

1116-VT-1010 **Shumei C. Richman*** (richmansmc@gmail.com). *Using Word Problems as a Bridge to Learn Linear Equations*. Preliminary report.

Most college students in a beginning algebra class are afraid of word problems. This research rose from a question: Is it possible to change the situation by adding the role of word problems in algebra, besides as applications? Our strategy is to use word problems to serve as a bridge, from everyday life to math and from arithmetic to algebra. For example, when first introducing a linear equation, instead of rules and algorithms, we give students some simple and concrete word problems, which can be solved by the equation, are familiar to them and they can solve easily by arithmetic methods with visual drawings. This is to help students 1. interpret the meaning of the equation, especially the meanings of operations involved, from what they have known about the word problems, and 2. solve the equation, without any algebraic rules, but with what they have known about the arithmetic solutions of the given word problems. We have found that this alternative approach helps students make sense of equations, and thus increases not only their comfort in solving word problems, but also their understanding of algebraic rules, such as the distributive law. In this talk, we will discuss the design of bridging word problems and their impacts on students. (Received September 21, 2015)