Innovative Science Pedagogy
in Research and Education

Inspire

European Schoolnet

bm:uk Bundesministerium für Unterricht, Kunst und Kultur

Thillm Thüringer Institut für Lehrerfortbildung, Lehrplanentwicklung und Medien

ITC

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Education and Training

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Education and Culture DG
Lifelong Learning Programme

About Inspire

Inspire (Innovative Science Pedagogy in Research and Education) aimed to experiment new teaching methods in the field of maths, science and technology (MST). The purpose was to challenge the lack of interest among students in starting scientific studies, to expand the supply of scientific specialists and develop a scientific culture in European countries.

From December 2007 to November 2009, Inspire

- observed the impact of new teaching methods on pupils and their motivation;
- analysed the pre-requisites to be defined for enabling teachers to integrate these new techniques in their pedagogy;
- identified the critical success factors to be mastered at the level of the teacher and the school for the generalization of such practices.

Additionally, it complemented the research with a Summer School, a Community of Practice and a Handbook.

Inspire Research

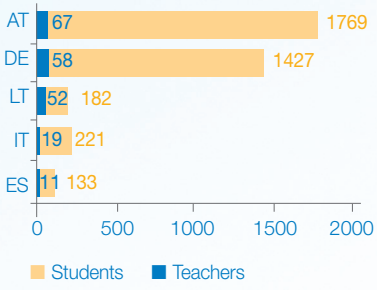
For ten months, the Inspire project tested and analysed the use of digital learning resources (LR) in the field of MST in 62 schools in Austria, Germany, Italy, Lithuania and Spain. MST teachers selected the learning resources from a pool of 60 resources, and their effects on teachers and 5 – 18+ year old students were measured.

After using the LR, the teachers noticed the LR had the highest impact on the autonomous learning of the pupils. Additionally, nearly three quarters of the teachers found that the LR stimulated their own interest and motivation for teaching MST subjects and 70% said the LR increased the pupils' understanding and use of Information and Communication Technologies (ICT) in general. When choosing the LR, teachers preferred resources which fitted into the normal curriculum and took into account the teachers' and students' knowledge of ICT.

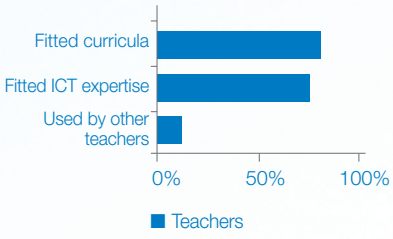
The use of LR increased students' understanding of MST and allowed differentiated learning within a class. The LR had a larger impact on boys than girls, and it decreased with age.

Overall, it appears that the use of LR has a positive impact on MST education but special attention has to be paid to the technical requirements and localization of the LR. The reports on the Inspire results can be found at ***http://inspire.eun.org/index.php/Publications***

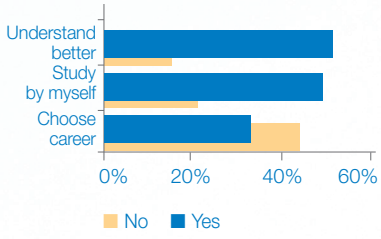
Participants per country



Criteria for choosing the LR

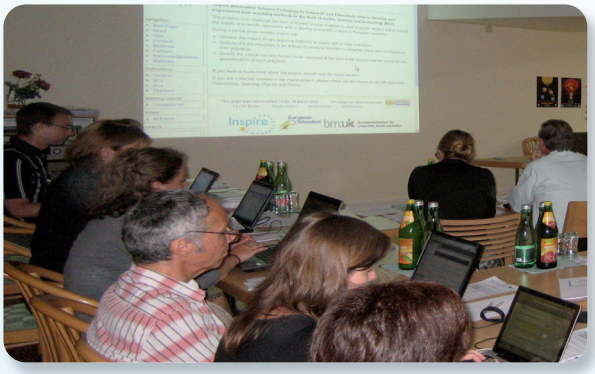


Did the use of LR in MST classes help you ... ? (students)



Inspire Summer School

To analyse and further discuss the results of the LR test period, an international Inspire Summer School was organised. It ran from 18-20 August 2009 in the beautiful village of Wals, nearby Salzburg, in Austria. During the three days of the summer school almost 40 teachers from around Europe learned about and discussed the use of digital learning resources in science education.



The summer school gave the teachers an excellent opportunity to share their experience and learn from each other. They got a chance to try out LR and repositories, to hear about the pedagogical methods and learning scenarios behind these new teaching technologies, and practical tips on how to create their own learning objects. Also the Inspire online Community of Practice was launched during the summer school. As well as enhancing their know-how as regards teaching methods, the participants got to know colleagues from around Europe and spent a wonderful afternoon on the excursion to sunny Salzburg.

Inspire teachers' Community of Practice

The Inspire Community of Practice (***http://inspire-teachers.ning.com***) is an online space for teachers and everyone interested in science education to discuss the use of digital learning resources in MST, and to find ways to challenge the lack of interest among students in starting scientific studies.

The community will remain open for everyone to join. The topics of the discussion forums cover LR's impact on pupils' motivation, technical guidance on using LR, and the theoretical framework and pedagogical methods behind the LR. The members of the community are also encouraged to publish any additional information or stories on teaching MST with digital resources through blog posts, new forums, videos and presentations. Additionally, every four weeks a new Learning Object of the month is presented to the community.

Inspire Handbook

One of the main outcomes of the Inspire project is the Inspire Handbook "The Smile of eLearning". The Handbook summarises the results and achievements of the project, but also serves as a guidebook for teachers interested in using digital learning resources in their own teaching.

Through practical examples and teachers' interviews the Handbook gives insight into the many possibilities for using digital learning objects in the classroom. It also reveals the theoretical frameworks and technical aspects behind the resources, and provides links to some of the LR repositories available online.

The Handbook is accessible at http://www.virtuelleschule.at/wiki/index.php/Hauptseite

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