IMPACT OF A STATE-WIDE PROFESSIONAL DEVELOPMENT MODEL FOR FORMATIVE ASSESSMENT

Vancouver, BC. April 16, 2012
Presentation Overview

- Formative Assessment in Michigan (Vincent Dean, MDE)
- Overview of the FAME Research Agenda (Amelia Wenk Gotwals, MSU)
- The Influence of Shared Expertise on Learning Team Discussions (John Lane, MSU)
- Nature of the Activity: Enabling Factors for Formative Assessment Learning (Dante Cisterna, MSU)
- The Influence of Coaches on Learning Team Discussion (Tara Kintz, MSU)
- The Impact of FAME on Teachers’ Formative Assessment Knowledge and Practices (Amelia Wenk Gotwals, MSU)
- FAME for the Future (Edward Roeber, MSU)
OVERVIEW OF THE FAME RESEARCH AGENDA
Model for Studying FAME PD

Professional Development:
Locally controlled, diverse learning teams focused on formative-assessment practices

Increased teacher knowledge, beliefs, attitudes, and skills in formative assessment

Change in practice, specifically incorporating more formative-assessment practices

Improved Student learning

Local Context: Learning team characteristics, local school and district characteristics, school leadership, policy environment
Why Formative Assessment?

- High leverage/core practice (Ball et al, 2009; Grossman, 2012)

- However, teachers struggle with:
  - The idea of “assessment” (e.g., Otero, 2006; Shepard, 2000; Webb & Jones, 2009)
  - Formulating “good” questions (e.g., Mergendoller, Marchman, Mitman & Packer, 1988)
  - “Noticing” the nuances of students’ ideas (e.g., van Es & Sherin, 2008)
  - Adjusting instruction based on students’ ideas (e.g., Feldman & Capobianco, 2008; Heritage, 2008; Ruiz-Primo & Furtak, 2007)

- PD has been shown to help teachers improve their formative-assessment practices (e.g., Popham, 2008; Schneider & Randel, 2009; Wylie, Lyon & Goe, 2009)
Effective PD:

- Focus on instruction and student outcomes (Newmann, King, & Youngs, 2004)

- Sustained over a long period

- Engage teachers in a community that supports learning and teaching (Darling-Hammond, 1997; Stoll, Bolam, McMahon, Wallace & Thomas, 2006; Wenger, 1998)

- Engage teachers in authentic problems of practice (Lave & Wenger, 1991; Webster-Wright, 2009; Wilson & Berne, 1999)
PLCs

- Shared teaching and learning goals
- Shared responsibilities for work
- Collaborative development of PCK
- Shared content and location focus? (Lee & Williams, 2006; Slavit et al, 2009)
- Led by experts? (Stein et al, 1999)

Borko, 2004; Grossman et al., 2001; Lachance & Confrey, 2003; Little, 2002
## Data Sources: Surveys (2010-11)

<table>
<thead>
<tr>
<th></th>
<th>Fall Survey</th>
<th>Winter Survey</th>
<th>Spring Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose(s)</strong></td>
<td>Diagnosis, setting baseline for pre-post analysis, guiding project design.</td>
<td>Evaluating process of implementation</td>
<td>Evaluation of the annual period and making suggestions for next year</td>
</tr>
<tr>
<td><strong>Respondents</strong></td>
<td>348 LTMs, 68 coaches</td>
<td>150 LTMs, 37 coaches</td>
<td>122 LTMs, 34 coaches</td>
</tr>
<tr>
<td><strong>Number of questions</strong></td>
<td>13 (LTMs), 18 (Coaches)</td>
<td>18 (LTMs), 21 (Coaches)</td>
<td>23 (LTMs), 17 (Coaches)</td>
</tr>
</tbody>
</table>
## Video Data: 6 Focal Learning Teams

