

Scientific Literacy on all levels:

The project MiA Meteorology in Action

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University education

Fields of competence

- intellectual
- technical
- methodical
- co-operative
- communicative
- problem-solving

Aspects of Scientific Literacy

Cognitive competences

Methodical competences

Bybee (1997)

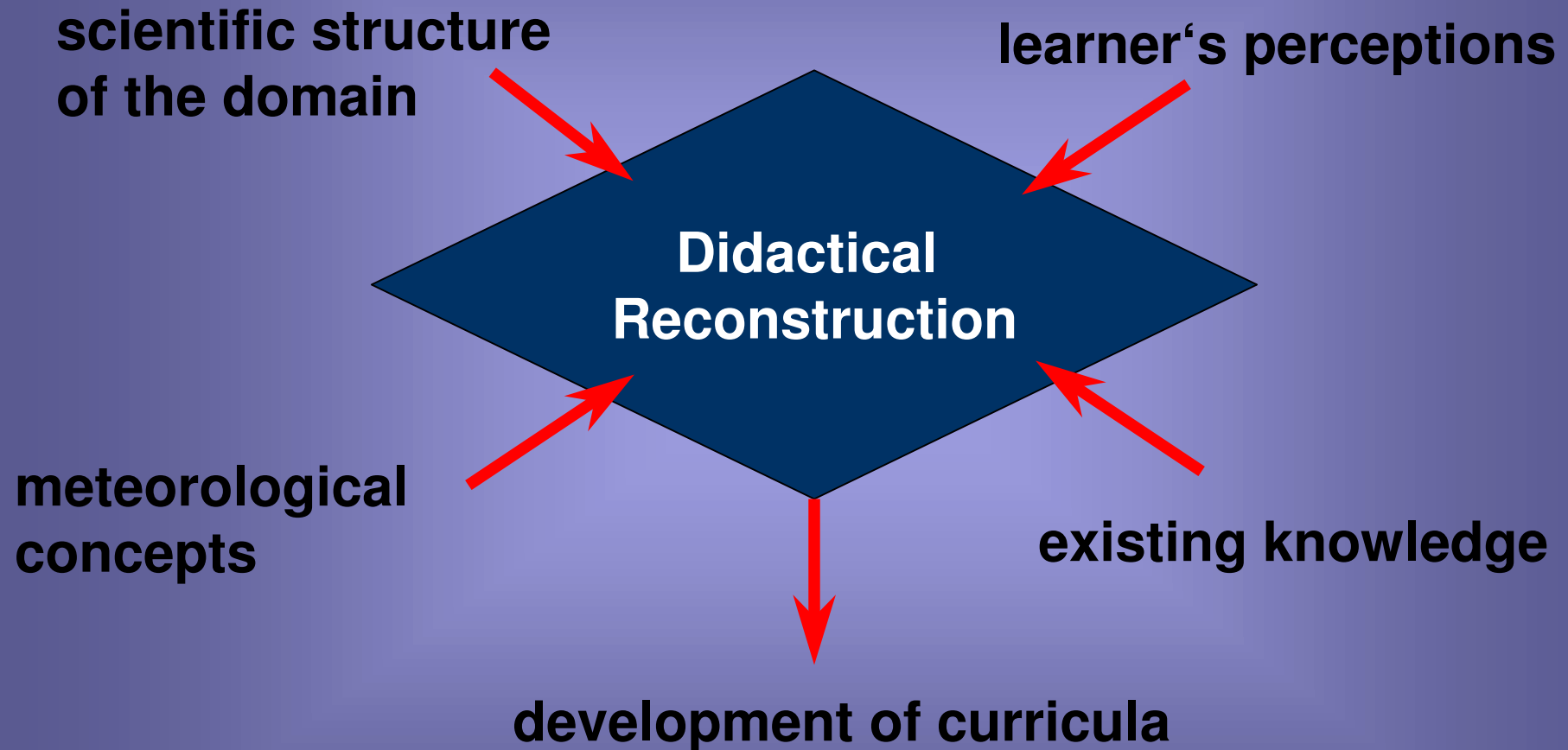
**Scientific Literacy is the
“fundamental goal” of
contemporary science
education**

Scientific Literacy

American Association for the Advancement of Science (1989):

„being familiar with the natural world and respecting its unity;
being aware of some of the important ways in which mathematics,
technology and the science depend upon another;
understanding some of the key concepts and principles of science;
having a capacity for scientific ways of thinking;
knowing that science, mathematics, and technology are human
enterprises,
and knowing what that implies about their strengths and limitations;
and being able to use scientific knowledge and ways of thinking for
personal and social purposes“ (S. 20).

