**Does an intelligent tutor homework system encourage beneficial collaboration?** BRETT VAN DE SANDE, ROBERT HAUSMANN, University of Pittsburgh — Physics instructors agree that homework assignments are an integral part of physics instruction. When students complete their assignments, we know they may work individually or in small groups. Unfortunately, most computer-based homework systems are structured for individual learners. In particular, these systems only evaluate the final answer, putting pressure on any students working in groups to engage in copying. In contrast, Andes is an intelligent tutor homework helper that requires students to show intermediate steps when solving a problem. Andes has been used successfully by instructors at several colleges and high schools. In order to investigate collaborative versus individual problem solving, we conducted a lab study where we recorded verbal self-explanations and logged solution steps as individuals and student pairs used Andes to solve a set of problems. We found that students working in pairs relied less on the tutor's hints and engaged in collaborative sense-making. Implications for instructional practices are discussed.

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