

ESTABLISH Consortium



ESTABLISH Kick off Meeting,
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ESTABLISH is committed to being an open-access project. Further information together with educational and training materials from the project will be made available on our website as they are developed.

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European Science and Technology in Action :
Building Links with Industry, Schools and Home

An Introduction

The ESTABLISH project has received funding from the European Union's Seventh Framework Programme [FP7/2007-2013] under grant agreement n° 244749



<http://www.establish-fp7.eu>

European Science and Technology in Action: Building Links with Industry, Schools and Home

The **ESTABLISH** consortium of over 60 partners from **11 European countries** will work together on this four year project to encourage and promote the more widespread use of **Inquiry-Based Science Education (IBSE)** in second level schools. Members of the consortium will be working with local teachers and students to develop and implement IBSE units and evaluation tools that are culturally adapted for each country.

The rationale for ESTABLISH lies in **creating authentic learning environments** for science by bringing together and involving all relevant stakeholders, particularly the scientific industrial community, policy makers, parents, science education researchers and teachers **to drive change** in the classroom.

Innovation in classroom practice will be achieved through the involvement of stakeholders for the development and provision of:

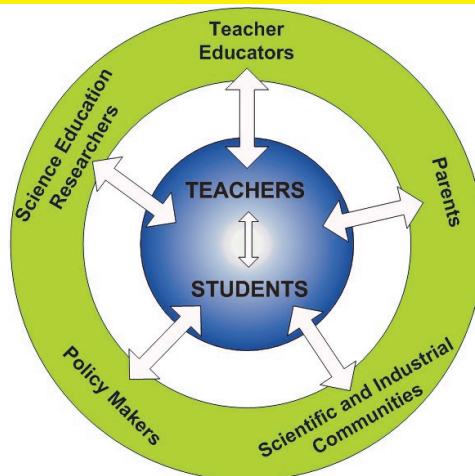
- Appropriate teaching and learning IBSE units (informed by scientific and industrial communities)
- Appropriate supports for both in-service and pre-service teachers to implement IBSE

ESTABLISH Stakeholders

This project brings together the key stakeholders in second level science education to work together to create authentic learning environments to drive change in classroom practice. These stakeholders include:

- Science teachers and educators, including science teacher networks;
- The scientific community, both local enterprises and multinational industry as well as the scientific and industrial communities;
- The students of science in second level schools;
- The parents of these students;
- The policy makers responsible for science education at second level, including curriculum developers and assessment agencies;
- National science education researchers

The objective of ESTABLISH is the dissemination and use of an **inquiry-based teaching method for science with second level students (age 12-18 years) on a large scale in Europe by creating authentic learning environments, involving all stakeholders to drive change in the classroom.**



ESTABLISH: Bringing together the stakeholders to influence classroom practice

Country	Institution
IRELAND	Dublin City University (DCU) (Coordinator)
NETHERLANDS	AG Education Services (AGES)
CYPRUS	Centre for Microcomputer Applications (CMA)
SWEDEN	University of Cyprus (UCY)
POLAND	University of Umeå University (UmU)
CZECH REPUBLIC	Malmö University (MaH)
MALTA	Jagiellonian University (JU)
SLOVAKIA	Charles University (CUNI)
ESTONIA	Across Limits (AL)
ITALY	Univerzita Pavla Jozefa Šafárika v Košiciach (UPJS)
GERMANY	Tartu Ülikool (UTARTU)
	Universita degli Studi di Palermo (UNIPA)
	Carl von Ossietzky-University of Oldenburg (COUO)
	Leibniz Institut für die Paedagogik der Naturwissenschaften und Mathematik an der Universität Kiel (IPN)
	Martin Luther Universität Halle-Wittenberg (MLUH)

The outcomes of ESTABLISH will be:

- a large team of science teachers across Europe who are skilled and confident in inquiry based science teaching methodology;
- identification of suitable model(s) of science teacher education, at both pre- and in-service levels, for inquiry based science teaching;
- promotion of inquiry in the classroom, involving the relevant stakeholders in science and science education.

ESTABLISH Work Packages

ESTABLISH is organised into nine work packages, each with a particular function:

- WP1:** Selection of ESTABLISH teaching and learning IBSE units
- WP2:** Involvement of strategic partners
- WP3:** Localisation, adaptation and pilot evaluation of teaching and learning IBSE units
- WP4:** IBSE with in-service teachers
- WP5:** IBSE with pre-service teachers
- WP6:** Collection of evidence of impact on students
- WP7:** Project monitoring and evaluation
- WP8:** Dissemination and project promotion
- WP9:** Project management

Project Steering Committee

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 Dr. Julia Michaelis
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Prof. Martin Linder



In the context of IBSE, INQUIRY is the "intentional process of diagnosing problems, critiquing experiments, and distinguishing alternatives, planning investigations, researching conjectures, searching for information, constructing models, debating with peers, and forming coherent arguments".

(Linn, Davis and Bell, 2004)