



518300-LLP-2011-IT-COMENIUS-CNW

## **Chemistry is All Around Network Workshop on "Teacher Training" Kırıkkale, Turkey, 29 May 2013**

### **Agenda**

#### **Timetable of the workshop: 16.30 – 18.30**

Workshop about training chemistry teacher was realized with 15 participants in Education Faculty of Kırıkkale University on May 29, 2013. 3 of them were experts and 12 of them were researchers and teachers. The issues discussed and the following suggestions have been put forth about "Chemistry is all around Network Project".

#### **Methodologies to teach a specific topics (e.g. acids and bases, the period table, ...): analysis and comparison between positive and negative experiences**

In changing and improving the education system of our time, the important point is to get student to be constructive, creative and inquisitive while applying the constructivist approach.

When opinions of the teachers considered, while using the activities based on problem-based learning in teaching some topics was efficient, it was not for some topics. They emphasized that problem-based teaching activities provided meaningful learning especially redox reactions, the mole concept, atomic models, and titration. In addition, teachers expressed that this method had positive effects to have high motivation, attitudes, and gain problem solving skills, critical thinking, and cooperative behaviors. However, some problems were observed such as not being accustomed to the method, communication problems, shortage of time, and distribution of tasks in groups.

One of the techniques mentioned is game education technique. Looking at teachers' practices, the technique is more effective in primary and secondary education, and this method's effect is decreasing in later age groups. The reason for this is thought to be that young age students have more sense of curiosity for technology.





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### **Pre-service and In-service training:**

Training Pre-service and In-service Chemistry teachers is an important issue. In this regard, it is necessary that doing more and more applications, informed about new teaching methods and techniques, having enough knowledge about how to use measurement and evaluation for Pre-service teachers. Teachers have been made Emphasis on these issues at the workshop. Furthermore, teachers in service have stated that they are participated in many in-service training courses which are organized by Ministry of National Education, remaining the theoretical level and not very concerned with their fields. The courses should be more practical rather than theoretical.

### **Use of simulations and animations:**

Issues related to the chemical course that is often abstract level so some issues may be difficult to make meaningful by students. In this regard, simulations, and animations are frequently used in science lessons.

Day by day simulation samples prepared for science teaching in interactive environment are increased. However, most of these simulations contain information that may be caused by students' misconceptions. Therefore, when we select of simulations, the validity of scientific knowledge must be checked. Teachers should have the necessary equipment how applied to simulations. Because, each simulation may be perceived as exact copy of the truth by the students. The difference between the actual situation and modeling should be provided by teachers

Learning and living is more in the forefront, the simulation experiments made with even if only simple ingredients should be avoided.

Thus, students perform active learning with gaining psychomotor skills.

### **Recommendations, guidelines for teachers:**

Students' difficulties in learning chemistry topics should be determined; they should be arranged on the teaching of in-service courses for teachers. These courses should be planned activities for the use of technology. Interactive portals on the training of qualified chemistry ([www.vitaminegitim.com](http://www.vitaminegitim.com), [www.morpakampus.com](http://www.morpakampus.com), etc.) that can be used by teachers and students should be done presentation and should be widespread. This portal should be free to access and up to date. Successful Teachers should be given to promote. Thus, the interest and motivation of teachers will increase further.

