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Pedagogies of Engagement: Classroom-Based Practices

Pedagogies of Engagement: Classroom-Based Practices looks at the effects of student-student interaction in the classroom that is designed and facilitated by the instructor. The context for the studies reported is college and university classrooms and field-study locations where cooperative and problem-based learning are compared with other instructional formats. The research questions include the effect of cooperative and problem-based learning on individual student achievement, critical thinking and reasoning skill development, and attitudes. The methodology used is primarily meta-analysis, that is, a quantitative approach for summarizing and comparing a large number of studies. The original studies included in the meta-analysis were randomized-design classroom and field experiments. The main findings include significant effect sizes for individual achievement, persistence, and attitudes. Principal recommendations from this study include increasing the quality and extent of carefully designed, purposeful and meaningful student-student learning opportunities in engineering classrooms and programs.