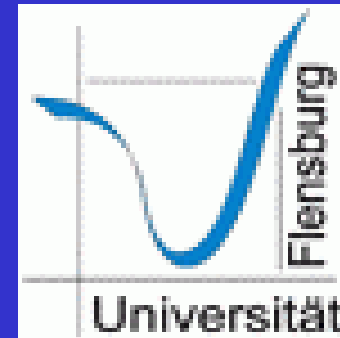


Dr. Fritz Schliessmann
University of Flensburg
Institute of Physics and
Chemistry and its Didactics



Project „How to implement the topic *Energy*
at Primary Education with
Inquiry-Based Science Education

*Workshop Jamaica 30. November -
05. December 2009*

Teenagers in OECD countries are mostly aware of environmental issues but often know little about their causes, raising questions *about* how well societies will be equipped to tackle such challenges in the future.

OECD Report

What's wrong?

Science education
often explicitly
teach the content
of science

What to do?

- „The earlier the better“
- Pedagogical practices that produce self-regulated learners and critical thinkers

Basics

Pedagogy:

Inquiry-based Approach:

- *Inductive*
- *Experimentation*
- *Self-guided
construction of
knowledge*

Scientific Concept of Energy



New instructional Approach

- Base on contexts from students` everyday life
- Take up problems from science and the professional world
- Consider students` conceptions and interests in order to activate self-guided learning
- Support students to develop scientific ways of thinking and working and to reflect on them

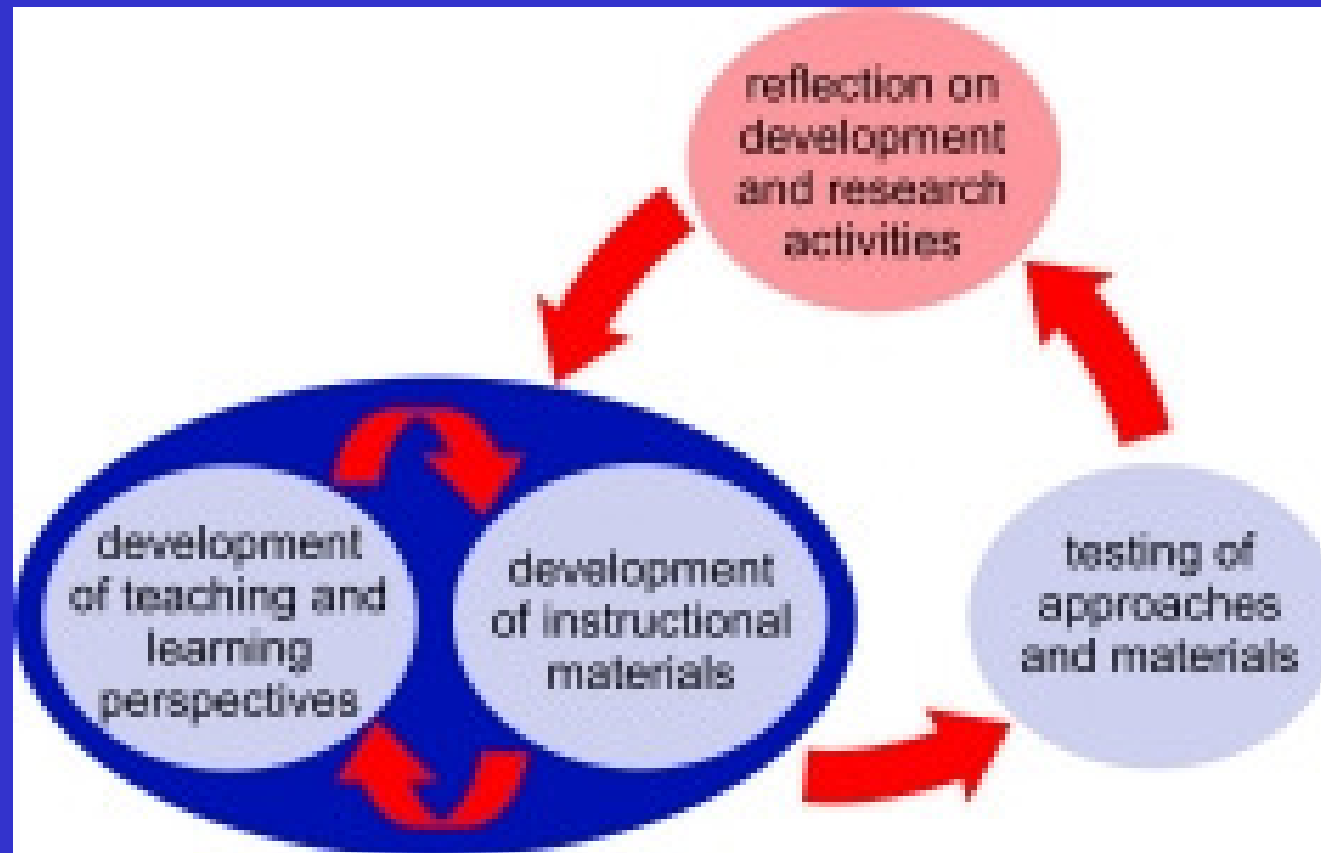
Intercultural Study „Conceptions of Energy“

- 6-year old children
- Students: Beginners in teacher formation in Sciences

Find a team consisting of members of (all) partner universities

- Interview conditions
- How to analyse: Categories, analysing system

Curriculum Development: Testing and evaluation of instructional approaches and materials



Teachers are the key players: „*Drivers*“

Module adapted to formation of teachers to teach „Energy“ with IBSE

Investigate the module, verification of the conception

Compare the results: Students` Conceptions about (renewable) energy at the partner universities