Impacts of Teaching Mathematics Through Problem Posing (P-PBL) on Students' Learning

Abstract

There has been increased emphasis on integrating problem posing into curriculum and instruction with the promise of potentially providing more and higher quality opportunities for students to learn mathematics as they engage in problem-posing activities. In this presentation, I will first provide a careful analysis of theoretical perspectives why Problem-Posing Based Learning (P-PBL) works for improving students’ learning. Then I will provide empirical results to show not only the actual effects of P-PBL on students’ learning, but also the P-PBL instructional interventions for promoting students' learning of mathematics. I will end the presentation by discussing four essential practices about the teaching mathematics through problem posing.

Brief Bio

Dr. Jinfa Cai is the Kathleen and David Hollowell Professor at the University of Delaware, and a Fellow of American Educational Research Association. He served as the Editor-in-Chief for the Journal for Research in Mathematics Education as well as the Program Director at the USA National Science Foundation (NSF). In 2017, he received the University of Delaware’s College of Arts and Sciences' Outstanding Scholarship Award, which is historical for a mathematics education researcher to receive such a prestigious award (competing with researchers in mathematics and natural sciences). In 2018, he received the Webber Award, honoring his significant contribution to the State of Delaware’s mathematics education.

Host: Dr. Kien Lim (kienlim@utep.edu)

For further information, please contact Dr. Emil Schwab, eschwab@utep.edu