

Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Free Response vs. Multiple Choice CUE at Oregon State University JUSTYNA ZWOLAK, Florida International University, CORINNE MANOGUE, Oregon State University — Standardized assessment tests that allow researchers to compare the performance of students under various curricula are highly desirable. There are several research-based conceptual tests that serve as instruments to assess and identify students' difficulties in lower-division courses. At the upper-division level, however, assessing students' difficulties is a more challenging task. Although several research groups are currently working on such tests, their reliability and validity are still under investigation. We analyze the results of the Colorado Upper-Division Electrostatics (CUE) diagnostic from Oregon State University and compare it with data from University of Colorado. In particular, we compare students' performance on the Free Response and the Multiple Choice versions of the CUE. Our work complements and extends the previous findings from the University of Colorado by highlighting important differences in student learning that may be related to the curriculum, illuminating difficulties with the rubric for certain problems.

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Date submitted: 31 Dec 2014

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