<table>
<thead>
<tr>
<th>Learning Team</th>
<th>Coach Role</th>
<th>LT Make Up</th>
<th>Video Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Elementary principal</td>
<td>All ES teachers from same building</td>
<td>2 meetings (~1 hr each)</td>
</tr>
<tr>
<td>Fo</td>
<td>HS teacher &amp; Curriculum Coordinator</td>
<td>HS cross-disciplinary</td>
<td>3 meetings (~1 hr each) **5 classroom teachers</td>
</tr>
<tr>
<td>Fr</td>
<td>HS teacher</td>
<td>Vertical team – upper ES, MS &amp; HS</td>
<td>1 meeting (~1 hr)</td>
</tr>
<tr>
<td>G (3 teams)</td>
<td>Curriculum &amp; instructional coaches</td>
<td>ES, MS &amp; HS teams</td>
<td>2 meetings (1.5 hr whole group; ~30 minutes ind)</td>
</tr>
<tr>
<td>M</td>
<td>HS teacher</td>
<td>HS cross-disciplinary</td>
<td>2 meetings (1.5 hr + ~4 hrs)</td>
</tr>
<tr>
<td>WW</td>
<td>MS principal</td>
<td>2 ES teachers, 4 MS teachers</td>
<td>4 meetings (~1 hr each)</td>
</tr>
</tbody>
</table>
Analysis Techniques: Learning Teams

- Survey Data (Descriptive statistics)
- Video Data → Recursive Coding
  - Type of activity (e.g., sharing a tool; analyzing student work)
  - Participants (coach, learning team members)
  - Questioning (gathering info, clarifying, probing, other)
  - Feedback (paraphrase, evaluative, move practice forward, redirect conversation)
  - Depth of Discussion (1-way sharing; parallel sharing; linking ideas/examples; examination of WHY)
- Cross-Case analysis (Yin, 2009)
Classroom Video Coding

- Eliciting student evidence
- Use of learning targets
- Formative Strategies
  - Activating prior knowledge
  - Goal setting
  - Feedback use
  - Self assessment
  - Peer assessment
- Formative tools
- Link to learning team meetings
THE INFLUENCE OF SHARED EXPERTISE ON LEARNING TEAM DISCUSSIONS

John Lane
Conceptual Framework

Depth of Discussion

- Nature of the Activity
- Shared Knowledge or Expertise
- Role of the Coach
### Necessary versus Sufficient (Ragin, 1999)

<table>
<thead>
<tr>
<th></th>
<th>Cause Absent</th>
<th>Cause Present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome Present</strong></td>
<td>1. Key cell for assessing necessity; cell should be empty (or relatively empty)</td>
<td>2. Cases in this cell establish the link between the cause and the outcome</td>
</tr>
<tr>
<td><strong>Outcome Absent</strong></td>
<td>3. Cell not directly relevant to the assessment of either necessity or sufficiency</td>
<td>4. Key cell for establishing sufficiency; cell should be empty (or relatively empty)</td>
</tr>
</tbody>
</table>
Significant Learning Team Characteristics

- **Shared Expertise**
  - Shared knowledge of students
  - Shared knowledge of content
  - Shared knowledge of strategies
Learning Team Members

![Bar Chart]

- Classroom Teacher: 350
- Building Administrator: 50
- Department Chair: 20
- District Administrator: 15
- Other: 10
### Team Composition

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Elementary</td>
<td>21%</td>
</tr>
<tr>
<td>All Middle School</td>
<td>14%</td>
</tr>
<tr>
<td>All High School</td>
<td>16%</td>
</tr>
<tr>
<td>Multiple Levels</td>
<td>33%</td>
</tr>
<tr>
<td>Unknown</td>
<td>17%</td>
</tr>
</tbody>
</table>

### Administrator Participating

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40%</td>
</tr>
<tr>
<td>No</td>
<td>40%</td>
</tr>
<tr>
<td>Unsure</td>
<td>20%</td>
</tr>
</tbody>
</table>

### Single Content Focus

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (LA, math, science, SS, art/music)</td>
<td>17%</td>
</tr>
<tr>
<td>No</td>
<td>83%</td>
</tr>
</tbody>
</table>

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**Fall & Winter Survey Results**
## Focal Learning Teams

<table>
<thead>
<tr>
<th>Learning Team B</th>
<th>Learning Team FO</th>
<th>Learning Team FR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Site Elementary</td>
<td>H.S. Multiple-Subject team</td>
<td>Multi-grade, subject &amp; level</td>
</tr>
<tr>
<td>Teacher Team</td>
<td>Coach: Teacher and Coordinator</td>
<td>Coach: High School teacher</td>
</tr>
<tr>
<td>Coach: Site Principal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Team G</th>
<th>Learning Team MS</th>
<th>Learning Team WW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Teams: Elementary,</td>
<td>H.S. Multiple-Subject team</td>
<td>Elementary, M.S. Multi-Subject, Multi-Site</td>
</tr>
<tr>
<td>M.S., and H.S.</td>
<td>Coach: H.S. Teacher</td>
<td>Coach: M.S. principal</td>
</tr>
<tr>
<td>Coaches: Curriculum and Instruction Coaches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Depth of Discussion by Team

