

December 3, 2001

Harriet G. Taylor
ISTE NETS Distinguished Achievement Award Coordinator
ELRC Peabody Hall
Louisiana State University
Baton Rouge, LA 70803

Dear Dr. Taylor,

On behalf of the College of Education at The University of Texas at Austin I am extremely pleased and honored to nominate the UTeach program for the ISTE NETS Distinguished Achievement Award.

The UTeach Program constitutes a joint effort of the College of Natural Sciences, the College of Education and the Austin Independent School District to recruit, prepare and support the next generation of mathematics and science teachers for the State of Texas. We also hope to be a national model for teacher preparation in the areas of mathematics and science education as we incorporate content, pedagogy and effective use of technology into our professional development program (UTeach).

As the Dean of the College of Education, I initiated a major commitment to rebuild and strengthen the College's program in mathematics and science education. Under the leadership of mathematics and science education faculty we reached the decision to completely revise the professional development courses here at the College of Education. These professors provided both the vision and actual course development for a sequence of courses (*Knowing and Learning*, *Classroom Interactions*, and *Project Based instruction*) that build on current research in the areas of student learning, the examination of standards-based curricula, the study of effective classroom interactions, and the development of models of teaching. Issues of technology use and effective approaches to equitable participation are embedded throughout the sequence of all UTeach classes. Because the program is restricted to 18 professional development hours by state law, careful consideration was given to the content, field experiences, and technology competencies of each course in the certification sequence. As each course was added to the sequence, we revisited the other courses to be sure that our curriculum continued to address state and national standards.

Faculty in the Colleges of Education and the College of Natural Sciences continue to work closely to generate a set of domain courses for the UTeach program. These courses

(such as *Functions and Modeling* and *Geometry and Visualization*) integrate mastery of the subject matter with inquiry-based methods and the use of modern technology for scientific discovery. Technology benchmarks are integrated throughout the program.

To help students gain competency in employing technology in their content instruction, a fully equipped technology classroom is currently dedicated specifically to the UTeach program (SZB 316). This was made possible by a grant from the Intel Foundation as well as a commitment of our student fees for instructional technology in a cost sharing basis with the College of Education's Learning Technology Center.

In order to facilitate technology integration into the UTeach experience, our College has received outside funding for professional training, hardware and software purchases for the UTeach program. For instance, through Project INSITE (Inventing New Strategies for Integrating Technology into Education) a Preparing Tomorrow's Teachers for Technology (PT³) grant, of which Dr. Petrosino is a Co-PI, we have received over \$800,000 for the purchase of laptops and peripherals for student use in the field. This grant has also provided training for mentor teachers from the Austin Independent School District (A.I.S.D.) to help facilitate effective utilization of technology into secondary mathematics and science classrooms throughout Austin. In this way, Project INSITE is building capacity for classrooms using technology effectively and consistent with our College's pedagogical courses, for a meaningful teaching experience for our UTeach students. This year, 25 Austin area teachers were provided with laptop computers, a Palm and a projection system along with 6 professional days of training. We are expecting an additional cohort this coming academic year with the same resources.

In addition, UTeach students have full use of the College of Education's Learning Technology Center. The LTC provides timely and effective microcomputing and media services to the faculty and students of the College of Education, assists the faculty and students of the College of Education in the production and use of instructional materials using a wide variety of media and technologies, and provides support and development for research programs in the use of technology in educational settings. The LTC has been especially helpful in the Project Based Instruction and Classroom Interactions classes in the UTeach program.

Furthermore, Dr. Petrosino has recently been awarded a \$125,000 grant from the National Science Foundation to establish a close collaboration between participants in the Austin Independent School District, UTeach, and the NSF VaNTH Engineering Research Center (ERC) of Bioengineering Educational Technologies (VaNTH is an ERC involving Vanderbilt University, Northwestern University, U. Texas Austin and the Harvard-MIT Health Sciences and Technology Program). The goals of this grant are to enlist mathematics and science teachers to help design and evaluate instructional materials that use science content as anchors and challenges for the teaching of science and mathematics fundamentals at various levels in K-12. The UTeach students involved in Project Based Instruction will be very involved in this new initiative.

Lastly, working in close collaboration with the College of Natural Sciences, the UTeach program has established an endowment for our collaborative program in order to ensure its future stability. Currently, both the College of Education and the College of Natural Sciences are working with donors to provide induction support for the alumni of our program.

I am very pleased to report that this collaborative approach to teacher preparation has shown exceptional promise in attracting new students to mathematics and science education. UTeach successfully combines practical experience and scholarly investigation, with early and on-going field experiences that capture the imagination of pre-service teachers and provide a foundation for their more advanced pedagogical courses taken here at the College of Education.

The first cohort of 28 UTeach students was selected in the fall of 1997. By the spring of 2001, UTeach enrollment had grown to more than 280 students. Retention rates for UTeach students have been far better than those of their undergraduate College of Natural Sciences peer group (All students in the UTeach program have content majors from the College of Natural Sciences in either mathematics, the sciences, or computer science). This success is ascribed to pervasive field experiences, a cohort approach that fosters close, interdependent relationships among participating students, and guidance from nationally recognized faculty and master teachers. UTeach is expected to grow to approximately 400 students, and to graduate 60--80 new science and mathematics teachers each year.

On behalf of Dr. Petrosino and Dr. Carmack and the many faculty and staff involved with the UTeach program from both the College of Education and the College of Natural Sciences, I want to thank you for the opportunity to submit this application, and hope that you will consider the merits of our program.

Sincerely,

Manuel J. Justiz
Dean
College of Education