Dr. Patti Brosnan and Dr. Diana Erchick
Directors

http://www.mcp-coaching.osu.edu
Mathematics Specialists Choosing to Coach: Using the MCP Model

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Symposium on Preparing P6 Mathematics Specialists and Coaches

May 17 – 19, 2009
Columbus Ohio
Funded by a CISCO Learning Institute Grant to the State of Ohio
MCP Mathematics Coaching Critical Features

- Full-time, classroom-embedded professional development for all mathematics teachers, one coach per building
- Work with teachers intensively - daily with 3-4 teachers for 6 weeks, and then move on to another 3-4 teachers
- Support teachers in learning mathematics content, pedagogy, and assessment strategies to meet the students’ diverse needs
- Team plan, team teach, debrief, re-plan, to create a data-based and student responsive pedagogy
- Honor confidentiality of all teacher and student data
## A “Day-In-The-Life” of a MCP Coach

<table>
<thead>
<tr>
<th>Period</th>
<th>Monday 12/15</th>
<th>Tuesday 12/16</th>
<th>Wednesday 12/17</th>
<th>Thursday 12/18</th>
<th>Friday 12/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before School</td>
<td>SWEA/ DSC mtg</td>
<td>Kennedy 7th Rm 117</td>
<td>Kennedy 7th Rm 117</td>
<td>COS Planning</td>
<td>Kennedy 7th Rm 117</td>
</tr>
<tr>
<td>1st Period</td>
<td>Kennedy 7th Rm 117</td>
<td>Kennedy 7th Rm 117</td>
<td>Kennedy 7th Rm 117</td>
<td>Stiles Family Ctr</td>
<td>Anderson 7th Rm 207</td>
</tr>
<tr>
<td>2nd Period</td>
<td>Anderson 7th Rm 207</td>
<td>Anderson 7th Rm 207</td>
<td>Kennedy 8th Rm 117</td>
<td>Stiles Family Ctr</td>
<td>Anderson 7th Rm 207</td>
</tr>
<tr>
<td>3rd Period</td>
<td>Plan/reflect</td>
<td>Plan/reflect</td>
<td>Plan/reflect</td>
<td>Plan/reflect</td>
<td>Plan/reflect</td>
</tr>
<tr>
<td>4th Period</td>
<td>Geiger 8th Rm 213</td>
<td>Geiger 8th Rm 213</td>
<td>Kennedy 8th Rm 117</td>
<td>Geiger 8th Rm 213</td>
<td></td>
</tr>
</tbody>
</table>

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Mathematics Coaching Program
A “Day-In-The-Life” of a MCP Coach

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<tr>
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<th>Thursday 12/18</th>
<th>Friday 12/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th Period</td>
<td>Materials Collection</td>
<td>Plan/reflect Kennedy</td>
<td>OSU-open Problems</td>
<td>Stiles Family Ctr</td>
<td>OSU-open Problems</td>
</tr>
<tr>
<td>6th Period</td>
<td>Data collect/revision</td>
<td>Data collect/revision</td>
<td>Data collect/revision</td>
<td>Data collect/revision</td>
<td>Data collect/revision</td>
</tr>
<tr>
<td>7th Period</td>
<td>Davis 8th Rm 213 inclusion</td>
<td>Davis 8th Rm 213 inclusion</td>
<td>Davis 8th Rm 213 inclusion</td>
<td>School PD activities</td>
<td>Davis 8th Rm 213 inclusion</td>
</tr>
<tr>
<td>After School</td>
<td>Grading Com 4:30-6</td>
<td>Dentist 4:15 Band 7:00</td>
<td>5:30 Swim meet</td>
<td>4:15</td>
<td></td>
</tr>
</tbody>
</table>
# How MCP Coaches Spend Their Time

## In a Typical Week

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>Direct work with the teacher, in the classroom</td>
</tr>
<tr>
<td>1/5</td>
<td>Working with data (teacher data, student achievement tests, student open problem solving analysis)</td>
</tr>
<tr>
<td>About 1/6</td>
<td>Reflection and planning</td>
</tr>
<tr>
<td>About 1/6</td>
<td>Building level Professional development and other school activities (committees, community relations, etc.)</td>
</tr>
</tbody>
</table>

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Preparing for the Coaching Process

Coaches conduct analyses of:

- **Teacher Interest Inventory** - informs coach of teacher development experiences and interest in participation
- **Teacher LAMP responses** - informs coach of teacher knowledge and understanding of content and pedagogy
- **Student test scores** - informs coach of classroom context

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## Working with Individual Teachers

