Modular Mobile Education:
Science Experiments
COORDINATOR : Mustafa EROL, PhD, BOZOK UNI.
DURATION : 24 MONTHS
PROJECT BUDGET : 288 808 AVRO
LdV CONTRIBUTION : 212 996 AVRO
TARGET GROUP : SCIENCE TEACHERS (6th, 7th and 8th Grades)
Lifelong Learning Program (LLP)
Leonardo da Vinci (LdV)

Leonardo da Vinci Homepage

Mobility
- To promote the placements for students, trainees and apprentices in the initial vocational training.
- To improve the life-long learning matter, to be ready for the future occupations and to promote the adaptation on the technological changes.

Transfer of innovation
- To promote the innovation, European dimension, transferability, quality with analysing and solving problems of the vocational training systems.
- To promote the adaptation on the improving conditions and the professional innovations in the context of life-long learning.

Turkish
Transfer of Innovation (TOI)
MSL - mobilim

Modular Mobile Education:
Science Experiments
<table>
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<tr>
<th>Domestic Partners</th>
<th>EU Partners</th>
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<td>Lab in a Lorry (UK)</td>
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Coordinator Institution
Bozok University (TR)

http://www.bozok.edu.tr/
Domestic Partner
Ministry of Education
Presidency of Strategy Development (TR)
Domestic Partner
Erciyes University (TR)
EU Partner

Bristol University (UK)

Outreach and public engagement are important parts of the AIMS project. From school visits to postgraduate courses, and through science fairs and the media, we aim to bring the university closer to the wider community. The main way in which we intend to achieve this is with visits from our Mobile Teaching Unit.
Affordable and Efficient Science Teacher In-service Training

a Comenius 2.1 project supported by the European Commission

AESTIT Partners

- The University of Crete - Paragiotis Michaelides,
- Pädagogische Akademie des Bundes in Wien - Hans FiBi
- University of Cyprus - Costas Constantinou,
- University of Minho - Manuel Filipe Costa,

AESTIT - a presentation in brief

The AESTIT project is a formal project within the framework of SOCRATES - COMENIUS 2.1 European Union program. The proposal for this project to the European Commission was submitted by P. G. Michaelides from The University of Crete who acts as project coordinator. A paper on a similar title, presented at the Computer Based Learning in Science (CELISS 2005) conference is the basis of the AESTIT project.

The aim of the project is to develop an Affordable, Sustainable and Efficient In-service Training scheme for the Science Teacher. This scheme is based on two axes:

- face-to-face training courses focused on the teaching of the recent theoretical paradigms on the Science teaching and the relevant supporting pedagogical principles;
- INTERNET supported training courses to be used by Science teachers and specialised scientists in the area of Science Teaching.
The aim of the Hands-on Science network is to contribute to the generalisation innovation and improvement of Science & Technology teaching at basic vocational training and secondary schools by hands-on experimental practice in the classroom.

... bringing hands-on active learning of Science into the classroom and into the soul and spirit of the European Schools ...

News and Events

5th International Conference on Hands-on Science (13-17 October 2008, Recife, Brazil)
EU Partner
Lab in a Lorry (UK)

Lab in a Lorry is a mobile lab that gives young people the chance to explore science through hands-on experiments.

The programme is guided by volunteers who want to share their passion for science and their curiosity about the world we live in.

Lab in a Lorry was created through a partnership by the Schlumberger Foundation and the Institute of Physics.

To view a short film of Lab in a Lorry in action download this quicktime movie (2.46 MB).
Web Site of mobilim
http://www.bozok.edu.tr/mobilim/index.html
Justification

For Science Lessons in the Rural Regions;

- Vocational education needs of teachers,
- Increasing the number of laboratory applications,
- Investigation of the conditions of EU,
- Coordination needs between the teachers,
- …
Purpose

Target Group: Science teachers in the rural region

- Vocational education (experimental),
- Coordination between science teachers in TR and EU,
- Comparison of science education between TR and EU,
- Mobile science laboratories,
- Science fairs,
- Virtual laboratories,
- Investigation of curriculums,
- Seminars, Symposiums, Congres, Conferences, Workshops,
- Science Museums,
- Interesting experiments for shows,
- …
Vocational Education
-in rural region-
Vocational Education
-in rural region-

Direkt target group
178 science teachers

Indirect target group
15000 – 20000 students

Place
Towns of Yozgat: 14 towns

Season
Spring 2009

Period
4 months
‘Modular Mobile Education: Science Experiments’

There are great disparities between the opportunities of science teaching in urban and rural regions in Turkey. One of the important reasons for these disparities is the gap in the pedagogical and vocational knowledge of the science teachers. The flexibility and accessibility of mobile science laboratories (MSL) together with science fairs will provide opportunities for teachers to support them with vocational education and will raise their pedagogical skills as well.

