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Student-Created Videos to Foster Active Learning in Heat Transfer Course

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Abstract : Heat transfer is important in chemical engineering field. We have to know how to predict rates of heat transfer in a variety of process situations. Therefore, heat transfer learning is one of the greatest challenges for undergraduate students in chemical engineering. To enhance student learning in classroom, active-learning method was proposed in a single classroom, using problems based on videos and creating video, think-pair-share and jigsaw technique. The result shows that active learning method can prevent copying of the solutions manual for students and improve average examination scores about 5% when comparing with students in traditional section. Overall, this project represents an effective type of class that motivates student-centric learning while enhancing self-motivation, creative thinking and critical analysis among students.

Keywords : active learning, student-created video, self-motivation, creative thinking
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