

The Impact of Physics Taught with Simulators and Texts in Brazilian High School: A Study in the Adult and Youth Education

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Abstract : The teaching of physics in Brazilian public schools emphasizes strongly the theoretical aspects of this science, showing its philosophical and mathematical basis, but neglecting its experimental character. Perhaps the lack of science laboratories explains this practice. In this work, we present a method of teaching physics using the computer. As alternatives to real experiments, we have the trials through simulators, many of which are free software available on the internet. In order to develop a study on the use of simulators in teaching, knowing the impossibility of simulations on all topics in a given subject, we combined these programs with phenomenological and/or experimental texts in order to mitigate this limitation. This study proposes the use of simulators and the debate using phenomenological/experimental texts on electrostatic theme in groups of the 3rd year of EJA (Adult and Youth Education) in order to verify the advantages of this methodology. Some benefits of the hybridization of the traditional method with the tools used were: Greater motivation of the students in learning, development of experimental notions, proactive socialization to learning, greater easiness to understand some concepts and the creation of collaborative activities that can reduce timidity of part of the students.

Keywords : experimentation, learning physical, simulators, youth and adult

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