The Use of Computer Based Visualization in near Science Education Future

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Introduction

Visualization tools have the strongest position among other teaching/learning tools in current days because of such features as complex 3D, spatial relationships, parameters of moving objects and comprehensible representation of images. It stimulates students' cognitive processes, motivation, self learning abilities and helps teachers to coordinate work in the classroom. But some pedagogues appealing to classical teaching paradigm avoid post-modern technologies in education. According to theoretical assumptions and educational reality, it is important to identify the situation of the use of computer based visualization in near science education future.

Research methodology

There was used validated questionnaire (Cronbach alfa – 0.93, it measures heterogeneous and homogenous factors, also, statistically significant differences) for biology, chemistry and physics teachers who work in higher education schools with 9-10 grade students. The sample of participants (839 pedagogues of all regions in Lithuania) is representative. Mostly of them had supervisors' or senior teacher's qualification and worked at school for more than 10 years.

The results of the research

Teachers predict that in near future (after 5 years) the visualization in the internet web pages will be the mostly used tool during biology, chemistry and physics teaching at school. Also, they assuming that second tool could be interactive board because it would bring new interactive possibilities to show visual representations. Results enclose the prognosis of other computer based visualization – animation, games, simulations, schemas, modulations, virtual labs and others, also, it shows statistically significant differences between biology, chemistry and physics teachers predicting the future of visualization in the classroom.