

The Impact of Information and Communication Technology on Learning Quality and Conceptual Change in Moroccan High School Students

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Abstract : Teaching and learning occupy a significant position globally, as the sustainable development of all sectors is intrinsically linked to the improvement of the educational system. The COVID-19 pandemic demonstrated that the integration of Information and Communication Technology (ICT) in the learning process is not optional but essential, and that proficiency in computer tools is an asset that will enhance pedagogy and ensure the continuity of learning under any circumstances. The objective of our study is to evaluate the impact of introducing computer tools on the quality of learning and the realization of conceptual change in learners. To this end, a learning situation was meticulously prepared, targeting first-year baccalaureate students in experimental sciences at a public high school, "Khadija Oum Almouminin," focusing on the chapter on glycemia regulation in the Moroccan Life and Earth Sciences (LES) curriculum. The learning situation was implemented with a pilot group that utilized computer tools and a control group that studied the same chapter without using ICT. The analysis and comparison of the results allowed us to verify the research question posed and to propose perspectives to ensure conceptual change in learners.

Keywords : information and communication technology, conceptual change, continuity of learning, life and earth sciences, glycemia regulation

Conference Title : ICPSSLTS 2025 : International Conference on Pedagogical Sciences, Learning and Teaching Strategies

Conference Location : New York, United States

Conference Dates : January 28-29, 2025