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Developing, validating, and measuring *Content Knowledge for Teaching*: An example from the teaching and learning of energy¹
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In carrying out *Tasks of Teaching*, teachers enact specialized knowledge that content experts who are not teachers do not use (and most likely do not have). How do we operationalize such a construct, validate it, and measure it in distinct ways (in teacher assessments, classroom observations, and teaching artifact analysis)? What is the relationship between these measures and student learning? In this workshop, a multi-institutional (Rutgers University, Seattle Pacific University, ETS, Facet Innovations, Horizon Research Inc., and University of Maine) project to pursue these questions will be described, the project framework will be shared, sample assessments items will be illustrated, and results from a pilot study and a field study involving 220 and 330 high school physics teachers, respectively, will be discussed. Implications for physics teacher education programs will be highlighted.

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