<table>
<thead>
<tr>
<th>Activity</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoring OATs together, teachers:</td>
<td>• Learn about student learning</td>
</tr>
<tr>
<td></td>
<td>• Learn mathematics for teaching</td>
</tr>
<tr>
<td></td>
<td>• Learn analysis with MCP data bases</td>
</tr>
<tr>
<td>Analyzing MCP Problem Sets, teachers:</td>
<td>• Learn about mathematical processes</td>
</tr>
<tr>
<td></td>
<td>• Analyze student changes over time</td>
</tr>
<tr>
<td>Co-Planning/Co-Teach, debrief: teachers</td>
<td>• Learn pedagogy</td>
</tr>
<tr>
<td></td>
<td>• Learn to apply results of analysis of student data to instructional decisions</td>
</tr>
<tr>
<td>Evidence of interactions</td>
<td>• Scenarios</td>
</tr>
<tr>
<td></td>
<td>• MCP Coach Reports</td>
</tr>
</tbody>
</table>
Inside the Classroom

Teachers use the MCP Evidence Tracker to focus observation on student learning.

Teachers co-plan, co-teach and debrief with coaches on implementing standards, student responsive pedagogy, integrated conceptual and procedural content, and mathematical processes.

Teachers learn how students think and communicate thinking, and how they can use that knowledge in instruction.

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Beyond the Classroom: MCP Coaches In Leadership Roles

- Grade level meetings
- Whole staff professional development sessions
- Textbook adoption and curriculum alignment support
- Responses to school board inquiries
- Union liaison
- Mentoring new coaches

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Mathematics Coaching Program

Results Through 2008
Population Pool

- Ohio Department of Education provided list of eligible schools for additional Title funding.
  - School Improvement Status
  - Title I Served
- Schools Self-Selected in each Group
  - MCP Coached
  - Literacy Coached
  - Other [Non-Coached]
**MCP Numbers**

- **Number of Schools:** 103
- **Number of Coaches:** 95
- **Number of Teachers:**
  - Grades K-6: ~2,060
  - Grades 3-6: ~1,030
- **Number of Students:**
  - Grades K-6: ~51,500
  - Grades K-3: ~25,750
3rd Grade Mathematics
Ohio Achievement Test Results

Percentage at or above Proficient

- 2004-05: Non-Coached 41, Coached 64
- 2005-06: Non-Coached 41, Coached 66
- 2006-07: Non-Coached 61, Coached 82
- 2007-08: Non-Coached 50, Coached 73

Non-Coached
Coached
4th Grade Mathematics Ohio Achievement Test Results

Percentage at or above Proficient

Year
2004-05
2005-06
2006-07
2007-08

Non-Coached
38
44
46
48

Coached
51
65
68
69

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Mathematics Coaching Program
5th Grade Mathematics
Ohio Achievement Test Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-Coached</th>
<th>Coached</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>23</td>
<td>49</td>
</tr>
<tr>
<td>2006-07</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>2007-08</td>
<td>26</td>
<td>51</td>
</tr>
</tbody>
</table>

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Mathematics Coaching Program
6th Grade Mathematics
Ohio Achievement Test Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-Coached</th>
<th>Coached</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>31%</td>
<td>47%</td>
</tr>
<tr>
<td>2005-06</td>
<td>31%</td>
<td>63%</td>
</tr>
<tr>
<td>2006-07</td>
<td>38%</td>
<td>66%</td>
</tr>
<tr>
<td>2007-08</td>
<td>37%</td>
<td>66%</td>
</tr>
</tbody>
</table>

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Mathematics Coaching Program
3rd Grade Results by Economic Status

Percentage at or above Proficient

- Non-Coached DisAd
- Coached DisAd
- Non-Coached NonDis
- Coached NonDis

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Mathematics Coaching Program
Mathematics Scores
2006-2007

Percentage at or above Proficient

<table>
<thead>
<tr>
<th>Grade</th>
<th>Non-Coached</th>
<th>Literacy Coached</th>
<th>MCP Coached</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 3</td>
<td>61</td>
<td>67</td>
<td>78</td>
</tr>
<tr>
<td>Grade 4</td>
<td>46</td>
<td>55</td>
<td>63</td>
</tr>
<tr>
<td>Grade 5</td>
<td>29</td>
<td>36</td>
<td>46</td>
</tr>
<tr>
<td>Grade 6</td>
<td>37</td>
<td>50</td>
<td>69</td>
</tr>
</tbody>
</table>

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Mathematics Coaching Program
Reading & Writing Scores
2006-2007

Percentage at or above Proficient

Grade 3 | Grade 4 | Grade 4 W | Grade 5 | Grade 6
---|---|---|---|---
Non-Coached | Literacy Coached | MCP Coached
52 | 51 | 59 | 62 | 68 | 72
61 | 59 | 67 | 62 | 68 | 72
70 | 68 | 72 | 51 | 55 | 75

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MCP Coach’s Are Supported By…

- The MCP Team, in monthly Professional Development sessions
- MCP Facilitators, in local, small group sessions and with individualized assistance
- Each other in MCP Facilitator groups
- Administrator support
- Regional State Support Personnel
- MCP/ODE Assurances
- The ODE and it’s infrastructure …
Thank you!