Creation and Application of Virtual Laboratory in Teaching

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Problem: the creation of a virtual laboratory supplied with machine - program complex for doing chemical, biological, physical experiments theoretically without having any contact with real appliances. Main idea: Creation of a virtual laboratory for biology lessons which contains the following advantages as using modern virtual laboratories in the training process is essential 1) interactivity 2) not depending on any laboratory (capability of doing some laboratory experiments while having computers) 3) capability of modelling objects, processes, events which can't be done in the conditions in educational institutions 4) capability of doing tasks online through the Internet Methodology : the research was done by using Unity, Chemlab, Algodoo, webvr.info aframe.io programs and is planned to create such laboratories in the Chemistry, Physics subjects. Result: the work introduced was dedicated to the creation of virtual laboratories in the Biology lessons and crucial results were gained. The algorithm for the experiment and its program in the Unity language were compiled. As a result a virtual laboratory was created. It should be noted that such kind of laboratory was created in Azerbaijan for the first time and the promotion of this project work will be extended for the applying in the secondary schools.

Awards Won: