Mathematics Coaching Program: Report to the Ohio Department of Education

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Mathematics OAT Scores

Percent of Students At or Above Proficiency in Grades 3 through 8
Mathematics Coaching

• Addresses Board Priorities
  – Higher Achievement for All Students
  – Educator Quality and Effectiveness
• Is High Quality Professional Development
  (*Standards for Ohio Educators*)
• Draws on school improvement models developed for literacy
• Is content-specific
• Is funded through Title I SI and Math Initiatives
Similarities with Literacy

• School-based coaches provide whole-school, job-embedded professional development (PD)
  – For all teachers, by grade-level, via co-teaching, for administrators, …
  – Addressing both pedagogy and content knowledge
  – Drawing on local data and diagnostic assessments
  – That is vendor neutral

• Projects are tiered through regional facilitators and higher education faculty members, who
  – Provide technical support to school-based coaches
  – Ensure fidelity and flexibility
Drs. Patti Brosnan & Diana Erchick
Directors

http://www.newark.osu.edu/derchick/MCP_Program/
Today’s Focus

• The Mathematics Coaching Project
  – MCP Model Details
  – Results so far
  – Current Status
  – Challenges
  – Future Directions
MCP Mathematics Coaching

• The Guiding Question:
  – How do we get research-based strategies into this classroom, with this teacher, with these students, with this curriculum, and with these materials?

• The MCP Approach:
  – Coaches are assigned to one elementary school to provide practice-embedded professional development to teachers on research-based strategies.
MCP Structural Model

Technical Assistance Team: Project PI's and Facilitators

School-Based Mathematics Coaches District Hires
- Teachers in Coach's Building
  - Students

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MCP Coaches’ work

• Practice-embedded: Team-teaching with classroom teachers, using research-based, standards-based instruction
• Focusing on student thinking and learning
• Provides an informed and rigorous focus on the Ohio standards for mathematical processes
• Practices data-based decision making
• Professional Development in content, pedagogy, and coaching

Curriculum independent
Mathematics Achievement
MCP Schools Grade 3

Cohort I
- 2005: 56%
- 2006: 60%
- 2007: 79%

State Average
- 2005: 70%
- 2006: 75%
- 2007: 84%

Percent at or above Proficient

The Ohio State University
Mathematics Coaching Program
Mathematics Achievement
MCP Schools Grade 4

Cohort I
- 2006: 56%
- 2007: 63%

State Average
- 2006: 77%
- 2007: 76%

Percent at or above Proficient

The Ohio State University
Mathematics Coaching Program
Mathematics Achievement
MCP Schools Grade 5

Percent at or above Proficient

Cohort I

State Average

2006

2007

The Ohio State University
Mathematics Coaching Program
Mathematics Achievement
MCP Schools Grade 6

Percent at or above Proficient


The Ohio State University
Mathematics Coaching Program
Grade 3 Achievement, MCP Cohort I Schools

2007 Percent Proficient vs. 2006 Percent Proficient

Dotted line represents average improvement, statewide.

The Ohio State University
Mathematics Coaching Program
Achievement Comparison, MCP Cohort I Schools

2006 Percent Proficient vs. 2007 Percent Proficient

- Gr. 3
- Gr. 4
- Gr. 5
- Gr. 6

The Ohio State University
Mathematics Coaching Program
Additional Results

- Changing Roles and Supports
- Emerging Leadership
- Ownership and Decision-Making
Current Status

• Of 34 Cohort I schools, 12 remain
  – Lost 20 Cohort I schools because they emerged from School Improvement
  – Lost 2 coaches (and hence schools) because of school restructuring RIFs

• Missed potential Title I SI schools because of summer eligibility identification

• This year we have 76 coaches
  – Many schools have hired coaches with other funds
  – We have expanded to middle school (in some cases 2 schools per coach)
Challenges

• Funding is dependent on School Improvement status
  – Considering variations of the model
• Identifying schools early
• School buy-in up front: 80% of staff buy-in before joining MCP
• Hiring coaches
• Understanding program assurances
• Administrative support
• Union requirements
Future Directions

- Expanding to grades 7-12 in Ohio
- Changing role of coach
- Variations of the model
- P-6 Mathematics Specialist Endorsement
- EdS Degree for Teacher Leaders
- Cisco Learning Institute’s National Mathematics Specialist Project
- AMTE working group
The Ohio State University
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Thank You!
MCP Coaching Activities

• Provide full-time, on-site, classroom-embedded professional development for classroom teachers.
• Assist with student diagnostic tests and interviews.
• Organize and analyze student assessment data.
• Work with building administration to establish building goals based on student data.
• Work with teachers individually and in grade level groups to develop instruction based on collected data.
• Team plan instruction and assessment based on student learning.
• Team teach with teachers.
• Document work performed.