Report on the

3rd Project Managers Online Discussion Event

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1. Introduction

The primary objective of the DESIRE project is to identify how project outcomes in science education can reach teachers, project managers and policy-makers more efficiently. The online discussion events (ODE) of DESIRE are used to facilitate the sharing of experiences about dissemination between stakeholders in STEM education. The ODEs have the purpose of collecting qualitative data for the DESIRE Project.

This report is a summary of the third project managers Online Discussion Event which took place on 3rd April 2013 using Google Hangout and was moderated by Digna Couso, researcher in Science Education at the Universitat Autònoma of Barcelona, Spain. Six project managers from four countries attended this event.

During the event project managers were invited to discuss together 'How to better communicate outcomes from the research and innovation projects in which we participate to specific stakeholders?' This event had the following objectives:

- To discuss preliminary results of the DESIRE project.
- To take participants' experiences and suggestions into account in order to elaborate a set of recommendations to disseminate science education projects' outcomes in a more efficient and fruitful way.

The following sections contain summaries of the discussed themes and the outcomes of these discussions.

2. On dissemination strategies

2.1. Text-based dissemination strategies

The first topic that was tackled during the ODE was the use of text-based or paper-based strategies for dissemination purposes. The moderator commented the Desire outcomes mentioning that public **project documents or reports** have been evidenced to be the most common text-based strategy to reach target audiences.

An alternative strategy to present experiences to stakeholders, as emphasized by one participant, is the production of a **book** collecting the outcomes from a funded project.

> "We think it [writing a book] can be quite a good and effective dissemination strategy. Most of our time has gone in writing reports which I suspect are read by a very small number of people"

The moderator went on discussing the recommendation of selecting key messages and **briefer formats** as possible facilitators of the communication between researchers and policy-makers. One participant supported this statement and added that an appropriate format to reach policy-makers according to communication advisers is a summary of key outcomes in maximum a piece of paper. Project managers insist on starting a dissemination plan thinking of

the target audience and their needs, priorities and constraints and developing the communication strategies in agreement with those.

> *"I think that one thing that we have to really keep in mind especially when talking to policy-makers is that those people are super-busy. So when you produce policy reports of 40-50 pages, it is just something that is not going to be read by those people. They do not have the time resources to go through all that material. And that is why we just end up producing material that is read by only a very small amount of people and talking to ourselves in a sense."*

2.2. Web-based dissemination strategies

The next dissemination channel that was brought to the discussion was the use of **mass media** and **social networks** since they do not appear to be much used by project managers, according to Desire's preliminary outcomes, although some teachers are enthusiastic about the use of social networks due to the fact that they can choose the kind of information they want to receive.

The main reasons argued by project managers for the underuse of social networks and mass media are mainly three:

- There is a lack of knowledge to use social networks in a way that is not superficial or distorting project key messages.

  > *"The main obstacle to using social networking is the trivial content that tends to be there. From my experience, it ends up with people commenting on each others' statuses and not communicating anything very useful in terms of teachers' professional development.*

- Teachers are often using their own (local) networks which already work and are successful to them and project managers do not always know them or how to work with them.

- The way funded projects are shaped or the funding institutions request for them to be shaped is not particularly attractive and so very often key national media are not really interested in reporting the outcomes.

However, another project manager pointed out a good reason for using social networks and it refers to the fact that they allow project managers to be aware of what information is of interest to their target audience. Accordingly, this project manager stated the following challenge for disseminating project outcomes:

> *"The challenge for project managers is really to convince the funding institutions to try to do things in a bit more innovative and risky way since they want media exposure"*

Websites were also discussed as the most common web-based strategy to reach target audiences. Some of the problems with the use of websites for dissemination purposes, as stated by the project managers participating in the event, are:

- There are too many projects websites and too much information in the web, and although there are some portals collecting information from different projects, these have not been successful with regards to dissemination because they are not used by many teachers or project managers or since they are not appropriate to engage them in taking project outcomes on board.

