



KENTUCKY CENTER FOR MATHEMATICS

Good News from KCM Coaching 2008-2009

A Coaching Paradigm for Clay County Schools

By Jennifer McDaniel, Senior Math Coach



Three years ago, Clay County District Supervisor, Hope Smith, jumped at the chance to recruit a person to serve as the new District Math Coach. She was excited to realize that the applicants selected would receive special training in Cognitive Coachingsm and continued support through the Kentucky Center of Mathematics.

Clay County High School had just completed a Program Improvement Review through the Appalachian Math and Science Program (AMSP) revealing that there was much to be done in each standard in order to improve instruction and student achievement in mathematics.

While the elementary schools were showing acceptable math scores, the middle and high school scores were stagnant. According to the review, teachers were not receiving content specific professional development, they were also lacking in instructional strategies. Hope's vision became a reality when high school teacher, Jennifer McDaniel applied for the new initiative.

According to Jennifer, the past two years of training have been quite effective and powerful: "It has changed my conversations, my teaching, my perspectives, and my life in positive and worthwhile ways. I no longer waste energy on events that I have no control over and focus on resolving problems and improving math instruction by feeling empowered, empowering others, and working together to achieve understood and common goals."

Today, as a senior coach, Jennifer can reflect upon the observed changes district wide: "I have had a tremendous amount of support from the District Administrators in carrying out my responsibilities as a coach".

Working together, improvements have been noted in teacher's attitudes towards mathematics, teaching practices, and support and local training for mathematics teachers within the district. The initiatives revolve around the six principles for school mathematics as outlined by the National Council of Teachers of Mathematics (NCTM)

Equity

All middle and high school teachers have access to graphing calculators

Curriculum

*Success Maker Math
Destination Math
Study Island
Aligned Curriculum (PEP Grant)
Vocabulary*

Teaching

*Content specific PD opportunities
Conferences and workshops
(KTLC, KCM state and local,
NCTM)
Leadership Team (AMSP)
Coaching
Interventions
MSLN Networks (Four participants)
Differentiated Instruction Training*

Learning

*Connected Math Activities
Communication among teachers to
share activities
PEP Grant*

Multiple representations for problem solving

Assessment

*Formative Assessment Training
Common Assessments
Open Response Banks
DOK Notebooks
MPIR High School and Middle School*

Technology

*Graphing Calculators
SMART Boards for all math teachers
Navigator Systems (one high school, one middle school)
Document Camera
Motion Detectors (Pep Grant)*

According to Smith, the coaching model itself fits into the school's broader improvement plan for mathematics in that it builds shared capacity among teachers and administrators and provides the means for true job embedded professional development. Mathematics teachers have had opportunities to improve their content knowledge and teachers are practicing effective strategies with meaningful feedback. Benefits to our district include:

School Culture

- Noticeable change in teacher and student attitudes toward Mathematics (positive)
- Positive change in teachers' perceptions of professional development

- Increased attendance in meaningful & content specific PD.

Positive change in teacher practices

- More effective instructional strategies
- Increased use of technology (smartboards, TI Navigator)
- Increased use of math manipulatives

Coaching as Teacher Support

- Strengthened support for teachers, both experienced and inexperienced
- Developed a learning community of math teachers who have a common language around teaching and learning

These changes are the result of a collaborative effort that involves not just changing practices, but beliefs and atti-

tudes. This is when the Cognitive Coachingsm training is most powerful.

According to high school teacher, Mitch Hawkins,

“The training that I have received from our district coach has helped to turn my teaching around. I have gone from a ‘drill and kill’ method of teaching where I was doing most of the work to a more problem oriented, student centered approach. My students are more involved and take more responsibility for their own learning than they did in the past. Recent improvements in test scores show that the students are learning more at deeper levels than before.”

Attitudes are changing in the district. **According to teacher, Rodney Lipps,**

“Just having someone to share ideas with and discuss my strengths and weaknesses with is a big asset to our

math department.”

Teachers are challenging themselves to set new goals and are excited about not only the improvements in test scores, but the changes within themselves, **as teacher Martina Bray says,**

“Motivation, motivation, motivation! I strongly believe that the coaching program has motivated my students in the classroom as well as myself.”

Hope Smith retired at the end of the 07-08 school year, but the coaching program she believed in is now self sustaining and thriving within the district. Now, each school employs an instructional coach working collectively with the district wide reading and mathematics coach offering support teachers in the areas of problem solving, planning, and reflecting.

