

# PROFILES

Some Ideas and Comments

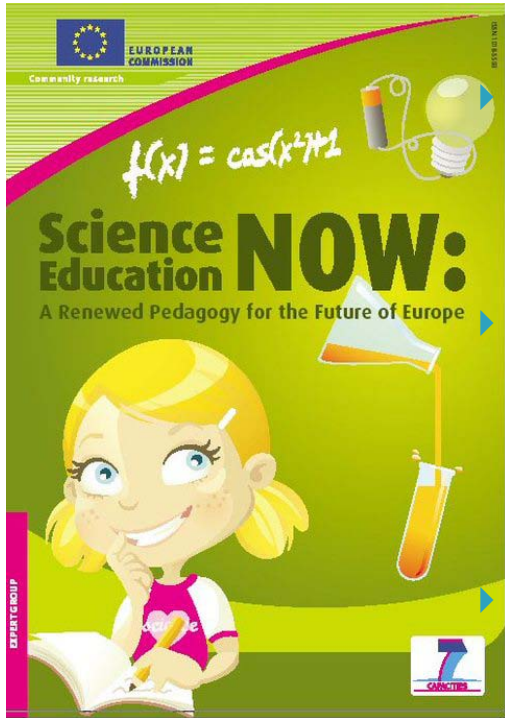
# PROFILES: Call and Proposal





**Elaborate Consortium on 22 experienced Universities with sound knowledge of IBSE**

# The Call's Background

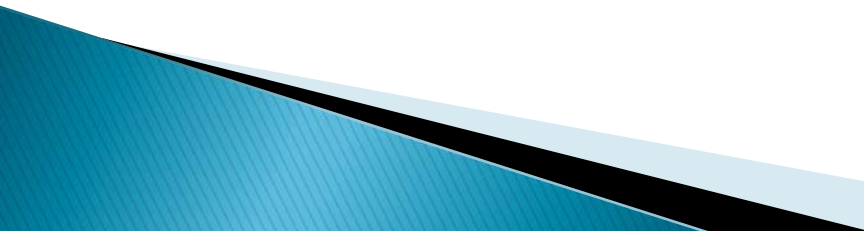


A reversal of school science– teaching pedagogy from mainly **deductive to inquiry–based methods** provides the means to increase interest in science.

Renewed school–science teaching pedagogy based on IBSE provides increased opportunities for **cooperation between actors in the formal and informal arenas.**

**Teachers are key players** in the renewal of science education. Among other methods, being part of a network allows them to improve the quality of their teaching and supports their motivation.

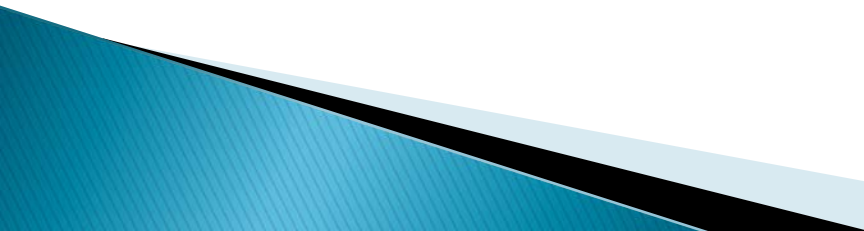
# Scientific Literacy and IBSE

- ▶ *Economic*: for a more competitive economy
  - ▶ *Humanistic*: for a more well-rounded education
  - ▶ *Civic*: for a better informed voting public on issues involving science and technology
  - ▶ *Political*: For the importance of logical inquiry skills in supporting democracy
  - ▶ *Social justice*: for equitable educational opportunities for all students
  - ▶ *Critical*: scientific literacy that can help to empower marginalized students and their teachers in contesting their social reproduction
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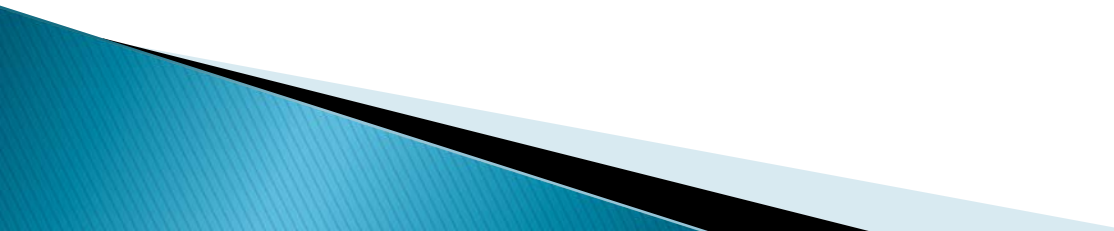
# Inquiry based Science Education

- ▶ *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, & Bell, 2004).*

# The Way of Teaching in IBSE

- ▶ *Inquisition*: Stating a question to be investigated
  - ▶ *Acquisition*: Brainstorming possible solutions
  - ▶ *Supposition*: Selecting a statement to test
  - ▶ *Implementation*: Designing and carrying out a plan
  - ▶ *Summation*: Collecting evidence and drawing conclusions
  - ▶ *Exhibition*: Sharing and communicating results
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# Inclusion of Stakeholders

- ▶ Delphi–Study
  - ▶ Developing PROFILES modules
  - ▶ PROFILES philosophy for teaching and teacher professional development
  - ▶ Networking and dissemination
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# CPD for Teacher ownership

- ▶ *“It is critical that teachers learn about the success or otherwise of their interventions: those teachers who are students of their own effects are the teachers who are the most influential in raising students’ achievement.” (Hattie, 2009, p. 24).*

# CPD for Teacher ownership

- ▶ *If the teacher's lens can be changed to seeing learning through the eyes of students, this would be an excellent beginning. This involves teachers seeking countering evidence as to the effectiveness of their teaching, looking for errors in their thinking and knowledge, seeing how students build on their prior knowledge and conceptions of learning, asking whether there is enough challenge and engagement in the learning, and understanding the strategies the students are using when learning and confronting difficulties. "(Hattie, 2009, pp. 252, 253).*

# CPD for Teacher ownership

- ▶ *“To facilitate such an environment, to command a range of learning strategies, and to be cognitively aware of the pedagogical means to enable the student to learn requires dedicated, passionate people.” (Hattie, 2009, p. 23)*

# PROFILES: Dedicated Enthusiasts