- The interest in a website depends on many factors all of which often cannot be controlled by project managers or are difficult to manage. For example, an attractive website needs to include good and updated information that takes into account users' needs and interests in order to be helpful to the people we are trying to serve. In this sense, it requires that project managers and all partners put up their information in a regular basis. As stated by a project manager, "*for many people, if it is not part of their regular routine, people don't do it*".

- Websites are not usually tested with the users, although this is considered a basic requirement to produce a website that is user-friendly and useful.

Some recommendations taking into account these problems are related to:

- Identification or creation of reference web portals linked to the national curriculum in particular countries or linked to particular topic areas. As one project manager commented:

  "The way forward is probably through national portals which teachers tend to use more than European ones."

- Professionally designed websites updated with information in a regular basis and tested by users to start from their needs instead of following the structure of a funded project.

- Lobbying with the funding institutions to make them realise that creating a website for each funded project, as an essential condition in contracts with funding institutions, is not helpful since there is too much information and teachers can get lost roaming around in the web.

2.3. Face-to-face dissemination strategies

One of the participants in the event brought the issue of involving stakeholders, mainly teachers and teacher trainers, in face-to-face dissemination strategies or using participatory techniques.

"Really our way into things is to have personal contact with people who have roles in providing teacher professional development at different national contexts and working with them in training programs which are already running and providing content to those. So it is about getting into a train that is already moving and making people buy the ticket basically."

The moderator commented then another Desire preliminary result related to the dissemination strategies based on already existing relationships, networks or resources. The

participants were invited to discuss how they intend to reach target groups or specific people other than those that they usually reach and what reference networks or associations they use in order to disseminate project outcomes in their context, at EU level or at international level. Some project managers pointed out the difficulty of scaling up and reaching a larger public since groups of researchers or project managers tend to work always with the same groups of teachers that are very experienced and usually know them, their activities and the training opportunities they offer. Whereas some project managers expressed their worries about reaching larger target audiences, other researchers were more concerned about the quality of their relationships with teachers rather than about the quantity of stakeholders reached.

> *"I think one of the things we should be thinking about is actually reducing the size of our target groups because most of the projects that have spoken to in STEM have tried to cover a wide range of stakeholders and, as a result, don't contact or don't work well with any of them."*

Some positive experiences or proposals that were shared regarding participatory dissemination strategies are based on:

- Teachers acting as kind of ambassadors or national coordinators: Project managers establish contacts with teachers that are responsible for engaging many other colleagues in the project. In European projects this strategy seems to work quite well since teachers can be easily reached if one colleague can organise meetings or other activities in their schools or local contexts.

- Structuring teacher professional development in Europe in such a way that there is a space to introduce the work of European projects into teacher development programme across Europe. It is considered that such ideal structure might have actually an impact in practice but that would require that the funding institutions supported this and had a strategy for developing such structure first of all and then connected to the projects in order to put content into it.

- Involving people who would advise general policy-makers. When project managers refer to policy-makers, they are aware that politicians do not know about many topics but they rely on particular advisors, people who do research, people who bring together ideas or is looking for new ideas. For this reason, advisory boards are usually considered relevant as intermediate stakeholders to reach policy-makers. However, as stated by one participant in the event, "*lobbying is a professional and extensive business and, unless you are prepared to invest in professional lobbying services, it is hard to reach politicians or their advisors*".

- Establishing a network across projects of people who would act as ambassadors or champions in each country or in each region of a country. These people are expected to be very connected to other stakeholders and really passionate about the topic of the network, in order to really have the potential to reach out to wider groups. ProCoNet (http://proconet.ph-freiburg.de/index.php), as a network which is intended to bring together coordinators of most of the big STEM projects in Europe is presented as a good example.

- Inviting the aforementioned sort of people to advisory teams or boards in a reactive way. Recruiting people who are champions in their regions, who are available on free

services, who are "superconductive", people who have massive connections is also considered a good dissemination strategy. In words of one of the participants, "*these people are usually proud of permeating to other people and they tend to bring massive value added to projects*".

3. On specific strategies used to reach specific audiences when disseminating results

As one of the project managers participating in this event summarised:

"It's necessary to adapt the messages and the way we communicate with stakeholders. Project managers should not be on their Ivory towers and should not forget about what are the needs of the stakeholders and they should make sure that stakeholders really feel interested and the communication we make for them is useful."

