sensitive to the organizational aspects, the experience shows that it is necessary to involve policy makers, not only in the plans for dissemination, but in the various phases of a project with the aim to have feedback and to evaluate the potential impact of the project on educational policy.