- One-way sharing
- Parallel sharing
- Linking ideas and examples
- Linking ideas with examination of why's

Bar chart showing the percentage of total meeting time spent on each category.
Importance of Content
Implications

- Shared content expertise influenced teacher interactions and allowed for deeper discussions.
- Shared experience with types of students allowed for connections among teachers about promoting student success.
- Multi-level, multiple-subject team structure encouraged parallel sharing about classroom experiences.
NATURE OF THE ACTIVITY: ENABLING FACTORS FOR FORMATIVE-ASSESSMENT LEARNING
Overview

- What did learning teams focus on overall?
- How were activities coded?
- What were our focal learning teams emphases?
- Examples of activities
- Implications for professional development
Overall Learning Team Meetings

Meetings

- 78% of LTMs reported meeting at least 5 times over the year and 43% of meetings took between 2-3 hours

<table>
<thead>
<tr>
<th>Focus areas</th>
<th>Areas perceived as beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>57%</td>
</tr>
<tr>
<td>Reflecting</td>
<td>67%</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>28%</td>
</tr>
<tr>
<td>Sharing</td>
<td>79%</td>
</tr>
<tr>
<td>Formative Assessment Tools and Strategies</td>
<td>87%</td>
</tr>
<tr>
<td>Resources</td>
<td>45%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
</tbody>
</table>

Focus areas for learning team meetings and perception of benefits for these areas (Data based on LTMs’ Winter and Spring Surveys)
Overall Learning Team Meetings

Types of Formative-Assessment Activities in LT meetings
(Source: Coach Spring survey; respondents could check more than one option)

- Formative assessment tools
- Learning target use
- Providing descriptive feedback
- Using self-assessment
- Student evidence
- Using feedback to guide instruction
- Using peer-assessment
- Activating prior knowledge
- Instructional decisions
- Goal setting
- Planning
- Student and teacher analysis

Proportion of learning teams

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Activity Codes for Team Meetings

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sharing an example or tool from practice (stories of personal experiences, observations, or student work).</td>
</tr>
<tr>
<td>2</td>
<td>Analyzing &amp; discussing examples of samples of student work or videos of classroom teaching.</td>
</tr>
<tr>
<td>3</td>
<td>Reading, examining, discussing information from a book or other source (e.g., video, website).</td>
</tr>
<tr>
<td>4</td>
<td>Presentation of information.</td>
</tr>
<tr>
<td>5</td>
<td>Discussion of external constraints or classroom-based obstacles.</td>
</tr>
<tr>
<td>6</td>
<td>Discussion of potential benefits of uses of Formative Assessment for student learning, teacher collaboration, school-wide reform.</td>
</tr>
<tr>
<td>7</td>
<td>Discussion of unrelated topics.</td>
</tr>
<tr>
<td>8</td>
<td>Guiding Discussion (e.g., setting the stage, giving directions, reviewing agenda, asking guiding questions, facilitating transitions).</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
</tr>
</tbody>
</table>
Focal learning teams activities
Activity Codes for Team Meetings

- General trends
  - *Sharing examples or tools from practice* was the most frequent activity in four LTs.
  - One LTs prioritized examining information from a resource (55% of the time).
  - One LTs prioritized presentation of information (35% of meeting time).
  - Two LTs spent more than 20% of the meeting time in activities for guiding discussions.
Example: Sharing Practices
Example: Discussion of Questioning
Change in activities
Example: Team M

- Meeting 1
- Meeting 2
Implications for professional development

- Diversity of activities: according to each team’s needs and characteristics.
- Challenge for LTs: moving from activities mainly based on sharing practices or learning about formative assessment knowledge to activities that engage teachers in authentic problems of professional practice (Lave & Wenger, 1991; Webster-Wright, 2009; Wilson & Berne, 1999).
- Nature of activities is a necessary factor for enabling quality discussions (not the only one).
- Increased support to guide LTs to a culture of learning (Sadler, 1989, Black & Wiliam, 1998, Shepard, 2000).
THE INFLUENCE OF COACHES ON LEARNING TEAM DISCUSSION

