Better teaching for inquiring minds

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Inquiry-based learning is an educational method centred on the investigation of questions, scenarios or problems. It is seen by many as a positive alternative to traditional forms of instruction where students are required to simply memorise information.

The aim of the EU-funded FIBONACCI project ('Large Scale Dissemination of Inquiry-Based Science and Mathematics Education') was to help spread this teaching method throughout the European Union, in ways that fit in with national and local conditions.

Under FIBONACCI, 12 experienced continuing professional development institutions for science and mathematics education where inquiry-based learning has already been successfully established were

each assigned the task of tutoring two additional teacher professional development organisations.

Led by the La main à la pâte programme (French Academy of science, Ecole normale supérieure of Paris), the project covered both the primary- and lower secondary-school levels. Initial surveys found that 42 percent of the teachers in these schools were novices in inquiry-based science and mathematics learning.

The project partners developed and trialled a common and holistic teacher support approach to inquiry-based teaching and learning in science and mathematics and a dissemination process based on a twinning strategy between higher education institutions, which took account of local contexts, so as to ensure sustainability by involving local players and stakeholders.

The institutions provided the teachers with the necessary services and resources to enable them to improve their knowledge in science and mathematics, their skills in inquiry-based methods, to overcome their misgivings and to build confidence. This work included professional development sessions, tailored learning materials, in-service support and other collaborative activities, which matched the different cultures and contexts of schools across the EU.

In addition, a wide range of communication actions at European, national and local levels was carried out, including the development of the FIBONACCI project website and 2 European conferences.

It is in the final phase of the project, between June 2012 and February 2013, that the Fibonacci model genuinely came into its full dimension, with a third generation of centres expanding the network to over 60 teacher support centres, thus demonstrating the multiplying power of the twinning process, and the structuring and catalytic effect of the systemic

approach fostered by the project.

In total, the Fibonacci network involved 500 teacher educators, 5,900 teachers and their 300,000 students, supported by 63 centres in 31 countries.
FIBONACCI partners believe the spread of inquiry-based science and mathematics education to more schools will benefit teachers and pupils, European society and ultimately European competitiveness in the global knowledge economy.

The project now represents a blueprint for the transfer of more effective teaching methodologies. Project partners also produced new guidelines on topics related to inquiry-based science and mathematics education and made concrete steps towards local implementation.

More information: FIBONACCI www.fibonacci-project.eu

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