

Mind Merge News



May 21st, 2008

New project moves forward

We've had a very positive response to the invitation which circulated recently.

(We haven't finally decided on a new name for the project...some old acronyms now available at reasonable prices...)

So far, almost everyone involved in the predecessor projects has responded positively to the invitation, and no-one has turned it down. We now have the required number of participating countries and partners, subject to ongoing negotiations in some cases.

The next step is therefore to work out the relationships between partners and work packages. Bear in mind that the ultimate purpose of the actions is to improve pupil attitudes towards science, and their motivation to take courses and pursue careers in MST¹. Just to remind you, we plan eight WPs as follows:

- WP1 - management, led by Prof. Geir Karlsen, NTNU, Trondheim.
- WP2 - implications of innovative methods in science education for teacher education, involving all partners in collecting national data. Led by Prof. Doris Jorde, University of Oslo.

- WP3- the role of teacher collaboration, led by Université Pierre MendesFrance/LSE Grenoble.
- WP4 - issues relating to new teachers (i.e. less than two years in post) and innovative methods
- WP5 - scientific literacy and disciplinary boundaries
- WP6 - argumentation and contexts for the implementation of innovative methods
- WP7 - indicators and instruments
- WP8 - media production and dissemination.

We anticipate that all partners will have some involvement in WPs 2, 7 and 8, and of course will be involved in discussions relating to the other packages. There is also a need for partners to put forward an area of specific interest and expertise. The final organisation of Work Package participation will be complex, and we will circulate a matrix for cross-participation before the meeting.

Given the requirement of the call for a co-ordinating and support action, what you need to

¹ Mathematics Science & Technology

have is an existing project, either on-going or complete, which provides specialised knowledge about some aspect of :

- science education as it relates to teacher education
- teacher education as it relates to science education
- Pupil motivation or attitudes as they relate to science teaching
- Policy in any of the above areas

These are broad categories and the main connecting thread is the relationship of your research or expertise to innovative methods, particularly inquiry-based or investigative methods.

More on the Work Packages

WP1 deals with the overall management, coordination and success of the project. Acceptance of the FP7 funding package implies that we will deliver a massive boost to science education in Europe. In other words, this is a huge opportunity for science educators to collaborate in changing the landscape of science teaching. To do this successfully, we need to listen to each other, to create actions which actually reach pupils in science classes and to do so in ways which can be communicated clearly to the public.

In turn, this implies that the management of the project needs to be democratic, focused and most of all, responsive to the participants and their needs. NTNU will lead this WP, drawing on an efficient research infrastructure and the Nordic tradition of democratic participation.

WP2 gathers the complicated strands of science education and teacher education policy reform and weaves them into a whole. Whilst projects such as PARSEL², SINUS³ and Mind The Gap have addressed the important question of methods in

science education, there are constraints on how teachers apply innovative methods, These need to be addressed at a systemic level. In order to develop leverage at the systemic level, we need to map the implementation, constraints and boundaries of innovative methods and their relationship to teacher education policy. This is the task of WP2.

WP3 brings together current research in several partner countries which looks at the role of teacher collaboration and teachers' collective work in bringing innovative methods to bear on problems in science education, including problems of diversity. This will include the role of micro-collectives in mentoring and work on extending the learning from the SINUS project in respect of teachers' collaborative action to implement inquiry-based methods.

Whilst WP2 addresses policy in science education reform, WP4 addresses teacher education practice in relation to science education, from recruitment through initial teacher education to lifelong learning for teachers and teacher educators. It will be particularly concerned with actions to overcome the problems faced by new teachers in adopting innovative methods.

WP5 will connect current thinking in the field of scientific literacy to current thinking in the areas of teacher competence development. It will also include consideration of cross-disciplinary methods such as the use of drama, narrative and competition, and the roles of technology and enterprise education in promoting scientific literacy.

WP6 pursues questions of argumentation and discourse within the overall context of improving science education through teacher education. Since argumentation and discourse are central to the kinds of constructivist classrooms in which genuine inquiry-based science can be pursued, science teachers need to be equipped with the conceptual

2 <http://www.parsel.uni-kiel.de/cms/> : addressing Popularity and Relevance of Science Education for Scientific Literacy

³ <http://sinus-transfer.uni-bayreuth.de/programm/ueberblick.html>

tools and practical skills to facilitate dialogic teaching. This work package will also include work on disciplinary differences in relation to constructions and conceptions of science in the classroom.

WP7 complements the other WPs by providing a variety of instruments, indicators and methods by which the success of the project actions can be measured. This is essential for the scientific quality of the project, but we also intend that the instruments and indicators will be intrinsically useful to science teachers and teacher educators in formative assessment of practice.

Finally, WP8 will focus on the development of deliverables from all the work packages, with the task of ensuring production quality and extensive dissemination. In the case of deliverables which take the form of events, the objective will be to use technology to capture learning outcomes. In the case of training packages, we will aim to produce re-usable models and materials which can be delivered directly to teachers or used to train teacher educators. The work of WP8 will also involve media collaborations in order to improve young people’s image of science education as required by the Call.

The Grenoble meeting: June 16th



Although we plan to circulate a draft proposal before the meeting, it is your project and we are expecting to change many aspects of the document as a result

of your input. It will also provide an opportunity to establish relationships within and across the work packages, based on mutual discussion of the issues involved and expertise required.

The meeting is scheduled for a full day (and an evening dinner) so if at all possible you should arrange travel for Sunday 15th and Tuesday 17th June.

Some of you have already sent ideas for WP contributions to Peter or Geir - thanks. If you are still thinking about what to do, and the information above doesn’t give you enough direction, please contact Peter as soon as possible. At this stage the content and relevance of the ideas are more important than the quality of the writing.

Travel to Grenoble

The most likely destinations for flights are Geneva and Lyon St Exupery. From Lyon there is a good airport bus service to Grenoble. For Geneva, we will probably be able to collect you from the airport, please contact Peter when you have flight details. We have block-booked a hotel so there is no need to arrange this yourself. Directions to the hotel and meeting venue will be circulated once we have confirmed your attendance.

We regret that there is currently no funding for hotels and travel costs. Hilde Roysland will be able to issue an official invitation if your institution requires one.

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We look forward to a productive partnership and an enjoyable collaboration!