Tara Kintz
With Appreciation to the MSU Educational Policy Center
Overview

- How does the role of the coach effect professional learning teams?
- Who are our coaches?
- Who are the coaches of the focal learning teams?
- How does the role of the coach influence:
  - Depth of Discussion
  - Questions
  - Feedback
- Coaching Examples
- Implications regarding the nature of shared knowledge
Theoretical Framework

- There is disagreement about the role of a coach and what constitutes a teacher learning community (Grossman, Wineburg, & Woolworth, 2001; Stein et al, 1999; Richmond & Manokore, 2011).
  - Expert vs. peer
  - Presenter vs. facilitator
- The model for FAME draws on the Cognitive Coaching™ model to train coaches to facilitate the work of learning teams.
  - Questioning and feedback
## Coach Information

<table>
<thead>
<tr>
<th>Position</th>
<th>% (Fall Survey; N=66)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Teacher</td>
<td>29%</td>
</tr>
<tr>
<td>Principal/Assistant</td>
<td>21%</td>
</tr>
<tr>
<td>Principal</td>
<td>28%</td>
</tr>
<tr>
<td>District Leader</td>
<td>20%</td>
</tr>
<tr>
<td>ISD Leader</td>
<td>2%</td>
</tr>
<tr>
<td>Retiree</td>
<td></td>
</tr>
</tbody>
</table>
## Focal Learning Team Coaches

<table>
<thead>
<tr>
<th>Learning Team</th>
<th>Coach Role</th>
<th>LT Make-up</th>
</tr>
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<tbody>
<tr>
<td>B</td>
<td>Elementary principal</td>
<td>All elementary teachers from the same building</td>
</tr>
<tr>
<td>FO</td>
<td>HS teacher and curriculum coordinator</td>
<td>High school cross-disciplines</td>
</tr>
<tr>
<td>FR</td>
<td>High School teacher</td>
<td>Vertical team: Upper elementary, middle school and high school</td>
</tr>
<tr>
<td>G (3 teams)</td>
<td>Curriculum and instruction coaches</td>
<td>1 elementary team, 1 middle school team, 1 high school team</td>
</tr>
<tr>
<td>M</td>
<td>High School Teach</td>
<td>High school cross-disciplines</td>
</tr>
<tr>
<td>WW</td>
<td>Middle school principal</td>
<td>2 Elementary and 4 Middle school teachers (same district)</td>
</tr>
</tbody>
</table>
Overall Questions for Teams

Number of questions/hour

- Gathering information question
- Clarifying question
- Probing/reflective question
- Other type of question
Comparison of Questions

Team M Increase in Questions

Team G Decrease in Questions

Number of questions/hour (Team MS)

Number of questions/hour (Team G)
Learning Team M Example
Learning Team G Example
Depth of Discussion Comparison

Team M Increase in Depth of Discussion

Team G Decrease in Depth of Discussion
Comparison of Feedback

Team M Increase in Feedback

Team G Decrease in Feedback

Feedback/hour (Team M)

Feedback/hour (Team G)
Implications

- The stance of the coach as a facilitator, as represented in Team M, was associated with:
  - Increased depth of discussion, increased questions, and increased feedback over the course of the meetings.

- The stance of the coach as an expert role, as represented in Team G, was associated with:
  - Less depth of discussion and decreased feedback over the course of meetings.
FAME TEACHERS’ FORMATIVE ASSESSMENT PRACTICES

Amelia Wenk Gotwals
Overview

- Impact of FAME on teachers’ perception of implementation
- Classroom enactment of formative-assessment practices
## Teacher Practice

<table>
<thead>
<tr>
<th>Type of Assessment</th>
<th>Fall survey (n=314)</th>
<th>Spring survey (n=103)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative assessment only</td>
<td>43%</td>
<td>11%</td>
</tr>
<tr>
<td>Formative assessment only</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Summative and formative assessment</td>
<td>7%</td>
<td>61%</td>
</tr>
<tr>
<td>Others (e.g. generic assessments)</td>
<td>31%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Perceptions of FAME model

