

1086-VE-1035 **Steven R. Lay*** (slay@leeuniversity.edu). *Preparing Students for Success in Algebra.*

Why do so many students struggle with algebra? We believe the primary reason is that they are not thinking correctly about what they are seeing. Most of their errors are usually related to very basic concepts: manipulating signed numbers, fractions, exponents, and canceling. To improve the students' success in algebra, we developed a pre-algebra program to teach them the correct way to think about these basic operations. Our approach involves developing a dynamic model for arithmetic where the emphasis is on an operator changing one number into another number. This presentation will give an overview of the operator approach to pre-algebra and document its successful use with under-prepared college students. (Received September 18, 2012)