The moderator focused on the dilemma that project managers face regarding participatory techniques: **Teachers and teacher trainers**, who are the main target audience of science education projects, are the only target audiences that are involved in face-to-face participatory techniques, such as workshops and communities of practice. However, some project managers have some reservations about using participatory approaches since they are considered very demanding and very time-consuming, they require a lot of involvement of all parts, and they do not tend to have impact at a large scale.

The participants were invited to discuss further which participatory strategies they would recommend to use with teachers based on their experience. Their proposals are summarised below:

- Establishing groups of teachers working together to support each other. According to one of the participants, "*the most successful strategy is that teachers get some input from a project and then take that further by themselves, sharing ideas, developing ideas in the classroom, with an initial push from the project, but then on a way which is not dependant on the project going*".

- Organizing a training program for national coordinators so that they become really familiar with the resources of a project so that they can involve more teachers and talk about the project in their schools and around their region organising workshops in their country. In words of a project manager, "*it's kind of 'train the trainers' and it's a model that works*".

- Implementing cascade models of dissemination. These models usually consist of courses, which involve educators usually working with public governments, and these teachers come together to get trainers courses, and then they train a great number of teachers in their local contexts. If these courses are successful, they can carry on with public governments after a project finishes.

- Organizing or selecting teacher conferences, and providing teachers participating in a project the opportunity to attend these conferences.

In the particular case of **policy-makers**, one project manager participating in the event stressed the importance of focusing on instruments of dissemination addressed to specific purposes more than in specific target groups. In his words, "*when we mention policy-makers this is frequently the case of wasted effort because policy-makers come and go in an astonishing rapid pace. And the thing perhaps to concentrate on is not so much policy-makers themselves but policy instruments or policy channels which actually cause change in education. And if we can identify those, both at the national and the European level, and work on strategies which could connect with those instruments, then we would considerably have more chance of getting something done. But trying to get the attention of policy-makers as personalities is almost due to failure because they would only want to pick up on things that impact due to their popularity in a particular moment. IBSE is not usually one of those things. It's not sexy for politicians. We need to find other ways.*"

4. On the evaluation of dissemination strategies

Another DESIRE result was discussed and it has to do with the fact that the most common criterion of evaluation of dissemination strategies is the number of people who are reached in a project. The participants went on discussing how they assess the quality of the dissemination strategy beyond the number of people reached.

Most of the participants agreed that **quantity** and **quality** are measures that need to be evaluated. In words of one project manager, "*the funding institutions always have to tick the quantity box for the very reason that internally they cannot justify the continuation of the programme unless there is a sufficient critical mass. They need the quantity. But, at the same time, I would definitely agree with the preliminary results of the Desire project that the actual lasting impact requires a face-to-face dimension. The reason is quite simple. We are also swamped with information and the only way to make your voice actually heard in this huge cacophony is to have this face-to-face dimension, involving people who are good communicators, who are passionate and who are going to be able to move beyond. So we have to play on both dimensions*".

Another project manager explained a strategy used in his context to assess the quality of the research that focuses on impact. This strategy consists of elaborating a case study showing the impact that someone's research or certain projects' outcomes have had on the research community in the last years. The impact can be shown in terms of examples of policy-makers who have taken someone's advice on board, evidence of how someone's contribution is part of ongoing debates and discussions, or instances of other people's work mentioning that a certain project or research influenced how they carried out their work. This participant agrees that "*it's hard work to write a case study because some of the evidence is quite faint but sometimes is much more than saying 'oh yes, we reached 5.000 teachers and that means 200.000 kids'.*

5. On constraints for dissemination

As time constraints of project managers and stakeholders were a recurrent issue during the discussions, the moderator started focusing on the issue of constraints for dissemination. First

of all, **time constraints** were discussed in depth and later the participants discussed other types of constraints that could prevent stakeholders from reaching project outcomes.

All the project managers participating in this event agreed that one of their main concerns is the fact that the dissemination finishes after the lifetime of a project.