- 79% LTMs reported that the FAME model was “effective” or “very effective”
- 85% LTMs reported the meetings impacted their use of formative-assessment practices
- 82% LTMs reported using new strategies or tools with their students (esp. learning targets, assessing prior knowledge, descriptive feedback, exit slips, learning logs)

Winter Survey, N=150
Degree of Success in Enacting FA

- Success in implementing formative-assessment practices
- Success in modification of classroom practices, based on the collaboration with LTMs
- Success in sharing learning targets in student-friendly language
- Success in providing descriptive feedback

Legend:
- Small
- Moderate
- Significant
Teachers in Fo Learning Team

- HS cross-disciplinary team with 2 coaches (teacher and curriculum coordinator)
- Video from 5 classroom teachers
Classroom Enactment: Learning Targets

- Sharing learning targets in “student friendly” language
  - Teacher planning
  - Student learning
- Focus of Fo learning team
Algebra 1 Class: Learning Targets
Spanish 1: Learning Targets
Learning Targets

- Both in student friendly language
- Spanish teacher explicitly linked the activities of the class to the targets and linked back to the targets throughout the class
Classroom Enactment: Student Evidence

- Student Evidence: “Develop and implement products, observations, and conferences as types of assessments that gather student evidence”
- 1:1 Student conferences
Algebra 1: Conferences
Senior English: Conferences
Implications

- Learning a new practice and then becoming effective in this practice takes time
- Need for models of what these practices look like
  - Practices intertwined with the content
- Future work on video of teachers’ classrooms
FAME FOR THE FUTURE

Edward Roeber
Overview

- Plans for 2012-13
- Review of the FAME Program – 2007-2012
- FAME Beyond 2013
Plans for 2012-13

- The MSU Research Team will continue to:
  - Record a small number of learning team meetings, to gauge changes in the nature of discussions (Yr 1, 2 & 3)
  - Record a small number of teachers using formative-assessment strategies in their classrooms, looking for changes in teaching practices
  - Survey and interview students
  - Survey all participants in the fall and spring
- Student achievement will be an even greater focus, as will be changes in teaching practices
Plans for 2012-13

- The MSU Research Team will also focus on:
  - The preparation of Year 1 Regional Leads
  - The work of Year 2 Regional Leads in rolling out FAME launches to Year 1 coaches and learning teams
  - The on-going support provided by the Regional Leads to coaches and learning teams in their region
  - The nature and types of support provided to year 2 and 3 teams continuing with the FAME program
Review of the FAME Program

- Because the FAME program is entering its 6th year, it is time to review it in order to enhance the program going forward.
- The Michigan Assessment Consortium may lead this effort for MDE.
- A small advisory committee, comprised of MDE staff, MSU researchers, and a subset of regional leads, coaches and learning teams members (and perhaps a student or two) will meet to review the FAME program.
Review of the FAME Program

- The review will examine the following:
  - The recruitment of Regional Leads, coaches and learning teams
  - The pre-launch activities
  - The Launch for year 1 teams
  - How structured the three-year FAME program should be
    - Materials provided to year 1 teams
    - Activities and support provided to year 2 & 3 teams
  - How training and materials could be enhanced
Review of the FAME Program

- How FAME could be spread to more regions of the state and to more districts and schools
- Plan for the receipt and use of the formative-assessment “tools” from the SMARTER Balanced Assessment Consortium by determining
  - Which resources to make available
  - How to make them available
  - How to prepare recipients in the use of the resources
Review of the FAME Program

- How to bring formative-assessment preparation to pre-service institutions:
  - University-based instruction on formative-assessment strategies and practices
  - Whether FAME learning teams could include other sorts of educator groups — e.g., interns (student teachers), their MSU field supervisors and mentor teachers

- How to obtain the policy and financial support to ensure a future for FAME and the work on improving educators’ assessment practices
FAME – Beyond 2013

- FAME comes home to Michigan
- Substantially increase participation in FAME
  - More Regional Leads
  - More teams
  - Broader state coverage
- Enhance the three-year program for coaches and learning teams
- Keep teams in the program for all three years
- Prepare for use of SBAC resources
FAME – Beyond 2013

- Work to incorporate pre-service formative-assessment work for future educators
- Obtain policy maker support for continued work on formative-assessment – in-service and pre-service
- Continue to conduct research on learning about formative-assessment practices, especially focused on impacts on teachers’ practices and students’ achievement