



BIOHEAD-CITIZEN:

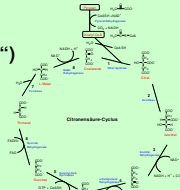
Biology, health and environmental education for better citizenship

QUESTIONS OF INTEREST:

1. Analyse conceptions in syllabi, textbooks and of teachers and teachers-to-be:
- ➔ ... about selected topics in Biology, Health and Environmental Education
 - ➔ Identify cognitive, affective, didactical and opinion dimensions
 - ➔ Controversial (e.g. evolution) or dangerous (e.g. racism) conceptions: to what extent are they still undefined /do they still exist today?
 - ➔ Contribute to didactical changes

2. Reductive simplifications in the presentation of complex scientific contents:

- ➔ Do they exist? (e.g. „1 characteristic = 1 gene“)
- ➔ Is the systemic approach introduced? How are notions like regulation or cycles presented?



3. Values: do they interact with learning and teaching in Biology?

- ➔ Social and affective dimensions in science education, e.g. earlier conceptions can hinder learning, emotions about specific contents...
- ➔ Gender, religion, socio-economic context, recent history of the country etc.: to what extent do they correlate with scientific knowledge and conceptions?

METHODS

Analysis of school textbooks and syllabi concerning the topics:

- human body, human brain, human genetics, human health
- evolution
- ecology, environment

Questionnaires and interviews to analyse teacher's conceptions

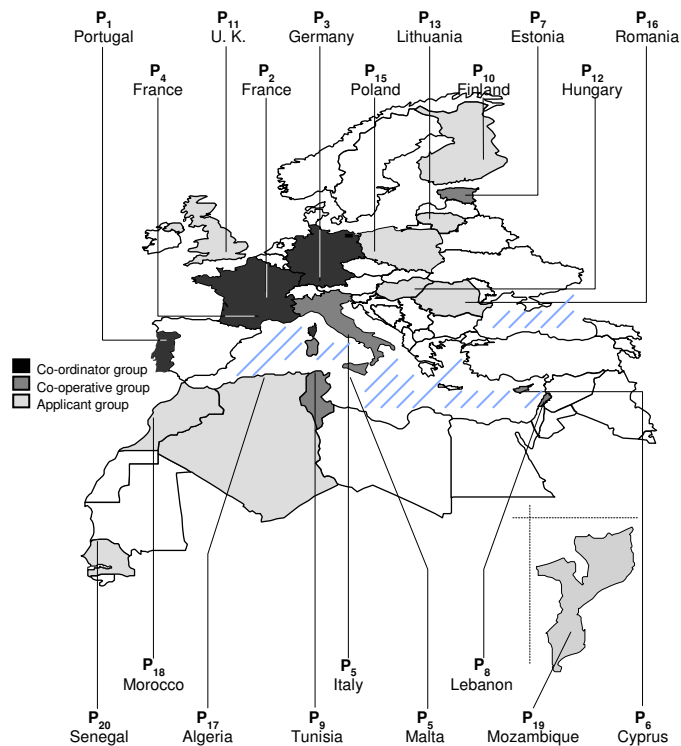
Case scenarios to analyse innovative teaching models (developed in consideration of the preceding results from analysis of textbooks etc.)



THE PROJECT:

A comparative study in 19 countries

- ➔ Co-ordinated by the universities of Praga, Lyon and Bayreuth
- ➔ The university of Bayreuth is responsible for the sub-project environmental education
- ➔ Data are collected from the following countries:



Geographical distribution of the consortium (P – Participant).

The Applicant group just applies the questionnaires. The co-operative group members assist the co-ordination group to select and apply the research instruments.

ENVIRONMENTAL EDUCATION

Week-long educational programmes within National Parks

“Let nature remain nature”:
Intact ecosystems are important.

Pupils make contact with the National Park by ...

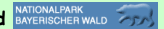
- cognitive tasks (animals in dead wood, predator-prey-relationships)
- emotional tasks (touch a tree, recognise a smell)
- interactive simulation games (e.g. “Mimicry”)

Pupils learn about ...

- complexity of ecosystems
- native and once-native animals of the ecosystem
- the threat of air pollution and bark beetle invasion
- the need for protection of biotopes for sustained conservation ... etc.



Nationalpark Bayerischer Wald



Müritz-Nationalpark



Ökologisches Schullandheim Licherode



For further information see:

http://www.bitoeek.uni-bayreuth.de/didaktik-bio/de/forschung/proj/projekt_detail.php?id_obj=24689

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