

Schild's 2007 Paper: **QL And School Mathematics**

Reviewed by Maura Mast, Univ of Mass.

Milo Schild agrees that common approaches to teaching fractions (essentially manipulating them symbolically, as a foreshadowing of algebra) turn off students. In his paper he **“explores the possibility of delaying, minimizing, or eliminating the manipulation of common fractions as mathematical objects and of replacing it with a more applied study of fractions in the context of percentages and rates”** (p. 87–88). **From a QL perspective, the gain is significant:** teachers would have a greater focus on percentages and rates, addressing both calculational and syntactical issues, and on ratios (with the benefit of greater statistical literacy).

The bulk of Schild's paper addresses what he calls “mathematics for the other 40%,” school mathematics for the 40% of college graduates with nonquantitative majors. These students (typically liberal arts majors) are all too often quantitatively illiterate. They have difficulty reading tables and graphs, they cannot express percentages clearly and correctly, they do not understand weighted averages (in fact, I doubt that most college students understand that their grade point average is an example of a weighted average), and, most challenging, they have poor attitudes about math. While attitude is not a bullet point in any curriculum framework, it is an important part of the classroom experience.

Schild suggests “student attitudes affect student choices and performance” (p. 96) and notes that “‘attitudes’ includes the attitudes of teachers and parents, which may account for much—if not most—of the difference in academic performance among K–6 school children” (p. 97). As a remedy for these issues, **Schild suggests that teachers need to emphasize context and argues that “‘mathematics in context’ should focus less on going from mathematics to context and focus more on going from context to mathematics”** (p. 105).

Schild makes eight recommendations for modifying the mathematics curriculum to incorporate QL. These recommendations are broad enough that they could be incorporated at most levels of education; the one exception is *his seventh recommendation, which calls for the establishment of alternatives (in the form of QL or Statistical Literacy) to Algebra II at the high school level. This is an excellent suggestion and is perhaps the most practical way to bring QL into the pre-college curriculum. Such a course is ideal for students in their fourth year of high school who are not planning to go into a quantitative-based major in college (or perhaps who are not even planning to go to college).*

While Schild's paper does not argue for a specific approach to teaching fractions, I don't mind. **The overall focus on how to bring QL into the curriculum, and the arguments for why this is essential, is quite appropriate.**

Review of Calculation vs. Context: Quantitative Literacy and Its Implications for Teacher Education by Bernard L. Madison and Lynn Arthur Steen (Editors).

Reviewed by Maura B. Mast, University of Massachusetts – Boston
Numeracy: Vol. 2 (2009) / Issue 2. [Bold, italics and boxes added]