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Assessing Student's Ability to Solve Textbook Style Problems

KAREN CUMMINGS, Southern Connecticut State University — Can We Really Measure Problem Solving Ability? The answer to this question may depend on how we define problem solving ability. But, if we care about students' ability to solve novel textbook style problems, the answer to this question seems to be "yes." In this talk I will discuss a pre-/post- instruction assessment that was recently developed to assess students' ability to solve fairly standard textbook style problems within the domains of Newton's second law, conservation of energy and conservation of momentum. The instrument is designed for large-scale use in typical university classrooms, has already been used in a variety of institutions and appears to be both valid and robust. Data collected with this instrument can help guide curricular improvements and provide important insights relevant to most departments for program review.

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