

Meeting: 1003, Atlanta, Georgia, MAA CP V1, MAA Session on Research on the Teaching and Learning of Undergraduate Mathematics

1003-V1-833 **Mary D Shepherd*** (msheprd@mail.nwmissouri.edu), Dept. of Mathematics & Statistics, Northwest Missouri State University, 800 University Drive, Maryville, MO 64468. *General Reading Comprehension Strategies Do Not Suffice for Learning Mathematics from Texts.*

One might expect that reading textual material about mathematics is somehow different from reading what might be called general text that one might find in a novel, a short story, or a journal article in, say, history. It seems reasonable that reading mathematical text may require different, or additional, reading strategies. A conceptual framework developed in reading research called Constructively Responsive Reading (CRR) provides a metacognitive approach to reading and learning. This paper reports on research that was conducted during the Fall 2003 semester in which 11 students in two first-year mathematics classes (Pre-Calculus and Calculus) were observed and audio-taped reading a new passage from their respective textbooks. They were also asked to work straightforward tasks based directly on their reading. Analysis of the tape recordings and field notes has led to the conclusion that (1) the students were indeed good readers, using many of the effective reading strategies in the CRR framework; (2) the strategies in the CRR framework were not sufficient for these students to learn as much as they could have from the mathematical text; (3) the CRR framework needs modification to include how readers should deal with some of the mathematics such as definitions and notation. (Received September 30, 2004)