

EMPOWERING TEACHERS TO
BECOME MATHEMATICS COACHES
TO SUPPORT TEACHERS

Overview

- Teachers will be retained if they feel a sense of community
- Coaches can play a key role in developing and supporting that sense of community by supporting teachers as:
 - A coach
 - A mentor
 - A fellow colleague
- PD for coaches enhances their effectiveness

Panel Members

- Pam Hutchison, Director, UC Davis Math Project
- Clay Dagler, Teacher, Luther Burbank HS
- Susan Haren, Sam Brannan MS
- Marla Tjoelker, Heron MS
- Kevin Burrill, Einstein MS

Background

 Teachers leaders (coaching cadre) were part of a multi-year grant focused on teacher retention

Coaching opportunity was offered in the 3rd year of the grant

- Participated in 2-week mathematics institutes each of the previous 3 summers
- Goals of summer institutes
 - Deepen participant's content and pedagogical knowledge
 - Examine the development of conceptual understanding and explore strategies and techniques for teaching
 - Fractions
 - Integers
 - Exponents
 - Connecting algebra to arithmetic
 - Developing mathematical thinking and reasoning
 - Examine effective questioning strategies
 - Explore strategies for increasing student engagement

- Participated in Saturday Seminars (5 each year)
 - Continued to build on and extend work from summer
 - Focused on questioning strategies
 - Increase student involvement
 - Spread understanding
 - Watched and analyzed videos of classroom practice
 - Discussed student-teacher interactions
 - Discussed teacher choices for instructional decisions
 - Analyzed student work
 - Networked with other professionals

- Year 1 Participated Collaborative Lesson Design (site based teams)
 - Examined student assessments and identified common misconceptions;
 - Identified best places in curriculum to intervene (in advance)
 - Planned lessons for this purpose using strategies and techniques learned as part of PD

- □ Year 2
 - Continued collaborative lesson design
 - Participated in a full Lesson Study cycle
 - Participate in a Coaching Cycle
 - Pre-Conference
 - Classroom Observation
 - Post-Conference and Coaching Notes

Coaching Cadre

- Selected from grant teachers
 - Had extensive PD in mathematics content and pedagogy
 - Had been coached before and know what coaching felt like
- Identified by leadership team as potential teacher leaders and coaches

Professional Development

- Meetings 4 hours each plus homework
 - 3 before coaching opportunities and 1 final meeting
 - Discussed scenarios What would you do if.....?
 - In writing
 - Discuss with partner
 - Discuss whole group
 - Discussed coaching attributes and philosophies
 - Build relationship
 - Look for positive and build on positive
 - Look for something that will help them be a better teacher tomorrow What if you....?

Professional Development

- Meetings
 - Discussed "tweeking" practices
 - Have a neutral ear
 - Take teachers where they are
 - I like....., I like....., What if.....?
 - Assist teachers in considering different next step
 - Help teachers over "hurdles"

Professional Development

- Meetings
 - Watched and analyzed videos
 - Identify positives
 - Look for something that will help them be a better teacher tomorrow
 - Make a plan: "How can I build on a positive to lead the teachers to address a concern I have?"
 - Discussed issues observed, possible next steps, and how to move a teacher during the debriefing conservation

1st Video Used at Coaching Cadre

1st Video: teachertube.com/viewVideo.php?video id=123118&title=171 P 2 2 Exponents M2U00724

Facilitators Notes for Coaching Cadre on Jan. 11, 2010 when using Exponents Lesson Video from teacher tube:

Watch the first 10 minutes of the video once:

Folks will have strong reactions and may judge him a bunch. This will be a good thing to talk about, as that is part of what they have to learn to check at the door when they visit. They have to come in thinking they are a partner with this fellow, working to help him develop his craft. So find where he is at, figure out a good next place to go, and have that discussion.

Folks could take 1 minute to brainstorm things they'd like to talk about on their papers.

