

Investigating Students' Cognitive Processes in Solving Stoichiometric Problems and its Implications to Teaching and Learning Chemistry

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Abstract : The present study investigated collegiate students' problem solving strategies and misconceptions in solving stoichiometric problems and later on formulate a teaching framework from the result of the study. The study found out that the most prominent strategies among students are the mole method and the proportionality method, which are both algorithmic by nature. Misconception was also noted as some students rely on Avogadro's number in converting between moles. It is suggested therefore that the teaching of stoichiometry should not be confined to demonstration. Students should be involved in the process of thinking of ways to solve the problem.

Keywords : stoichiometry, Svogadro's number, mole method, proportionality method

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