This presentation will discuss the new program designed for in-service elementary teachers at Texas Tech University entitled Proyecto English Learner Science and Mathematics Education, Proyecto El SMEd. This program, developed in collaboration among departments at the university level as well as two local school districts, focuses on developing the mathematics and science knowledge and instructional practices to support all learners. Proyecto EL SMEd targets three domains of effective teachers and teaching: content knowledge, teaching and learning dispositions, as well as pedagogical skills. These elements are: (a) a high association between student outcomes and teachers’ skills and (b) the impact of teachers’ skills on student skills is mediated by teacher knowledge and dispositions. Thus, Proyecto EL SMEd features include: engaging teachers in complex problem solving in mathematics and science; collaborative partnerships with consortium school districts in a comprehensive approach to teacher training; the integration of recent strategies in developing ELs’ mathematics and science academic literacy; and providing teachers with opportunities to critically examine their beliefs about teaching and learning mathematics and science content. (Received September 26, 2012)