In this project 10 institutions from 5 different European countries (IT, UK, PT, GR and TR) came together to make an international consortium. The aim of this consortium is to achieve the scientific and pedagogical integrity with Europe and to contribute to the generalization of innovations and the introduction of the new techniques in the area of science and technology teaching.
to prepare a network for teachers interested in laboratories and science teaching techniques,

to provide medium for discussion to make it possible to exchange ideas and experiences,

to obtain some new ideas for science fairs,

to develop internet supported training courses for the use of science teachers in rural regions,

to reach out to the teachers in rural region schools who have no laboratory facilities and to offer them the means of teaching science through laboratory experiments with MSL to do face-to-face training courses which focus on the recent experimental paradigms in the area of science teaching and to donate them with the relevant supporting pedagogical principles.
Scientists, curriculum planners and science teachers from rural regions are the beneficiaries of the project. An effective web-based network is planned for science teachers in rural region. Beneficiaries will design a mobile science laboratory (MSL) and develop a curriculum program for science education in rural regions. In order to collaborate and set up a dialogue through continuing education with European science teachers and educators, some workshops will be organized for beneficiaries. In this project, the focus is on the science and technology laboratories of 6th – 7th and 8th grades.

At the end of the project; we aim at gathering the right knowledge for developing a MSL, science fairs, workshops, meetings, science museums, national an international symposiums and conferences for the science teachers particularly for those in Yozgat, TURKEY.
Interesting Experiments for Show

- Liquid Nitrogen Show
- Van der Graaf Generator,
- Rockets
- ..
- ..
- ..
Mobile Science Labs in the World
Boston University
USA

Mobile Laboratory Coalition
Science on the move...
Europe

www.labinalorry.org
Lab In a Lorry

Bristol Uni.
www.bris.ac.uk
Vidnyanvahini
India
WORK PLAN

WORK PACKAGE 1
Project Management

WORK PACKAGE 2
Present Situation and Need Analysis

WORK PACKAGE 3
Designing a Mobile Science Laboratory (MSL)

WORK PACKAGE 4
Preparing an Effective Web-site

WORK PACKAGE 5
Vocational Educational Trips to Rural Regions

WORK PACKAGE 6
Evaluation of the Project
# Work Plan

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<th>Working Techniques</th>
<th>Results</th>
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# Budget and Work Program

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Steps

- Proposal Preparation Calendar,
- Project Calendar,
- Logo Works,
- Partners,
- Mobile Labs,
- E-mails,
- Links,
- Questionnaires,
Important Dates

- January 15th 2007 → Call for Proposal
- March 30th 2007 → Deadline for Proposal
- April 2007 → First Control
- April - May 2007 → Evaluation
- May - June 2007 → Decision
- June 2007 → Announcements
- July 2007 → Budget Control
- August 2007 → Last Control Before the Agreement
- December 2007 → Agreements

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Attended Workshops of the Project Team

- Turkish National Agency Workshop
  Leonardo da Vinci 2007-2013 Program Meeting,
  Eras Hotel, Kayseri

- Turkish National Agency Workshop
  Valorisation Confrence,
  December 25th 2006, Sürmeli Hotel, Ankara

- Turkish National Agency Workshop
  Lifelong Learning Program (LLP) Briefings Days,
  19-20 February 2007, Hacettepe University Sihhiye Campus, Ankara

- Yozgat National Education Directorate
  Center for EU Education and Youth Programs Meeting,
  28 February - 01 March 2007, Yozgat

- Turkish National Agency Workshop
  LdV Mobility Projects Kick-off Meetings
  16-20 July 2007, Ankara

- Turkish National Agency Workshop
  Workshops for the Coordinators Transfer of Innovation Projects,
  November 19th, 2007, NA building, Ankara

- Yozgat National Education Directorate
  Center for EU Education and Youth Programs Seminars,
  09-11 January 2008, Yozgat
Evaluation of the Results

Questionaries

- Questionaries for Science Teachers
- Questionaries for Visitors
- ..
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http://www.bozok.edu.tr/mobilim/index.html
mobilim@bozok.edu.tr
Questions & Answers

Thanks..