

Preparatory Effects of Problem Posing on Learning from Instruction

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Abstract: A randomized-controlled study compared the preparatory effects of problem-posing on learning from subsequent instruction. Students engaged in problem-posing either with solution generation (where they generated problems and solutions to a novel situation) or problem-posing without solution generation (where they generated only problems) prior to learning a novel math concept. Problem-posing with solution generation prior to instruction resulted in significantly better conceptual knowledge, without any significant difference in procedural knowledge and transfer. These findings suggest that although solution generation prior to instruction plays a critical role in the development of conceptual understanding, and generating problems can further enhance transfer.