



EXAMINING A STUDY BASED ON ACTIVE LEARNING

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Summary

It has been proven by many researches that teaching science with the traditional methods is not an effective way in today's world. However, it's quite difficult to have the right conditions to apply to an active learning process while the students, teachers and the school boards are used to traditional methods. Due to this reason, a project was developed by nine different institutions, and applied to the European Union Life Long Learning Programme, Leonardo Da Vinci Sub-programme for the financial support. Finally, the project was supported by this programme and called 'Creating active learning material for science educators of vocational education' (project number: 2010-1-TR1-LEO04-15846 1). The project was performed from August 2010 to August 2012. There were nine different institutions on the project. In this study, it was aimed to explain and discuss the performed works during the project process.

Introduction

In accordance with the general goals of their education, every country generate specific educational programmes to train the students to the aimed level. One of these programmes is science education programme. It is aimed to improve a philosophy to understand the aspect of the students about the teaching of science. It is aimed to build qualities such as improving a global perspective that is realistic and persistent, improving the necessary qualities to use scientific methods, explaining the conceptual meaning of science, adjusting to the innovations in science and technology and raising individual beneficial for the society (Gucum ve Kaptan, 2: 2002).

The traditional methods where the teachers transfer the information which is based on one direction communication are centred on teacher. The modern teaching methods which are now called active teaching, the students attend to the part of learning process. Nowadays, all the countries are busy with transforming their education systems into active learning or either busy with making changes on them. It is a really difficult process for the school board, the teachers and the students to apply this to their methods of teaching. Because of this, the sharing of the experiences of the students and the teachers about the techniques and the methods of the science and technology are considered as a secondary point. As we succeed in this, the students of the other partner countries will have information about different techniques and the methods as well.

As the teachers and the students get information about the active teaching methods and techniques, the other important issue would be how to use these in beneficial and successful ways. It is obvious to see that the students get enthusiastic naturally in a student-centred education. Yet, if the methods and techniques are not applied correctly, the teaching would be unsuccessful (Felder and Brent, 1996). Due to this reason, the goal in this project is to determine how and on which level these active teaching methods and techniques (mentioned in the first sub goal) are used by the students and the teachers.

In today's world, many of the teachers are busy trying to find the best way to use the active learning methods where the students should be busy and stop with the passive learning. (Fink, 1999).

Due these facts, the selection of the methods and techniques of teaching science are very crucial. The use of these activities, the comprehension of them via teachers, students and the environment, the determination of the methods and the techniques used for the specific subject and the application of these are also very important. In this study, a research group shared their experiences about the methods and the techniques of teaching science, the usage of these techniques and methods, the importance of the school board, the teachers, the students roles and the teaching environment,

Method

Purposes

The general purpose of this study was to explain and discuss the performed works during the project process.

Project process

Although the benefits of active learning are known, during the transition to active learning some teachers may have some difficulties. Therefore, we generated a project to share experiences of teachers from different countries about the learning methods and techniques used in the science lesson.

The project was developed by nine different institutions and applied to the European Union Life Long Learning Programme, Leonardo Da Vinci Sub-programme for the financial support. Finally, the project supported by this programme was called 'Creating active learning material for science educators of vocational education' (project number: 2010-1-TR1-LEO04-15846 1). The project was performed on from August 2010 to August 2012. There were nine different institutions (Nigde University-Turkey, Training cons. 2005-Romania, Associazione Antares-Italy, VšĮ "eMundus-Lithuania, Leiva Formacion-Spain, Dekaplus Business Services LTD-Cyprus, Foundation of Knowledge-Hungary, Repere Association Bacau Branch-Romania, Trakų švietimo centras-Lithuania) on the project from seven different countries.

During the project the following goals were investigated:

1. To share the experience on active learning materials which are used by educators,
2. To analyze, gather and provide out-door education material,
3. To gather and describe inquiry-based science learning material,
4. To gather and describe information communication technologies (ICT) based science learning concerned with vocational learning material,
5. To provide practical detailed examples (as educational path) of the learning material and exercises, which allow the critical and creative thinking skills in education to improve,
6. To find out the strong and weak points of the different science learning material,

7. To produce web page, which will be used as an electronic advisor and guide to people who are interested in vocational education of science teachers,

8. Learners and academic staff will share their active learning experiences and participant countries apply their methods in the other countries' institutions and compare the learners' behavior

9. To share new trend active learning science materials between the participating countries,

10. To improve science teacher's knowledge and skills to utilize active learning materials in their vocational development,

11. To enable teacher education institution's boards to create an active learning environment in their institution,

12. To improve the teaching skills and knowledge of the academic staff by sharing a professional experience

During the project process the following works were created to reach these goals.

- Beginning the project an email group (activelearningldvproject@googlegroups.com) and a project web page (www.activelearningproject.eu)
- There were five project meetings during the project (Turkey, Cyprus, Lithuania, Romania and Spain)
- 'Explain your own education system' week activity was organized. In this activity every country detailed their education system and their explanations were announced on the web page
- An international competition for the best logo of the project opinions to usage of active learning materials in science course was organized. In this activity, every institution organized a logo competition in their countries
- An attitude scale towards science was developed during the project
- An attitudes towards active learning scale was developed during the project
- Every institution explained their country's pedagogical ideas on application steps of active learning materials which educators used in the science courses
- Every institution developed inquiry based science learning materials
- Every institution developed out-door science materials
- Every institution developed ICT (Information and communication technologies) based learning materials
- Every activity was discussed on the project meeting
- Communication between the partners was realized by e-mails and phone

Results and Discussions

Project participants were very active during the project.

Every teacher in the project gave information about the teaching techniques and methods he/she used in science lessons by using photos, videos, e-blogs or power-point shows and explained these to the other groups and the necessities involving these activities to the other groups as well.

Every teacher in the project gave information about the roles of the teachers and the school board on the teaching techniques and the methods used in the science lessons by using photos, videos, e-blogs or power-point shows and explained these to the other groups and the necessities involving these activities to the other groups as well.

Every teacher gave information about the teaching environment while the teaching techniques and the methods used in the science lessons by using photos, videos, e-blogs or power-point shows and explained these and they have to explain the necessities involving these activities to the other groups as well.

The explained methods they used by the help of scanning during the meetings.

The teachers held activities such as ‘explain your own education system’, ‘poster or logo competitions.

The teachers exchanged their information and work on workshops during the meetings, and they discussed the methods and the techniques that used during the activities aforementioned. They, also, made presentations over the advantages and the disadvantages of these techniques.

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