



Implementations of a constructivist physics teaching design: An example on the kinetic theory of gas

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Abstract

This article introduces an innovative teaching design in university physics in Taiwan, based on a personal and social constructivist view of learning. The program was designed and implemented by the author. The author firstly elaborated on the rationale of the constructivist view of learning followed by the implementing teaching strategies of the innovative teaching. The links between the adopted teaching strategies and the themes of the constructivism were discussed in details. On the topic of the kinetic theory of gas, specific teaching sequences were described along with the video clips of the classroom activities. The learning outcomes, both in academic and affective aspects of the innovation program were then summarized. Based on the learning outcomes and the students' reactions appeared in the video clip, the author gives reflections on her constructivist teaching design, as well as providing suggestions to the teachers, who committed to the didactic way of teaching.