









analysis of Gowin's UVE, constructed by the students for 16 laboratory practices, as in the problems of the theory class, for those who use the log table for the analysis of each. Of the elements of the UVE, these elements describe them in the methodology. The conceptual maps and ECPM are used in the diagnostic test and the post-evaluation as qualitative tools to study the circulation of the cognitive structure of the student, they should be the ones that the students will know about the background they should be for assimilating and learning the new content according to object-oriented progress, to the goal that is completed with success, to agreement with the results, as well as through the means and the standard deviation. The above represents an improvement in the relationship with academic performance among students and what was implemented in V of the theory of Ausubel, Novak and Gowin in the design of Gowin algorithms. It is concluded that Metacognition e-learning becomes a significant progress in the experimental group with respect to significant learning and academic performance.

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