

# **Innovations in the Learning Process in the European Context**

**Jānis Mencis 2009**

# **Novitātes mācību procesā Eiropas kontekstā**

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**The Faculty of Physics and Mathematics, University of Latvia has been preparing secondary school mathematics teachers for more than 50 years.**

# **Professional study programme “Teacher of Mathematics for Secondary School”**

**has been regularly adapted according to innovations in mathematics and pedagogy (changing course content and methodology). Adding a new study course “Intercultural Communication and Learning” is planned.**

# Recommendations of the EU experts

- **Key Competences for Lifelong Learning**
- **Education for Sustainable development (ESD) competences (envisages interdisciplinary cooperation with teachers of other subjects, school as a team with common values);**

# SCHOOL AGENDA 21

## **Goal**

encourage teachers to participate actively in developing and implementing models of ESD at the school.

## **Objectives**

Make connections between school curriculum and sustainable development issues/real life problems.

Encourage students to identify, investigate and take practical actions toward the prevention and solving problems in local community.

Incorporate culture of sustainable development in school life (policy, management, partnerships).

# Steps for SCHOOL AGENDA 21

Interdisciplinarity, models for integration of SD issues into school curriculum

Lesson guideliness: from knowledge to action competence

Interaction of the school and local community, public relations

Participatory planning, using logical framework

Assessment/self-assessment of achievements;

# SCHOOL AGENDA 21

**Co-operation of teachers** to achieve an integrity of the content and co-ordination of the subject curricula as well as out-of-class and project activities.

**Opening the school** to important issues of the local community and co-operation with social partners.

**Orienting an overall school strategy** and management towards sustainable development.

**Development of school** as a learning organization and dissemination of experience among colleagues.



# Functions of education

- The **liberal** function:  
to develop the individual and his/her potential.
- The **socialization** function:
  - to replicate society and culture and promote citizenship.
- The **vocational** function:
  - to train people for employment.
- The **transformative** function:
  - to encourage change towards a fairer society and better world.

# Sustainable development

- means achieving relevant quality of life now and for coming generations;
- is based on an integrated, holistic approach to economic, societal and environmental development taking into account a cultural context.

## ESD concepts

- ESD is student-centred;
- ESD is connected with real student's life and with the local community;
- ESD meets the challenge of complexity;
- ESD is future oriented;
- ESD is calling for participation;
- ESD is founded on values.

# SD competences (1)

## **Learning to learn:**

posing analytical questions/critical thinking;  
understanding complexity/systemic thinking;  
overcoming obstacles/problem-solving;  
managing change/problem-setting;  
creative thinking/future-oriented thinking;  
understanding interrelationships across  
disciplines/holistic approach.

## SD competences (2)

- **Learning to do:**

applying learning in a variety of life-wide contexts;  
decision making, including in situations of uncertainty;  
dealing with crises and risks;  
acting responsibly;  
acting with self-respect;  
acting with determination.

## SD competences (3)

### **Learning to be:**

self-confidence;

self-expression and communication;

coping under stress;

ability to identify and clarify values.

## SD competences (4)

### **Learning to live and work together**

- acting with responsibility (locally and globally);
- acting with respect for others;
- identifying stakeholders and their interests;
- collaboration/team working;
- participation in democratic decision making;
- negotiation and consensus building;
- distributing responsibilities (subsidiarity).

# Conclusion

**All these competences are analysed and investigated in the projects Y2-I3L08-100**

**Scientific Methodology of Teachers  
Education in English Language and  
Mathematics**

**Y2-ZP116-100 Content Integrated  
Development of Mathematics and English  
Language Programmes at the University of  
Latvia in European Context**



# Conclusions

- **Theoretical ideas have been approbated in the study course “Oral and Written Communication in English” at the Faculty of Physics and mathematics in 2008;**
- **Further development of these ideas is planned in the next project which envisages approbation in the whole Latvia**

## *Conclusion*

**The participation in the project “Face it”  
has helped in designing materials for  
developing 8 lifelong competences**

**Thank you for your  
attention!**