Research of teaching and learning processes



Research of teaching and learning processes

... on conceptualisation

... on implementation

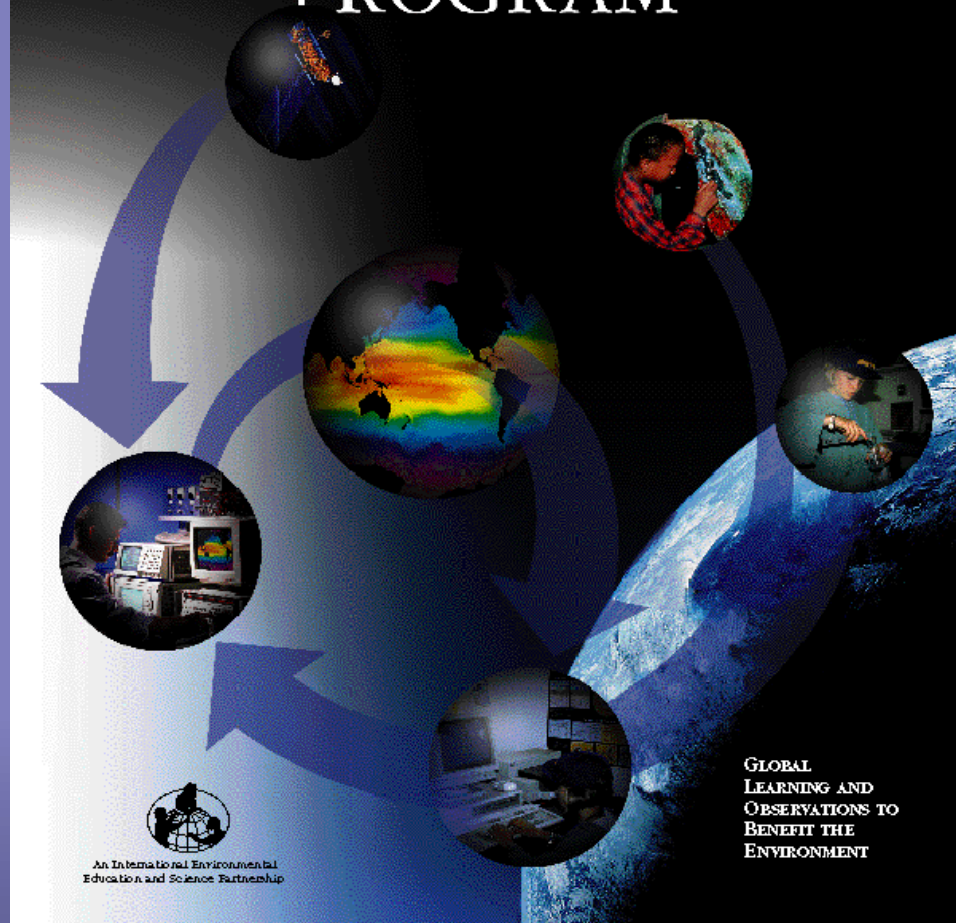
Evaluation

**Research on the impact
of all actions**



Consequences for the hands-on-project MiA

THE GLOBE PROGRAM



University of Hohenheim

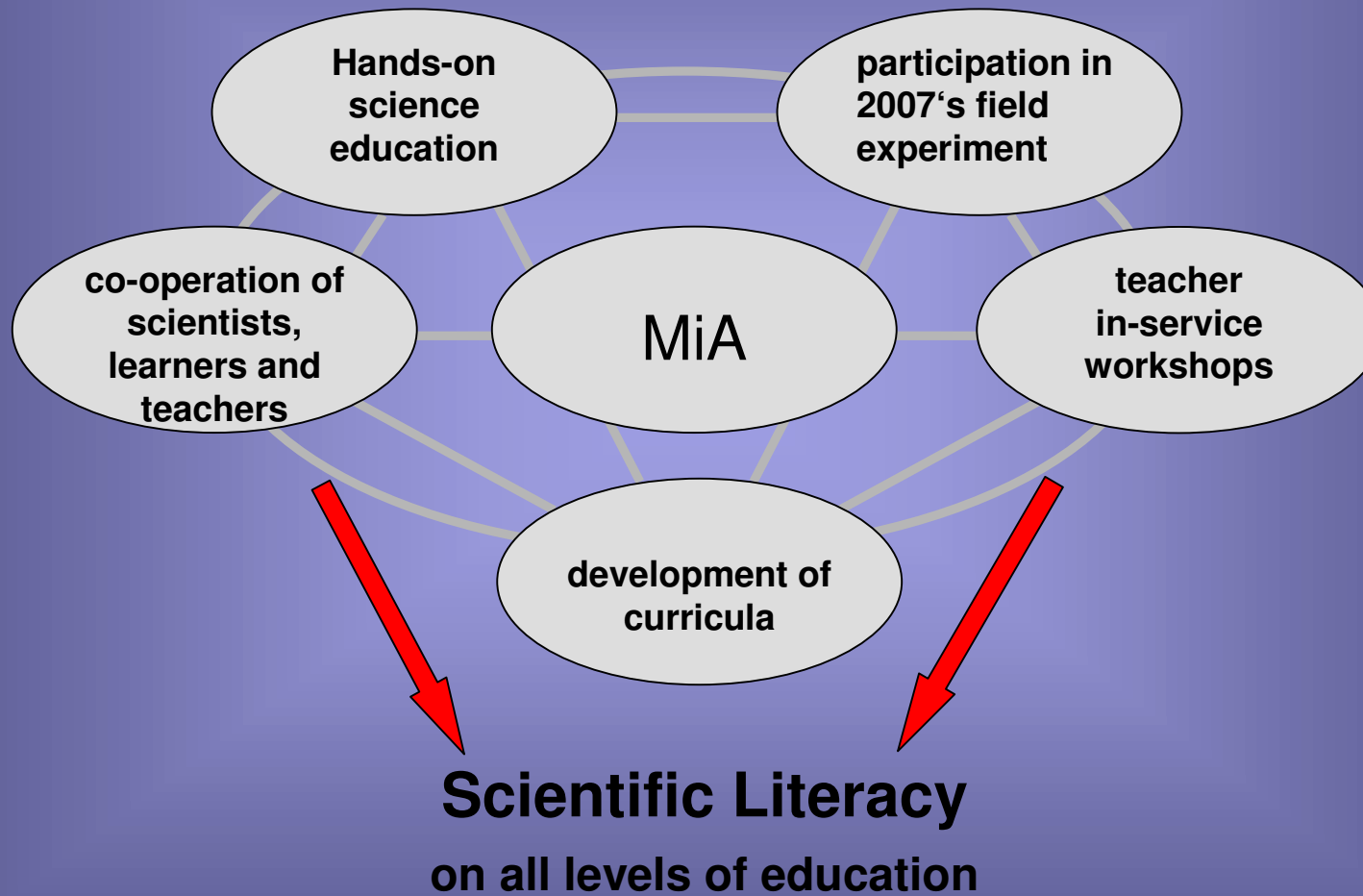
2nd COPS Workshop

June 27th-28th 2005

