資料2-1



Education for a sustainable development in the university perspective

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- What is it about?
- Changes in the society and
- The university institution, organisation
- Teaching and learning



- Changes in society
 - Global changes,
 - climate, economy, SD
 - Regional changes
 - EU (enlargement, Bologna, Lisbon process etc)
 - National changes EU ..



- University response to changes SD
 - Declarations:CRE-Coperincus charter 1994, IAU Agenda 2000 for Sustainable development, etc)
- Include: Institutional commitment, ethics, education of university employees, study programmes, interdisciplinarity, networking, etc



- Recommendations, BUP-teachers conference 2004:
- 1. In order to improve education for SD there is a need to develop teaching and learning methods
- 2. There should be courses on sustainable development for all students.
- 3. Pedagogical universities and colleges should pay special attention to the role of teachers education



- 4. Universities should contribute to the UN/UNESCO decade for education for sustainable development, 2005-2014.
- 5. It is of highest priority to convince university leaders to implement sustainable development in the every day routines at their universities.



• Education *for* and *about* SD

- Competencies needed?
- Substance needed?



Links between EE and ESD

 "EE typically focuses on environmental impact on society of pollution, waste water, emissions from cars, factories etc, their causes and effects, and how to reduce them, as well as on concern for nature and nature protection".



- "ESD more often focuses on the use of natural resources and the importance of their renewability (sustainability).Different methods of mapping resources such as ecological footprints or material flows are pedagogical tools in ESD, especially at university.
 - Negative environmental impact is in the first place seen as a consequence of the unsustainable use of resources."



- "A good environmental situation will not develop unless people have a decent social and economic situation, and that a healthy environment is a prerequisite for a vital economy in the long term.
- Thus environmental, social and economic aspects are intervowen in ESD."



 "Ethics and justice, as expressed in democratic government and social and global responsibility, become important components in the larger context of ESD."



• "Learning for sustainability:

Key concept is SD: a well balanced development of the three perspectives. Well balanced in relation to future generations and developing countries.

SD is a subjective concept, which means that it cannot be imposed from above. It is a joint consideration of interests, opinions, norms and values, and therefore it is formed by the dialogue between different actors."



• Thinking about learning, students in higher education should have acquired skills of

- Information literacy
- Critical and independent thinking
- Active participation (action competence)
- Self assessment of learning outcomes



• Thinking about teaching and learning SD

Special features:

- Closeness
- Action competence
- Interdisciplinarity



- Concrete experience
- Laboratories
- Observations, examples
- Field work
- Simulations, games

Reflective observation Discussions Journals Brainstorming Questions

Abstract conceptualisation

- Lectures, papers
- Model building
- Analogies

Active experimentation Case studies, projects Home work Simulation, field work



- Problems?
- University autonomy, organisation, economy
- Teachers' competence development
- Interdisciplinarity