

**ZMATH 2012e.00729**

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**A cross-disciplinary approach to teaching data literacy and proportionality.**

Educ. Stud. Math. 81, No. 2, 179-205 (2012).

Summary: The thinking with data project (TWD) expands on current notions of data literacy by focusing on proportional reasoning as key to data literacy and leveraging the non-mathematics disciplines to engage students in deep thinking about the context of data and the application of proportionality. A set of four two-week, sequential modules for cross-disciplinary implementation in seventh-grade classrooms was designed and evaluated. Using a quasi-experimental approach, we found that student data literacy was increased through the focused integration of social studies, mathematics, science, and English language arts. In this article, we describe our theoretical approach to designing and implementing the modules, report on student learning gains in mathematics, and describe teacher reactions to the materials. In sum, our study provides evidence that the TWD approach has the potential to build data literacy while also allowing students to learn core discipline-based content standards.

*Classification:* K43 F83 M13

*Keywords:* proportionality; data literacy; proportional reasoning; instruction in middle school  
doi:10.1007/s10649-012-9392-z