The development of ICT tools offers in present many possibilities of their using in teaching Science and assumes a concrete increasing of the quality of the teaching process by the direct advantages related to the logical assimilation of the concepts and phenomena.

About two decades ago, in the information and communication technologies area a new concept appeared - virtual instrumentation. Virtual instrumentation is based on the idea of creating a new and own instrument for user that replaces the traditional adapting of user's needs to the existing instruments. Generally, a virtual instrument (VI) consists of a set of graphical tools that enables the user to design and simulate their own instruments that are necessary to a proper understanding of the chemical concepts and phenomena. The advantages of virtual instruments in Science education lays in the fact that they enable the user to design their own instrument that can be used in both classroom and laboratory. The teachers can design and modify the instruments that will suit their own needs, and the pupils can use them for their own learning.

The use of virtual instruments in teaching Chemistry presents the following advantages: a) offers to the teacher and students the possibility to design quickly, easy and safely different virtual experiments necessary to a proper understanding of the chemical concepts and phenomena; b) offers to the teacher and students the possibility to design interactive virtual experiments for teaching Chemistry present the following advantages: a) offers to the teacher and students the possibility to design quickly, easy and safely different virtual experiments necessary to a proper understanding of the chemical concepts and phenomena; b) offers to the teacher and students the possibility to design interactive virtual experiments that can be used in both classroom and laboratory; c) allows the teaching and learning of chemistry in a more interactive and engaging way; d) saves the time of their presentation in comparison with the real experiments; e) allows the learning autonomy due to specific tools for the solving of tasks that can be easily controlled.

In this paper, we present some results from the training modules of virtual experiments that were created with the software Crocodile Chemistry. The training modules were designed to be used in both classroom and laboratory. The teachers can design and modify the instruments that will suit their own needs, and the pupils can use them for their own learning.

In the beginning of the project, the teachers and pupils were introduced to the concept of virtual instrumentation and its applications in teaching Science. The teachers were given the opportunity to design their own virtual instruments that were necessary to a proper understanding of the chemical concepts and phenomena. The teachers were able to design and modify the instruments that will suit their own needs, and the pupils can use them for their own learning.

The teachers and pupils were also introduced to the concept of distance-learning and distance-teaching technologies. The teachers were given the opportunity to design their own virtual instruments that were necessary to a proper understanding of the chemical concepts and phenomena. The teachers were able to design and modify the instruments that will suit their own needs, and the pupils can use them for their own learning.

In conclusion, the use of virtual instruments in teaching Chemistry offers several advantages: a) it enables the teacher to design their own instrument that can be used in both classroom and laboratory; b) it offers the possibility to design interactive virtual experiments for teaching Chemistry; c) it allows the teaching and learning of chemistry in a more interactive and engaging way; d) it saves the time of their presentation in comparison with the real experiments; e) it allows the learning autonomy due to specific tools for the solving of tasks that can be easily controlled.

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