Keeping the Focus on Social Justice in a K-6 Mathematics Coaching Program

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The Ohio State University Mathematics Coaching Program (MCP)
MCP Goals and Commitments: Connecting to Social Justice

- Develop “mathematical voice” (Erchick, 2001; 2002)
- Develop awareness and strengthening of agency
- Use an informed mathematical voice and agency to make the best decisions for the context
- Work toward some answers, for all of us, to the question of practice: “How can we teach for social justice?” (Tyson and Park, 2006)
Today’s Session

• Patti Brosnan
  – About the MCP: Context and Perspectives
• Melva Grant
  – Power Dynamics in Coaching and MCP Classrooms
• Donna Farland
  – Student Dispositions in MCP Schools
• Diana Erchick & Cynthia Tyson
  – Teaching Social Justice in the MCP
• Lisa Poling
  – Reflections upon Mathematics and Social Justice Pedagogy in the MCP
The Mathematics Coaching Program
(Patti Brosnan)

• Evolution of our Perspective.
• 34 Low-Performing Elementary Schools.
  – 34 coaches
  – 500 teachers
  – 12,500 students
• Students from urban and rural communities.
• Disproportionate numbers of minorities, low SES.
Social Justice Presence

MCP Conceptual Framework

Content knowledge: Limited to rigorous

Societal norms: Cultural ignorance to cultural awareness

Classroom norms: Externalized authority to shared authority

Equity, Diversity & Social Justice: Umbrella focus to individual focus

Student-centered mathematics

Elements of Mathematical content

Pedagogical Elements

Processes:
Static application to dynamic integration

Classroom interactions: teacher-centered to student-centered

Task selection:
Rigid procedural focus to richly connected and integrated conceptual/procedural focus

Assessment:
Judgmental focus to informative focus

The Ohio State University Mathematics Coaching Program (MCP)
The MCP Structural Model

Technical Assistance Team:
Project Directors, Facilitators and Support Personnel

Coach (district hire) - School - Teachers - Students

Coach (district hire) - School - Teachers - Students

Coach (district hire) - School - Teachers - Students

The Ohio State University
Mathematics Coaching Program (MCP)
Mathematics Achievement Test Results

The Ohio State University
Mathematics Coaching Program (MCP)
Mathematics Coaching & Power Dynamics (Melva Grant)

Research question:
• Within an MCP coached classroom, what is the nature of power related to mathematics teaching and learning?

Rationale & Framework:
• Teaching and learning within classrooms are full of teacher-student interactions that are controlled by teachers
• Coaches PD focused on MCP teaching philosophy
• Coaches work done well influences mathematics teaching, learning, and classroom environment
Preliminary Findings

Locations of power related to coaching:

1. Planning for Instruction
2. Instructional Strategies
3. Classroom Culture

In general, teachers, influenced by coaches, relinquished power (authority) and students gained power (autonomy and responsibility).
Implications & Questions

• MCP coaching may encourage power shifts related to mathematics teaching and learning, are these changes sustainable beyond MCP?

• How might a shift in the power dynamics, from teacher to student, related to mathematics teaching and learning affect the opportunity gap for underserved populations?
Identifying the Relationship between Social Justice & Student Disposition
(Donna Farland)

The role of the classroom teacher

The process of mathematics

Students’ disposition

The Ohio State University
Mathematics Coaching Program (MCP)
Focus of Research Project

• **Question**: How do students in MCP classrooms perceive mathematics class and or/ mathematics in their environment?

• **Methodology**: Students were given one or more opportunities to represent their perception of mathematics or math in the context of the classroom.
Results

• Selected findings:
  – 99% of the students associated mathematics as ‘getting the right answer’
  – 95% of the drawings pictured addition
  – 85% associated doing math problem sets from a textbook

• Student drawings can be a useful tool for mathematics coaches’ planning for professional development and for teachers’ planning and instruction in a data-based pedagogy.
Teaching Social Justice by the Numbers:
Toward a Pedagogy of Social Justice in the MCP
(Diana Erchick & Cynthia Tyson)

• Research question:
  – What is the relationship between the curriculum as delivered to coaches in the MCP and coach understanding of and commitment to social justice?

• Methodology:
  – Participants: 12 experienced MCP coaches
  – Data sources and analysis: Analysis of curriculum, session discussions; writing prompt responses; and reflective planning discussions.
Curriculum and Methodology

• **Getting Started:** Pre-study analysis

• **The Nature of the Journey:** Implemented curriculum

• **Data Collection:** Review of curriculum, observation documentation, and participant contributions

• **Analysis:** On-going, iterative process with developing curriculum and coach growth; External observation and evaluation
Preliminary Results

• Types of awareness
• Wants and needs
• Spheres of influence
• (Re)developing curriculum
• Connections to the MCP
The Bridge That Connects The MCP to a Social Justice Agenda (Lisa Poling)

Recognition that...

• knowledge is socially and politically constructed.

• critical thinkers are making the decisions.

• critical thinking is related to critical action.
Transformation from Private to Political

Habit of the Mind:

• Internalization

• Reflecting

• Conversations with other coaches and eventually their peers

• Making a commitment
Mathematics Education…

a Political Act

Mathematics as a Gate Keeper:

• Citizenship
• Democracy
• Social Context
• Pedagogy

“When a student is ready, a teacher will appear”

African Proverb
Open for Discussion!

• What questions does this work raise?
• What discussions do we need to have about this work - both in the MCP and in the broader mathematics education community?
• What more does this work need to accomplish?
Thank You!!
References

