

## Research base for T-MAST

Clearly, America does not have enough high-quality teachers to fill its classrooms. According to the National Commission and Teaching on America's Future the teacher shortage is caused by increased student enrollment and an increase in the number of teachers reaching retirement age (Bullough et al, 1998). As a result, the shortage has caused many school systems to lower standards for teacher assignment and recruitment. Ingersoll & Smith (2003) have discovered that part of the problem is attrition, not a shortage in the usual sense. "The data on new teacher attrition suggest that efforts to recruit more teachers-which have been the focus of much policy - will not, by themselves, solve the staffing problems plaguing schools. The solution must also include teacher retention" (p.32). While up to 50% of new teachers leave after the first five years in the classroom, mentoring and induction programs have been found to increase teacher retention (Ingersoll & Smith, 2003; Darling-Hammond, 2003).

Mentoring, the pairing of a beginning teacher with an experienced teacher is fundamental to effective alternative certification programs. Yet, the participation of an experienced teacher is not sufficient to support quality mentorship. Janas argues that the optimal mentor possess the expertise, commitment, and time to provide assistance." Retrieved August 11, 2003 [www.nsd.org/libray/jsd/janas174.html](http://www.nsd.org/libray/jsd/janas174.html). Janas continues, "The mentor is the linchpin of any formal mentoring program." Wilson , Floden, & Ferrini-Mundy (2002) identify characteristics of successful alternative certification programs as supportive in the research literature, and mentoring was listed as an important program quality. Teaching is complex, and reasons teachers give for leaving the profession include a lack of strong mentorship. Another avenue to improve retention of new teachers is to create adequate preparation so that new teachers can effectively deal with the complexities of teaching. Teachers that emerge from high-quality preparation programs are more likely to remain teaching (Darling-Hammond, Chung, & Frelow, 2002).

Producing high-quality middle school teachers is imperative. Prospective teachers at the middle-school level need to understand the unique nature of middle-school teaching. The National Middle School Association states that "teachers should understand the developmental uniqueness of young adolescents and are as knowledgeable about their students as they are about the subject they teach" (1995, p.13). Teaching at the middle-level can be challenging, but teachers with the proper preparation can achieve high-quality mathematics teaching and learning in their classrooms. Beane & Brodhagen (2001) have also reported several areas of tension which have complicated middle school teaching, among them, and probably most important, is understanding the characteristics of the young adolescents and their educational needs. Laczko-Kerr & Berliner (2002) reported that the research suggests that: 1) subject matter knowledge is important, but not the only factor in a certified teacher's success with mathematics and science students in the upper grades; 2) that teachers who have training in pedagogy outperform teachers without such training; and 3) that traditionally certified teachers teaching in their area of certification outperform both certified teachers teaching out-of-field and alternatively certified teachers.

T-MAST is an innovative alternative route to teaching with a unique feature: **accelerated and highly mentored classroom teaching experiences in the form of a paid internship** that occurs while the T-MAST inductees pursue a graduate degree in education. Wilson , Floden and Ferrini-

Mundy (2002) have researched effective program components of alternative routes to teaching. They reported that there are "several features that appear to support high-quality alternative certification, including, high entrance standards, extensive mentoring and supervision; extensive pedagogical training in instruction, management, curriculum, and working with diverse students; frequent and substantial evaluation; practice in lesson planning and teaching prior to taking on full responsibility as a teacher; and high exit standards" (p.201). These features provide the framework for the T-MAST goals.

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