

Abstract Submitted
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Proportional reasoning competence among different student populations KING WONG, Western Washington University, WESTERN WASHINGTON UNIVERSITY, RUTGERS UNIVERSITY, AND NEW MEXICO STATE UNIVERSITY COLLABORATION — A collaborative project between Western Washington University, Rutgers University, and New Mexico State University seeks to understand student's competence level on proportional reasoning. We have been collecting and analyzing data from introductory physics and science education courses using a set of assessment tasks. We utilize the notion of constructs to categorize student thinking according to repetitive patterns. Results suggest that, when students confront ratio and proportion problems, they often experience a gap between the mechanics of the mathematical operations and the conscious understanding of what they are doing. In this poster we will share results of our findings from different courses, institutions, and student populations. Supported by NSF grants DUE-1045227, DUE-1045231, DUE-1045250..

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