Assessing the Role of Computer Simulation in Chemistry Learning

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Abstract. Simulation and Computation make a versatile teaching strategy, and may be an important way to motivate students and lecturers to achieve meaningful learning. Indeed, this work refers to a study whose main objective is to set the influence that a teaching approach based on the use of computer simulation would have on students' learning, compared to the one in use today. This work involved the participation of two classes of 11th grade at a Secondary School in Lisbon, Portugal, where the main goal is to teach a specific topic to an untried student's group. With regard to the simulation environment, it will be grounded on a Proof Theoretical approach to Knowledge Representation and Reasoning, which caters for the handling of incomplete, unknown or even self-contradictory information or knowledge.

Keywords: Computer simulation · Chemistry learning · Teaching strategies · Secondary education · Logic programming · Knowledge representation and reasoning

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