Abstract
In 2002, Dr. William S. Bush and his colleagues at U of L received funding to create a center that focused on mathematics and science education. The initial funds were used to develop sets of mathematics assessments for elementary and middle grades teachers of mathematics, entitled Diagnostic Teacher Assessments in Mathematics and Science (DTAMS). The types of teacher knowledge assessed included: understanding of important mathematics and science concepts, skills, and generalizations; ability to perform important mathematics and scientific skills; ability to reason and solve problems in mathematics and science; and pedagogical content knowledge in mathematics and science. Over the past six years, a large number of elementary and middle school teachers have taken the DTAMS. Last year, the group received funding at U of L from Institute of Educational Sciences (IES) to revise the middle grades DTAMS so that the assessments align better with the new Common Core State Standards in Mathematics and the accompanying Mathematical Practices. A proposal to revise the elementary DTAMS is currently under review at IES.

Biographical Note
Dr. Bush is a Professor of Mathematics Education and Director of the Center for Research in Mathematics and Science Teacher Development in the College of Education and Human Development at the University of Louisville. Prior to this appointment, he was a faculty member in the Colleges of Education at the University of Kentucky (1985-2001) and at the University of Houston-Victoria (1982-85). He received a doctorate from the University of Georgia and a Masters’ degree from the University of Kentucky. During his postsecondary career, he has taught mathematics courses, mathematics methods and general education courses, and supervised student teachers. Over his career he has obtained almost $37 million in funding, and he has directed projects focused on: (1) providing mathematics professional development to teachers; (2) creating mathematics and science assessments for elementary, middle, and high school teachers; and (3) improving mathematics teaching and learning in Appalachian schools. He also led statewide projects to develop mathematics curriculum analysis tools and to provide professional development for teachers. Also at the state level, he served as the initial chair of the Kentucky Mathematics Achievement Committee. He has chaired or is chairing committees for 26 doctoral students and has served on committees of an additional 20 doctoral students.