Global Learning and Observations to Benefit the Environment



Structure of MiA (Meteorology in Action)



Meteorology in Action

University students

Learners at school

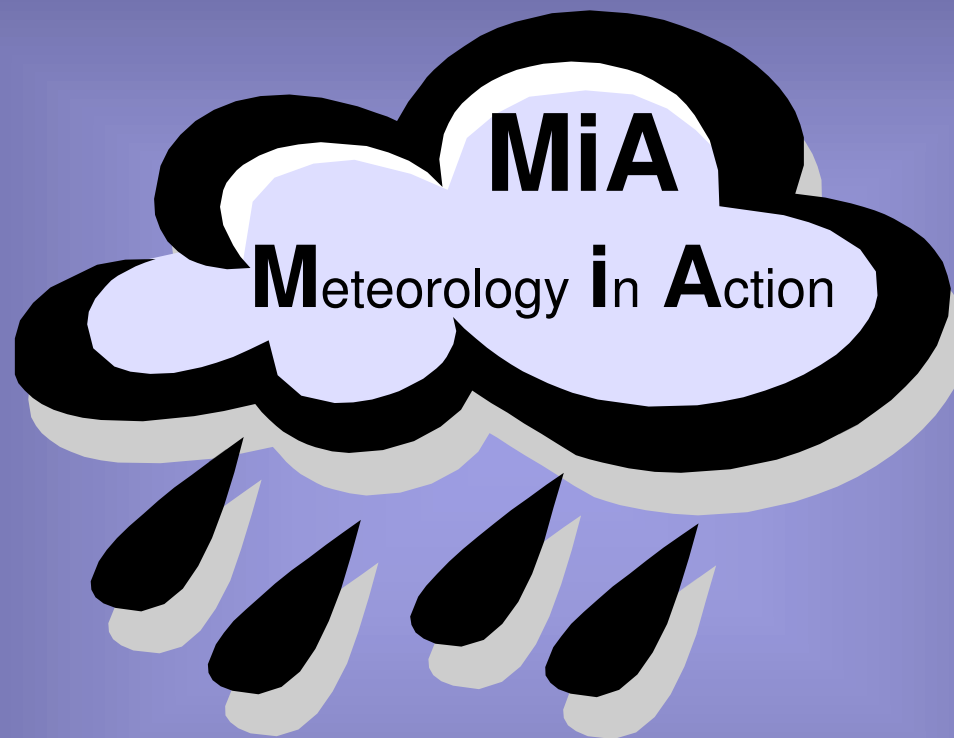
**Educational research
on teaching and learning processes:**

- didactical reconstruction
- participation in the field experiment
- development of curricula
- conceptual change

Teachers

Minds-on

Hands-on



Minds-on

Hands-on