> *"It's really frustrating to see that all the effort that has gone to create nice resources and to make your project known is finished because your costs are not eligible anymore."*

All the participants contributed with possible or partial solutions to this issue of time constraints:

- Using centralizing portals, such as Scientix, to sustain the results and resources of projects that finish and do not have funding anymore to maintain their websites or human resources.

- To change the current policy of funded agencies so that projects were allowed to use any savings that they made over the duration after the end of the project period. This measure would allow keeping things going, people attending events and evaluating the impact of a certain project more in-depth.

> *"A very small change in policy would actually make a big difference. It's definitely something that needs to be changed because it's extremely frustrating when you have funds available which could be used after the end of the project and the money has to go back to the funding agencies. There have to be mechanisms put in place for evaluation over a longer period. As we all know, projects tend to last 3 or 4 years and we are only usually at the start of the impact of any particular project once we reach the end of the funding period. So the evaluation has to go on after that period and there is need to be a mechanism for collecting reliable information and representing it in a coherent way to interested parties."*

Regarding teachers' time constraints to participate in the implementation of projects and professional development programs, the participating project managers recognise that it is very important to reach head teachers and other people in charge of schools (e.g. school manager, school governors) in order to promote professional development generally, so that teachers can have training opportunities but they can sustain them by themselves.

In addition to that, the moderator brought to the discussion other constraints for dissemination such as **resource constraints** (e.g. technological, equipment, etc) in schools or **lack of appropriate support to teachers** from their institution and colleagues (not involved in the project). She added that "*perhaps some teachers feel that projects are based too much on new things that are not really available to them instead of being based on what they already have in their ordinary teaching*". The reflection of one of the participants was that support to teachers is essential if we want them to consider the produced materials useful. However, he added: "*I don't think projects take that seriously enough. Sometimes, they focus too much on creating materials and not enough on supporting the use of the materials*".

All researchers in the field of STEM education agree that teachers should be enabled to develop materials by themselves instead of being faced with externally-developed worksheets. This support to teachers and their professional development needs to take into account that resources produced in the lifetime of a project should not be conceived as a way of providing recipes to teachers.

> *"I think we have to be very careful when using this word resource and we should work with teachers to make sure that it's not just a matter of resources but it's a matter of imaginative thinking in the classroom"*

The last barrier for dissemination that was discussed is the **language barrier** since, according to the DESIRE preliminary result, almost 1 out of 3 active teachers and 2 out of 5 policy-makers consider the language (mainly English in the case of EU projects) as a barrier to the dissemination of the project results. All contributions of participants regarding this issue agreed that we should focus a lot more on the national level because teachers need materials and approaches in their own languages and seated to their own context.

6. Looking to future perspectives

The moderator introduced the last issue of the event related to the tools that are missing at the moment to ensure good dissemination. She briefly discussed a recommendation brought about by some science museum organisers highlighting that there is a need for a common European **database** where all on-going and finished science education projects would have to deliver their results.

The opinion of one of the participants about this proposal is that the tool that is needed is not so much a database for keeping materials but a **structure that enables the materials to be used**. There are already some of these databases, platforms or portals already existing where all produced materials can be deposited but there is not use without some reason to use it.

> *"That's much what we need to focus on, not so much the distribution of materials as the use of them and the support for that use in the classroom"*

The moderator herself also commented that it would be interesting and useful to have a **database of online classes, online teacher training or videos of people actually teaching**. The participants agreed on that mentioning that "*videos are probably the way forward if we can overcome some of the current difficulties with permissions and legal constraints on using classroom video. But even without those, teachers can do something really useful in two or three minutes, speaking to a camera*".

Other more strategic proposals regarding dissemination consist of:

- Influencing the **policy guidelines** with regards to this topic in crucial moments of definition of funding programmes, and

- Suggesting the need to provide **training opportunities** to project managers **to write more effective dissemination plans**.

"I guess none of us really has had much or any training in dissemination techniques. The issue of social networking is not really developed yet, for instance. If we wrote dissemination plans better we might disseminate better. So a workshop on writing effective dissemination plans might be helpful."