

Remedying Students' Misconceptions in Learning of Chemical Bonding and Spontaneity through Intervention Discussion Learning Model (IDL M)

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Abstract : In the past few decades, the field of chemistry education has grown tremendously and researches indicated that after traditional chemistry instruction students often lacked deep conceptual understanding and failed to integrate their ideas into coherent conceptual framework. For several concepts in chemistry, students at all levels have demonstrated difficulty in changing their initial perceptions. Their perceptions are most often wrong and do not agree with correct scientific concepts. This study explored the effectiveness of intervention discussion sections for a college general chemistry course designed to apply research on students preconceptions, knowledge integration and student explanation. Three interventions discussions lasting three hours on bond energy and spontaneity were done tested and intervention (treatment) students' performances were compared with that of control group which did not use the experimental pedagogy. Results indicated that this instruction which was capable of identifying students' misconceptions, initial conceptions and integrating those ideas into class discussion led to enhanced conceptual understanding and better achievement for the experimental group.

Keywords : remedying, students' misconceptions, learning, intervention discussion, learning model

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