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Physics & Preservice Teachers Partnership Project (P⁴): An interdisciplinary peer learning tool PAUL J. SIMMONDS, JULIANNE A. WENNER, Boise State University — Physics graduate students (PGs) and teacher candidates (TCs) often graduate with specific weaknesses. PGs frequently lack training in teaching and effective communication. TCs are typically underprepared for teaching science, and physics in particular. In response to these challenges, we created P⁴. P⁴ is an innovative model for peer learning, creating interdisciplinary partnerships that help college physics instructors train their students in the “soft skills” prized in both academia and industry, while helping teacher educators infuse more content knowledge into science methods courses. In P⁴, PGs plan a lesson and deliver physics content to TCs. TCs then use this content to design and execute a 15-minute elementary science lesson. Framed by the concept of peer learning, we expected P⁴ would help PGs develop their teaching and communication skills, and TCs learn more physics. We studied the affordances and constraints of P⁴ to inform future iterations. Overall, P⁴ was successful, with both PGs and TCs reporting benefits. Affordances for PGs included the chance to plan and teach a class; TCs benefitted from working with experts to increase content knowledge. We will share the full findings and implications of our study, and outline next steps for P⁴.

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