

## Workshop on Goerudio Method

23.04.2015 - Iasi, Romania

### Minutes

#### Participants

The Goerudio workshop on creating models has been organized by EuroEd in collaboration with the Vasile Alecsandri High School and involved 23 participants (22 students from 11<sup>th</sup> grade and 1 teacher of Physics).

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The focus of the workshop was to support the students of one of the schools involved in the Goerudio network in finding out more about the Goerudio project and its objectives and discuss about the best ways to attract students to learn science disciplines and to understand easier the theoretical knowledge. The main aim was to involve the students in brainstorming and creating Goerudio models on the spot.

The first topic of the workshop was the presentation of the Goerudio project. EuroEd representative presented the general idea of the project and the activities proposed. The following data have been introduced: The aim of the project - to create a learning community of science teachers and students willing to identify solutions to overcome the main obstacles when studying scientific subjects and development of innovative teaching methods for science; The project activities and results - Action 1: Creation of school network (35 schools, 70 scientific teachers, 1400 students); Action 2: Teacher (350) and students Experiences (700); Action 3: Identification of project initiatives (210); Action 4: Review of the initiatives; Action 5: Participation in a virtual meetings; Action 6: Communication campaign; Action 7: Development of interactive educational products. An update of the project by presenting and discussing further developments of the project have been done.

Participants discussed on the science disciplines and the teaching/learning methods used at class by sharing their experiences. The discussion offered the possibility to students to speak about their difficulties in learning and understanding science disciplines and to propose suggestions on how to make the class lessons more attractive. Students agreed the fact that science classes are full of abstract concepts, which are difficult to understand. Goerudio models can help students understand them by relating them their everyday experiences.

To support the participants to understand more the Goerudio project, the 2 staff members presented the Goerudio model and approach proposed for learning sciences. Goerudio has been presented as a learning methodology that is based on user involvement in its application and subject matter development. The program enables the user to explain complex formulas, physics laws and concepts presented by teachers with simple and familiar examples that are readily understood. Some of the models created already, also from other countries, have been presented and discussed.

During the group activity we insisted on the creativity and novelty of the Goerudio method and presented some of the samples from the site. The teacher and students were encouraged to try their hand at producing their own model. They also came up with new ideas and suggested other types of activities (lesson plans, tests, worksheets), which should stimulate students' interest in science and therefore motivate them to learn.



Within the working group activities, students and teachers were involved in brainstorming ideas and work together in creating Goerudio models. As result of this activity the group came with the scenarios for 5 models and worked on the template Work sheet1\_Description of the model:

- Revision of the proposed model on Electric current
- Revision of the proposed model on Pendulum
- Revision of the proposed model on Brownian motion
- Scenario for the model on Chemical Reaction
- Scenario for the model on Ohm's Law

As conclusion of the workshop, students and teachers have found that Goerudio models can be useful especially when abstract scientific concepts are first introduced to students. Students are asked to find similarities between the scientific concept and a familiar information with a view to integrating new information in their previous knowledge base. They use familiar information to explain unfamiliar information; and thus students build knowledge. The new knowledge is explored from different angles as students get actively engaged in finding explanations and applying the newly learned material to new situations related to their own experience. Thus, students get a better understanding of the scientific concept and make the learning process memorable and very personal. Goerudio models can make unfamiliar scientific concepts easy to understand, visualize and remember.

## Annexes

1. 3rd Seminar\_RO\_Programme
2. 3rd Seminar\_RO\_List of participants
3. 3rd Seminar\_RO\_Photos
4. 3rd Seminar\_RO\_Products (5 Work sheets\_Description of the models: Electric current, Pendulum, Brownian motion, Reaction and Ohm's Law)

