

Innovative science teaching

The way forward

Conference on innovation and dissemination in math / science education



When? 17th - 18th of June 2015
Where? Freiburg im Breisgau, Germany



Registration and information: <http://instem.tibs.at/>
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Shaping the future of STEM education



Come together in Freiburg

Share your ideas with us on the 17th and 18th of June 2015 ...

Conference Themes and Objectives

Global challenges, such as global and climate change, food security or migration call for innovative solutions. To meet these challenges, students must understand fundamental concepts of science and must be able to use them. But what attracts students to learn? And, how can educational innovation be implemented? The conference will focus on these topics, with a strong emphasis on the dissemination of innovative pedagogies.

Keynote speeches:

- INSTEM message: "Sharing the experiences from INSTEM"
- State of the art in stem education in Europe
- Teaching towards the future - visions of innovative math / science teaching and learning

Conference track plenaries:

- Dissemination - a key to innovation in school?
Models from six European countries and group discussions
- Show and tell sessions and "Market of possibilities"

INSTEM will bring together scientists, teacher educators, policy makers and other key actors from across Europe. to discuss the best ways of dissemination. We want to ensure exploitation beyond partnership countries through a widespread dissemination of possible models of exploitation and by encouraging participants to actively seek for similar models in their countries.

About the conference

The conference offers an opportunity to gain an insight into new research approaches:

Dissemination - a key to innovation in school?

Models from six European countries - presentations and discussion:

1. Experiences from SUN, a school-based TPD program for science & math teachers
2. Experiences from INQUIRE.
3. Experiences from FIBONACCI.
4. Experiences from Traces.
5. Zelf - a model for dissemination.

Show and tell sessions and “Market of possibilities”

10 project-teams will have the opportunity to present their projects in the form of short presentations (6 min). In addition, each project team will also present a stand to showcase their activities to the public at the so-called “Market of possibilities”.



Promoting 21st century innovation in school: Inspiring science and maths education!

A GLIMPSE “BEHIND THE SCENES” ...

What is INSTEM?

As can be seen in the figure beside, global challenges, such as global and climate change, food security or migration call for innovative solutions. To meet these challenges, students must understand fundamental concepts of science and must be able to use them. Enquiry-based teaching can make science education more attractive. The implementation of these educational innovations requires collaboration with key-actors such as teachers, teacher educators and policy makers, namely on different levels. But such actors need sustained long-term structures. Hence the project “Innovative Networks for Science Technology” (INSTEM) will synthesise the extensive knowledge and experience from many EC funded projects, and make this material accessible and relevant through innovative dissemination methods and sustainable national working groups to transform science teaching.

The aims of the project are to bring together insights from many EC funded projects and stakeholders to provide a synoptic overview of innovations in science education across Europe in order to inform future practice.

The project brings together mathematics, science educators and social scientists from nine countries (Germany, Great Britain, Austria, Norway, Italy, Ireland, Greece, Romania and Turkey). They are working closely with researchers, teachers and policy makers in the respective countries, as well as with school authorities, teacher trainers etc., who were invited and will be invited to join the INSTEM annual conferences.

For further information please visit the project’s website (<http://instem.tibs.at/>).

The importance of dissemination

The Rocard Report (2007) prompted the European Commission to support the dissemination of enquiry based teaching methods with funds of €60 million. Many institutions have conducted successful projects across Europe. However, so far, there are few channels for knowledge sharing across projects, thus reducing their overall impact. Passive repositories are useful, but for continuing dissemination active negotiation is required in order to persuade actors to adopt innovative methods or training programs. There is thus a need for sustainable structures, which actively synthesise the knowledge from a wide range of projects into a coherent whole, whilst actively helping to embed innovative methods into the practices of actors. INSTEM is a step towards developing such structures.

Until now two conferences brought together different target groups from the partner nations of INSTEM. In these conferences partners and participants shared their understanding of enquiry-based learning and on meaningful dissemination and implementation strategies. During the conference in Frankfurt models on making more use of project results will be presented and pro’s and con’s of the strategies will critically be analysed. The aim of this conference is to ensure exploitation beyond partnership countries through a widespread dissemination of possible models of exploitation and by encouraging participants to actively seek for similar models in their countries.

