Education and Culture DG
Lifelong Learning Programme

Move'in Science

International project
MIS / Docente Europeo: Move'in Science²
(2008–2009)

Evaluation of the project activities

Daiva Penkauskienė
Modern Didactics Centre, Lithuania

134648-2007-IT-COMENIUS-CMP

Aim of the project

The general aim of the project is to weigh on initial teacher education and, secondly, on in service teaching, of the scientific and technological areas so to make more attractive the perspective of scientific careers on the so called “hard subjects” for new generations. Specifically, the project aimed at:

- creating a working group at European level composed by trainers of prospective teachers, teachers of science and technology areas, which developed an educational approach based on **Pedagogical Content Knowledge (PCK)** methodology diffused to institutions dealing with initial teacher education (secondary school level);
- testing on training paths for prospective teachers of the partner institutions the initiation, by means of a seminar-like methodology, of research groups involving at the same working table teacher trainers, prospective teachers and in service teachers;
- elaborating, publishing and diffusing of the **HANDBOOK** including pedagogical materials for the PCK development, published on line;
- realising experimentation and exchange paths of the PCK development among prospective teachers of science and technology areas through **mobility actions abroad**.

UNIVERSITY ACTIVITIES

Opinion of lecturers

Preparation to workshops and lesson

- Students were well prepared to attend the workshops.
- After lessons' observation at schools, students were acquainted with school curriculum already and have a general impression about Lithuanian school – thus helped them to prepare to the classes better.
- Some students developed structured lesson plans.

Communication

- During the activities students discussed actively, raised a lot of questions. They demonstrated good skills of team work – those, who have better understanding in the subject, explained the matter to others.

Attitudes

- Students were interested in the subject, showed great enthusiasm.
- Students demonstrated ability to work independently and to take responsibility: they independently developed lesson plans, tried to solve unclear moments by themselves.
- Students were well organized, worked purposefully.
- During the lectures and workshops students were notably active, creative, good-natured towards group members and lecturers.
- Tried to give an active contribution to the pedagogical process – raised ideas how to teach lessons, how to improve university teaching modules.
- Group members were able to evaluate objectively theirs and colleagues‘ work.

Subject teaching

- Students modeling different strategies of subject lesson, tried to find typical students' learning difficulties and overcome it.
- Some students have clear understanding how to deliver the lesson, while others have only general idea about the lesson.
- They made every effort to understand the teaching subject and looked for the ways to present it to the pupils in attractive form, taking examples from ordinary life.
- Students used various models and representations in order to fit students' reasoning.
- Preparing lesson plans they tried to integrate lab-work with theory.

Content matter knowledge

- Students' knowledge about the subject was not equal – not all students exactly understood teaching subject.
- All students actively asked lecturer and searched for deepening of subject knowledge.
- Prepared lesson plans demonstrated students' ability to make a distinction between what matters and details.
- Not all students were good in using mathematical language and scientific terminology.

Opinion of students

- Lectures and workshops were organized well, it were interesting and clear.
- Students were glad to cooperate, to discuss, and share experience.
- Students have a possibility to express their opinion and it was taken into account for further activities.
- Students made a wish to have more activities that will help to master subject teaching better.

SCHOOL ACTIVITIES

Opinion of teachers

Preparation to lesson

- Students were well prepared to teach lessons in the secondary school – they consulted with teachers before lessons, prepared detail lesson plans, handouts for pupils, presentations, materials for experiments.
- Lesson time, activities of teacher and pupils, teaching methods were clearly planned.
- At the beginning of every lesson students presented the theme and objectives of the lesson.
- Teaching of new material was followed by conclusion and control questions.
- Didactic materials were interesting and properly chosen for pupils.
- They set good contact with every child, used method of group work.

Communication

- Students were able to describe situations appropriately both orally and in writing – they clearly presented the subject, gave exact directions for pupils, asked questions.
- Students know and use terms of Physics properly.
- Students demonstrated ability to communicate on subject in English.
- Visual materials were schoosen properly according age and preparation of pupils.

Attitudes

- Students showed the interest in the subject and subject teaching.
- Students were responsible and were able to work independently – they responsibly prepared to the lessons, objectively evaluated their work, independently chosen lesson theme, prepared handouts and visual materials.
- Students were well organised – lessons were teached according lesson plan, all activities were done in time.
- Students activelly participated in disscussions about teaching methods, lesson evaluations. They were not afraid in defending their own opinion, at the same time they took in consideration remarks of lesson observers.
- Students demonstrated good teamwork abilities and communication skills.
- Students objectively and constructively evaluated their work, were able to mark weak and strong points.

Subject teaching

- Most of the students were able to build and use conceptual maps.
- Students searched for ways to engage pupils and to involve them into the learning process – used group work method, discussions, raised problem-based questions, and invited pupils to verify their ideas by themselves.
- Students were concerned to choose teaching methods most suitable for particular theme.
- Students were able to find and solve pupils' learning difficulties with the subject – they individually consulted those pupils or asked others to help them.
- Students were able to present content knowledge in appropriate way: theory was supplemented by visual materials, well chose activities and questions, linked theory with practical activities and real-life experience.
- Students used IT to lessons preparation and during lessons.

Content matter knowledge

- Students have enough content matter knowledge and were able to deliver it to pupils.
- Students tried to deepening subject and subject teaching knowledge – looked for additional materials, consulted with teachers.
- Students have abilities to analyse information and to choose essential things from details, therefore their lessons were clear, nor overloaded by information and additional materials.

OTHER ACTIVITIES

Visits to school, lessons observation

- Most of the students found these activities interesting as they have possibility to acquaint with the school, to understand needs of pupils, to notice what lesson activities are most attractive for them, to look for some new ideas for lesson.

Lessons of Lithuanian language

- These lessons involve the entire group and students were very enthusiastic to learn. Teacher was evaluated as excellent person able to attract students for learning quickly and in attractive form.

Presentations of countries' education systems

- Students fount it as a possibility to compare the system of education of their own and other countries, and widening the scope as well.

Conclusions

Students thought that during the project they:

- Have succeed to apply knowledge into teaching activities.
- Have learned to use active teaching methods.
- Founded links between science of Physics and phenomena of ordinary life.
- Used IT in preparation and teaching activities successfully.
- They were lack of time to define pupils' learning strategies and models and thus feel do not complete they teaching activities.
- Learned many things not concerning Physics.

Conclusions

Lecturers and teachers think, that students:

- Performed all assignments good enough.
- Work orderly, in cooperation with group members, giving support to others.
- Used interesting and attractive teaching methods and forms in classes.
- Prepared for classes thoroughly.
- Were interested in activities, discussed and expressed their opinion actively.
- Have opportunity to know themselves as teachers – both strong and week sides.