

Euclides

Newsletter 5

THE EXPERIMENTATION PHASE

THE CASES OF:

Romania - *Technical Railways Transports High School; Casa Corpului
Didactic Iași - Teacher Training Centre.*

Greece *University of Crete - Natural History Museum.*

Spain *Spanish Confederation for Educational Centers, CECE.*

Turkey *Bolu İl Milli Eğitim Müdürlüğü, Directorate of National Education.*

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THE EXPERIMENTATION PHASE

THE CASES OF ROMANIA

Technical Railways Transports

High School;

Casa Corpului Didactic Iași -

Teacher Training Centre.

"E-teaching" – a concept developed in Iași by Railway and Transports High school and CCD (teachers' meeting house)

On June, 24th, 2009, CCD hosted the National Conference involving principals, trainers, teachers and professors, authorised to present 2 European projects. CCD and The Railway and Transports High school participate actively in the European projects meant to develop new modern methods of teaching in our schools.

The Euclides project is a part of the Life Long Learning Programme, and have been presented yesterday at CCD. The coordinator of these 2 projects is Vila Montesca Training Centre from Italy, and has partners from many universities, Educational Centres and schools from Romania, Italy, Cyprus, Crete, Bulgaria, Spain, and Turkey. "Up to now, we have finished working on the on-line experiment, in order to create a curricula by using a scenario which was chosen by the teachers and pupils involved in this project and to apply the PBL method.

We involved in the project 84 students, 12 teachers and 4 schools,: Grup Scolar Tehnic de Transporturi Cai Ferate Iasi, Colegiul D. Leonida Oradea, Grup Scolar "Brancusi" Iasi, Grup Scolar Agricol "Adamache" Iasi.

In Crete we had a Conference to present the results of the experiment in each country, to discuss about the impact of developing project at students, teachers and community level. we changed ideas about didactical methodologies with other teachers from local institutions.

In this moment the experiment is finished and we have posted on the site the final products, PP presentations for Euclides.

Mihaela Poroach, project manager and Railway and Transports High school principal.

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A case study: “The interdisciplinary, the main direction of the renovation of the activity for teachers of Science” – March 2009.

Our approach was centred on the analysis of the interdisciplinary problem from the Science teachers’ from schools of the whole county of Iasi, including both areas, rural and urban. The sample was made up of 200 teachers of Physics, Chemistry and Biology, representing 25% of the total number of teacher of Science from the county of Iasi, from secondary schools and high schools (theoretical, technological and vocational).

The pedagogical inquiry started with the application of a questionnaire in which the teachers answered three questions regarding: the interdisciplinary teaching, the difficulties met by teachers in dealing with the interdisciplinary approach of the experimental science, the frequency of using the methods in their teaching process in the classroom.

The obtained statistics based on the questionnaire, shows that the teaching based on problem solving has a high percentage (31%) in the Science in the secondary school system as well as in high schools.

The results and the analysis of this case study were presented in the meeting of the ERASMUS Intensive Programme “Science Hits for kids” from Wien, Austria – March 2009.

- Creating the questionnaire for a pedagogical investigation at national level with 10 questions, one of them regards the advantages of the application of PBL like didactical strategy - May 2009.

- Application of the questionnaire (41 county and Bucharest) to the sample with about 1300 science teachers, from urban and rural areas, with pedagogical experience between 1-10 years, 10 – 20 years and over 20 years.
- Analyzing and interpretation of the results of the research which will be uploading on the EUCLIDES Platform and will be disseminated at the national education level – July/ August 2009.

- Elaboration of the methodical guide for the science teachers with the utilization of trainees’ portfolios (lesson projects with PBL method) – July/ August 2009.

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THE CASES OF GREECE

University of Crete - Natural

History Museum

Dpt of Education

The experimentation phase of PBL application through EUCLIDES project with the schools in Greece started at the end of March 2009. In the beginning there was a briefing by the NHMC partners about EUCLIDES project and a demonstration on how to use the platform.