New Prompt for 2nd Viewing:

Folks could consider how to build on what this teacher knows to move him to what they think the best next step for him would be, (looking at the first list of all the things they'd like to talk to him about and selecting which to go for by also looking at the list of what they can pr him about—that would be moving from his have to his want.)

During 2^{nd} Viewing, note what they could pr him about

Post 2nd Viewing Discussion:

Partner talk: Folks could consider which they think they should start with

Whole group discussion

Partner talk: Folks could consider how to build on what this teacher knows to move him to what they think the best next step for him would be, (looking at the first list of all the things they'd like to talk to him about and selecting which to go for by also looking at the list of what they can pr him about—that would be moving from his have to his want.)

Whole group discussion

Other Videos Used at Coaching Cadre

- From <u>Learning and Teaching of Linear Function</u> by N. Seago, J. Mumme and N. Brancha: (I have renamed these videos on my computer so you may have to watch them to find the right one.)
 - Teacher is Kirk teaching high school, Daniel and James clip
 - Teacher is Kirk, still teaching dots lessons, going backwards by asking them how many minutes if there were 25 dots
 - Regina's Logo
- Connecting Mathematical Ideas, by Cathy Humphries and Jo Boaler,
 - Pool border problem clip
 - Surface area of a cylinder clip
 - Classroom participation
- From Content Focused Coaching by L. West used the video clip of the 4th grade teacher holding a class discussion about fractions

Video Notes from agendas

We tried pasting in the notes from the agenda for the the Learning and Teaching Linear Functions Videos, and for the Connecting Mathematical Ideas Videos, but it wouldn't fit.

We'll email that as a word document, and see if Tsai-Tsai can make that available through the website as well.

On the Job Training – 2 rounds

- Paired 3 coach-trainees with experienced coach
 - Attend pre-conference with teacher
 - Debrief/Discuss:
 - What do we watch for?
 - How should we record?
 - What are your initial thoughts about what might happen?
 - Is there anything we know about this person already?

On the Job Training – 2 rounds

- Paired 3 coach-trainees with experienced coach
 - Classroom Observation
 - Discuss/Debrief:
 - What were the positives?
 - Based on what the teacher wanted to focus on, what is the evidence?
 - What would make them a better or stronger teacher?
 - Plan post-conference:
 - What positives do we want to share?
 - How do we move from positives towards growth?

On the Job Training – 2 rounds

- Paired 3 coach-trainees with experienced coach
 - Attend post-conference/debrief with teacher
 - Discuss/Debrief:
 - What do you think went well?
 - Where was the teacher comfortable?
 - How did the teacher respond?
 - Any questions about why we said something or how we said something?
 - Reflect on the experience.

Practice Coaching – 2 rounds

Set up a coaching session with someone at their site

Once the session was complete, they called one of the experienced coaches to debrief.

Questions?

- Panel is going to answer some questions.
- If you have additional questions, there are cards on the tables.
- We'll take questions from tables after panelists answer initial questions.

What made you decide to participate in this process?

Part of the model were the after school meetings where we discussed scenarios and watched video tapes. Could you talk about how these experiences supported your development as a mathematics coach?

□ Talk about your experiences and growth during the on-the-job-training sessions.

Once you did the coaching on your own, what were the advantages of having an experienced coach to support you as you reflected about your coaching experience?

Of the primary pieces of the training model (Questions 2,3, and 4 above), did you feel any were more important than others?

■ What was most critical to you?

- Describe the benefits of the program
 - How did it benefit you as a classroom teacher?
 - How did it benefit you as a coach or a colleague or department leader

 Describe any opportunities or challenges you have faced while being a coach or teacher leader (either formally or informally) in your school or district.

As we talk about the role of a coach or mentor in supporting new or struggling teachers, how can this role increase the **retention** of teachers?

Are there any anecdotes about things that have happened since the coaching cadre?

Questions?

Are there any questions that you would like to ask the panelists?

Contact info

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