I. Goal Area of the Activity: Improving Teacher Quality

II. Summary / Purpose
Adequate teacher preparation is a crucial element in improving our nation’s mathematics achievement. Innovative Teaching in Mathematics Program at Nova Southeastern University in the Fischler Graduate School of Education is designed to help train and prepare competent teachers in our nation’s schools. Many teachers drill students in procedures that are soon forgotten. Students learn strict, seemingly infallible rules, ranging from the mechanics of addition to the intricacies of factoring algebraic expressions. In contrast, children should learn to apply mathematical rules fluently. Further, teachers often teach the mathematical procedures poorly. Students lack proficiency from inadequate drill, but because too many teachers themselves do not understand mathematical principles behind the rules. Most U.S. colleges and universities do not teach mathematical foundations. Therefore teachers only teach what they know (New York Times, June 27, 2001).

This problem can be solved by teacher preparation. Teachers need a deeper understanding of the mathematical concepts they cover. Mathematics is as easy or as difficult as we choose to make it. It constantly goes through changes and grows, not only in the way it is applied, but also in its fundamental structure. New ideas are introduced; intriguing connections between old ideas are discovered.

The principal aim of the graduate program in Innovative Teaching is to equip the student to conduct original research in mathematics. Independent and critical thinking is encouraged by participation in course work, seminars, and by completing hands-on projects. In order to enable each student to acquire a broad background in mathematics, course contents are designed in a fun, challenging, and creative structure.

III. Accomplishments / Results
Fischler Graduate School of Education and Human Services is one of the largest graduate schools of education in the western hemisphere, with more than 10,000 students in 50 cities and more than 20 U.S. states, as well as 12 other countries.

M.S. and Ed.S. Innovative Teaching in Mathematics Program:
- Is based on the extraordinary Project MIND-Math Is Not Difficult® developed by Dr. Hui Fang Huang “Angie” Su, and widely supported by prestigious organizations such as the Toppel Family Foundation, quantum Foundation, South Florida Annenberg Challenge, and school districts throughout the southeastern region of the U.S.
- Leads to certification or recertification, as well as M.S. and Ed.S. degrees
- Makes math fun for teachers and for students
- Provides students with the skills needed for FCAT and other tests, without the rote drills or worksheets.

The Innovative Teaching in Mathematics Program Partnership with School Districts:
- Is efficient and cost effective
- Targets out-of-field mathematics teachers
- Can improve the effectiveness of k-12 teachers who teach math and those who could integrate math into other subject areas.
- Encourages participants to go through the program together as a cohort
- Provides a fast-track timeline for completion
- Provides online and/or face-to face options
- Improves students outcome
- Is linked to National Council of Teachers of Mathematics Standards

IV. Plans for Next Twelve Months We would like to continue to work with school districts on a national scale. We would also like to participate in local, state, and national conversations on achieving high quality mathematics instruction.