Two schools of Irakleio, Crete (11th Lower Secondary and Peiramatiko Lower Secondary) were involved in the project. For each school, two teachers and approximately thirty (30) students who formed five (5) groups participated. Each school followed a working protocol which consisted of the following steps: group formation, role assignment, information gathering, research activity, results and publication of research results. The parts of the project resource were to design a plan for the project, to create a schedule, to monitor the students and the progress of the project, to assess the outcome and to evaluate the experience. Each school had to deal with one scenario. These two scenarios were the following "The water in our city has become more expensive. Why?" and "There is a deficiency of water in Iraklion city. Is there a way to solve this problem?"

The previous knowledge that both schools used in the project was about the chemical and microbiological water pollution, the melting of the glaciers, the global warming, the oil pollution, the recycling, the water cycle, the water supply of the city of Irakleio, the water deficiency, the ways of saving water, etc. While proceeding, they filled in questionnaires about their knowledge on the subject and the process of their work and they exchanged ideas with other groups through the platform. They performed some "field research", they searched new literature and they took into account previous projects of environmental education.

Finally they evaluated their work as well as the platform and the project. The experience that they gained working with the computer and the Web, the communication with students from other European countries as well as the knowledge that water is a valuable commodity that must be respected and be used with care were considered as positive issues. On the other hand, the limited time devoted to the project due to Easter holidays and early beginning of the examinations, the different languages that were used by the participants and the impossibility to observe what each participant had uploaded to the project were considered as negative issues to the project.

As a final result, both schools prepared a PowerPoint presentation which was presented in the European workshop organized by the NHMC at 19 June 2009, in the framework of the 4th meeting of EUCLIDES project.

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THE CASES OF SPAIN

Spanish Confederation for Educational Centers, CECE

The Euclides Project has been implemented at the AVE MARÍA SCHOOL in Málaga and it was addressed to teachers and students. The main aim of this project was to learn how to use the new ICTS tools in their learning process.

The first meeting had place on 16th of April of 2009 when all the partners agreed on the experimentation details. Then, the experimentation was completed in two classes of 4th Grade of Secondary Education (44 student of 15 and 16 years old). The duration of the experimentation phase was one month, i.e. from 27th of April of 2009 to 29th of May of 2009, one hour per week and it was complemented by the web based.

The students and teachers worked together in order to reach the successful results. First, they had clear the objects they would like to gain (Use of new ICTs as part of the learning process; use of Mobile phone and digital cameras for learning purposes for the creation of multimedia documents; to foster the interest and the reading habits, as well as how to express them in public; and to enhance the Autonomous learning and team working, applying the research techniques for the study according to different subjects)

and at the same time they followed a method (PBL that stands for Problem Based Learning) ended with a group and self-evaluation (students and teachers satisfaction and SWOT analysis).

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THE CASES OF TURKEY

Bolu İl Milli Eğitim Müdürlüğü, Directorate of National Education.

This project was applied in Bolu with four schools, five teachers and 101 students. One of the schools was an elementary school and the others were high schools. They selected different scenarios about environmental problems-water shortage, global warming, environmental problems of Bolu and extinction of an endemic species Salmon Trout. School administrations, teachers and students were actively involved in the project. All phases of PBL method were implemented by the teachers and students. The results of the project show that PBL method was generally successful. Because teachers were enthusiastic about implementation of the project and PBL increased motivation of the students and teachers. It increased self confidence of students and developed critical thinking,

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improved teacher-student relationship. Other important factors were active involvement of school administration, enthusiasm of students, and active learning of students. However, there were some problems during the implementation of this project. For example, teachers had some difficulties in the beginning of the implementation because of being PBL is not a common learning method in Turkey, fear of time consuming, fear of losing control of class. Teachers also had some difficulties to adopt PBL implementation to local school environment. But, at the end of the implementation, most of teachers stated that PBL was a very beneficial learning method to learn more deeply some specific cases like their scenarios and it also developed critical thinking ability of the students. Students stated that PBL method provided participating the lesson actively, express themselves and their opinions freely within the group, and participating making decision phase of lesson.