FORMATION OF RESEARCH COMPETENCIES IN PHYSICS IN PROFILE LEARNING

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The main objectives of profile learning are promoting the development of creative independence; the formation of system of ideas, values and research skills – the components of research competencies that will provide graduates to fulfill successfully. The main objective of physics learning in secondary school is inter alia the development of students' experimental and research skills. That's why the main aim of the profile learning of physics is the formation of research competencies of students.

Objectives of profile learning of physics can not be implemented without the principle of flexibility, which provides opportunities and conditions for change the content, methods and forms of organization of profile learning, including distance learning. It operates on the basis of modern psychological, pedagogical, information and communication technologies such as cloud ICT of learning. According to V. U. Bykov basic conceptual foundations of the strategy of subsequent informatization of education must be based on the concept of cloud computing.

The most successful model of organization profile learning in which the secondary school is partnered with high educational institution. In this model the use of cloud technologies in the profile learning of physics will provide free access for students both to traditional electronic educational resources and to variety equipment (directly or via remote control or indirectly through other participants of learning process.

Засоби формування дослідницьких компетентностей с фізики

віртуалізація

традиційні засоби

демонстраційний експеримент

лабораторна робота

фізичний практикум

позаурочний дослід

експериментальна задача

засоби хмарних технологій

комп'ютерна демонстрація

лаб. робота/практикум з віддаленим керуванням

віртуальна лаб. робота/ віртуальний практикум

лаб. робота/практикум з віддаленим опрацюванням результату

позаурочний дослід з використанням комп'ютера для його проведення чи опрацювання результатів

задача з комп'ютерного моделювання