

Description

TEAM-Math is a partnership of Auburn University's College of Education and College of Sciences and Mathematics, Tuskegee University, and 14 school districts in east Alabama with the mission of "Transforming East Alabama Mathematics" (abbreviated as TEAM-Math). Over the past six years, TEAM-Math has received over \$12 million to support its systemic change model, which includes the following areas of activity:



Professional Development

Ninety-one schools entered intensive professional development in a cohort-based model in which they received a two-week Summer Institute, a one-week follow-up Summer Institute, and Quarterly Meetings held on Saturday mornings throughout the year. Over 1600 teachers completed the full professional development program.

Teacher Leader Development

Designated teacher leaders at the school and district level coordinate activities at their respective levels. Quarterly leadership meetings are held to provide the teacher leaders with updates on the partnership and professional development aimed at developing their leadership skills.

Curriculum Alignment

A partnership-wide committee has worked together to develop a common curriculum guide based on state and national standards, which has undergone annual revisions to improve usability. In addition, a joint textbook review committee made recommendations that were adopted by the districts.

Improvement of Teacher Preparation

Efforts have also been made to improve the mathematical preparation of preservice teachers. The mathematical content courses for elementary majors were revised to align with partnership goals, and a "capstone" course for secondary majors was added. Alignment between the university and partner schools has been enhanced by placing students with TEAM-Math teacher leaders for field and internship experiences.

Stakeholder Outreach

Efforts have been made to engage administrators, guidance counselors, and parents and the community through briefings and other events. "Multicultural Literature as a Context for Problem Solving" program, in which parents and students work together to solve mathematical problem in the context of multicultural literature has been particularly effective.

TEAM-Math Teacher Leader Academy

Most recently, TEAM-Math has received two grants from the National Science Foundation to establish the TEAM-Math Teacher Leader Academy--\$600,000 in 2008 to support 14 secondary mathematics teachers and \$1.5 million in 2009 to support 22 elementary teachers with an interest in mathematics. Teachers who are selected to be fellows in the Academy receive a \$10,000 annual stipend over a 3-5 year span to continue teaching full-time in high-needs school districts. They also receive intensive professional development to stimulate their growth as teacher leaders, as well support for tuition to pursue graduate degrees at Auburn University. Secondary mathematics fellows pursue degrees in mathematics education, and elementary fellows pursue degrees in early childhood or elementary education, along with an Elementary Mathematics Specialist certificate.

Successes

Key Findings

Examination of attitudinal data show that teachers who participated in the professional development provided by TEAM-Math were more likely to engage in instructional practices recommended by TEAM-Math (Martin, Strutchens, Woolley, & Gilbert, in press).

Furthermore, students with teachers who used instructional practices recommended by TEAM-Math showed more desirable levels of motivation towards learning mathematics (Woolley, Strutchens, Gilbert, & Martin, in press). In turn, these students performed better on both subjective and objective measures of mathematics achievement (Woolley, et al., in press).

Examination of achievement data show that schools participating in the TEAM-Math project have had significant gains exceeding state averages on state-mandated examinations.

Qualitative analyses suggest that school-level support is an important factor in the successful implementation of TEAM-Math. Very different school climates can emerge depending on the support provided. Schools with supportive administrators and effective teacher leaders had teachers who were more engaged in the partnership and who felt more accountable for implementing innovative practices. In contrast, teachers in schools with low support attended events grudgingly and made limited attempts to implement innovative practices (Strutchens, Henry, & Martin, 2009).

References

- Martin, W. G., Strutchens, M. E., Woolley, M. E., & Gilbert, M. C. (in press). Transforming east Alabama mathematics: Changing teachers' attitudes and practices through professional development. In D. Brahier (ed.), *Motivation and disposition: Pathways to learning mathematics*, 2011 Yearbook of the National Council of Teachers of Mathematics (NCTM). Reston, VA: NCTM.
- Strutchens, M., Henry, D., & Martin, W. G. (2009, January). Improving mathematics teaching and learning through school-based support: Champions or naysayers. *MSP Learning Network Conference 2009*, Washington, DC. Retrieved: http://hub.mspnet.org/index.cfm/msp_conf_2009_abstracts
- Woolley, M. E., Strutchens, M.E., Gilbert, M.C., & Martin, W. G. (in press). Student motivation and the math success of African American middle school students: Direct and indirect effects of teacher beliefs and reform practices. *The Negro Education Review*.

For More Information

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