

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Conceptual chains and its application to study solving problems in physics¹ CARLOS ENRIQUE LOPEZ CAMPOS, Universidad del Valle de Mexico — This work reports a theoretical model developed with the aim to explain the mental mechanisms of knowledge building during the problem-solving process in physics using a hybrid approach of assimilation- formation of concepts. The model has been termed *conceptual chains* and represents graphic diagrams of conceptual dependency, which have yielded information about the background knowledge required during the learning process, as well as about the formation of diverse structures that correspond to distinct forms of networking concepts. Additionally, the conceptual constructs of the model have been classified according to five types of knowledge. Evidence was found about the influence of these structures, as well as of the distinct types of knowledge about the degree of difficulty of the problems.

¹I wish acknowledge to Laureate International Universities, Baltimore, MD, USA, by the support given to develop this work.

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Date submitted: 27 Nov 2009

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