

IMPACT OF FAME PD ON THE FORMATIVE- ASSESSMENT KNOWLEDGE AND CLASSROOM PRACTICES OF LEARNING TEAM MEMBERS AND COACHES

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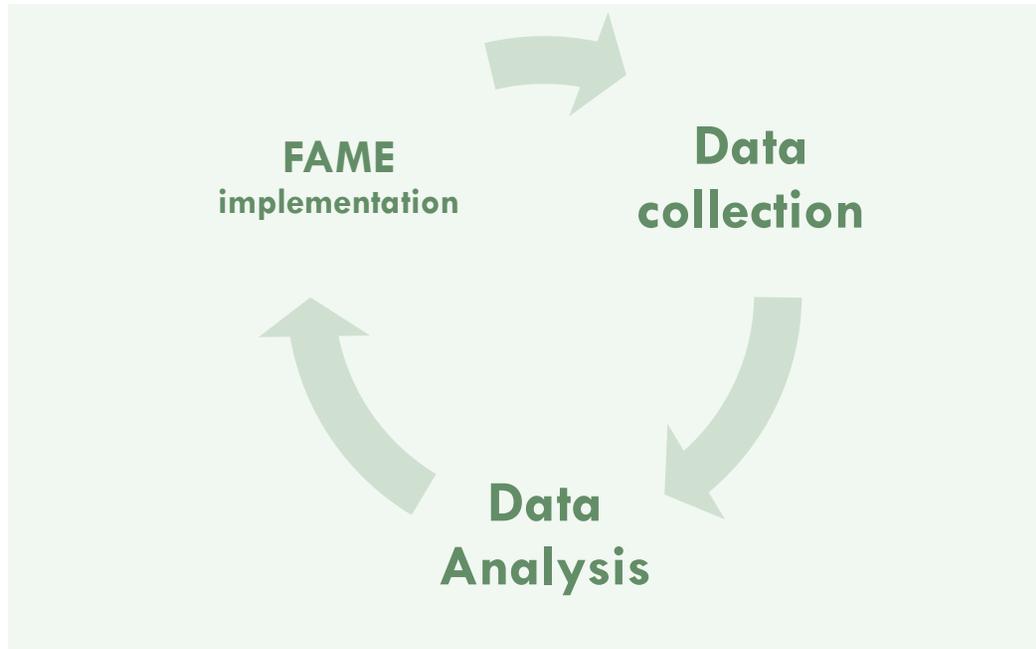
Overview

- Our research context
- Research questions
- Literature review
- The study and its characteristics
- Main findings
- Limitations of the study



Research Context

Iterative design-based research



2009-2010 process

- 1) Learning team impact
- 2) Participants' learning and implementation



Research questions

- 1) How do coaches' and learning team members' (LTMs) characteristics affect LTMs' implementation of formative-assessment practices in the classroom?
- 2) What do coaches and LTMs learn in terms of formative-assessment practices over the course of the professional development and through the learning teams?



Literature review

Formative-assessment features

- Promotion of student learning
- Use of classroom information to adjust teaching
- Involvement of teachers, students and other stakeholders
- Reflective and relational process

Factors affecting implementation of formative-assessment

- Teacher beliefs about instruction, learning, curriculum and assessment
- Conditions in school settings
- Time and support
- Content knowledge and pedagogical content knowledge
- Lack of training



Literature review

Professional learning in formative-assessment

- Emphasis on the examination of classroom practices
- Success related to school culture and support

Professional development in formative-assessment

- Promising results
- Focus on teaching practices and classroom interaction
- Space for sharing different perspectives
- Intended changes in practices of teachers and students



The study and its characteristics

2009 – 2010 process

145 schools within 68 districts

420 learning team members and 100 facilitators (coaches)



Sample (n=198)

153 learning team members

45 coaches

Survey

35 questions (closed- and open-response items)
Participants self perception of knowledge and classroom implementation of formative-assessment



Examples of items

How do you think the learning team- as a vehicle for learning- impacted your implementation of formative assessment practices in the classroom? (Please check)

- No impact
- Negative impact
- Limited positive impact
- Strong positive impact

Please describe in as much detail as possible a time in which you involved students in *The Formative Assessment Process* during instruction – e.g., what you did, obstacles, successes, students' responses

The study and its characteristics

Data analysis

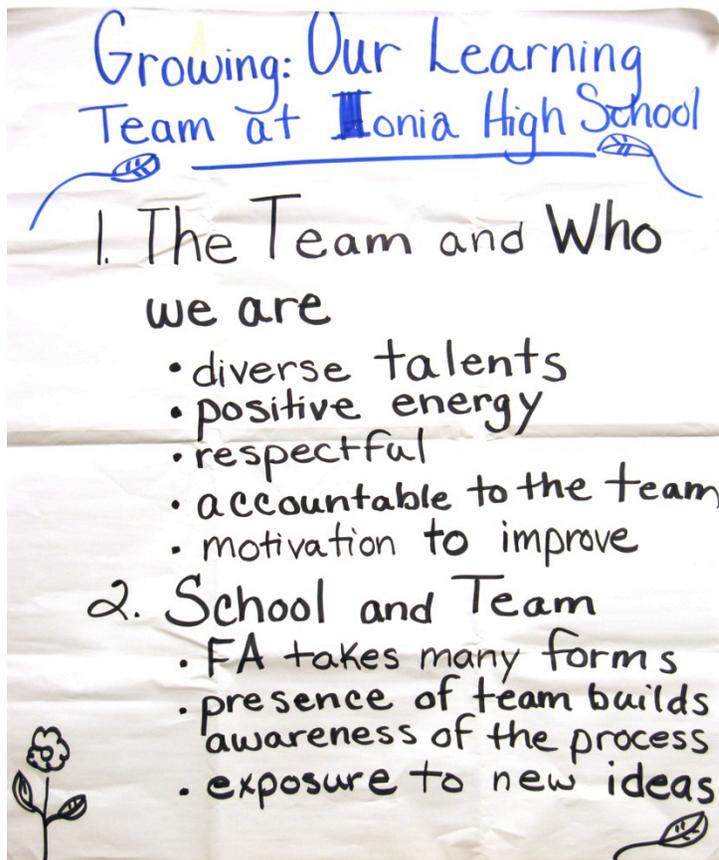
Technique for analysis	Purpose (s)	Research question
Exploratory factor analysis	* Identifying latent variables and justifying creation of megavariable about <i>Formative-Assessment Implementation</i>	1
Descriptive statistics	*Characterizing tendencies and results of participants	1 and 2
Comparison of means	*Comparing scores in the megavariable <i>Formative-Assessment Implementation</i> for different groups Comparing scores in participants' learning of formative-assessment and classroom implementation	1
Pearson correlations	*Examining relationships among participants' types and learning and perception of student learning	2
Description of open-ended questions	*Complementing responses collected in closed-response items	1 and 2



Findings

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1) Team makeup



Learning team makeup

-participants from different content areas and across grades (55%)

-participants from same-content area (27%)

-participants from in same-building teams was similar to those from cross-building or cross-district teams (for both, 38%)

-presence of a school administrator or curriculum specialist (73%)

Findings

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Satisfaction with learning team makeup

“It was great to have dialogue through different buildings, grades, and content areas. This helped us tremendously to have different perspectives and the learning process.”

“Our administrator strongly supports innovation. FA included, and is a great asset. While our team worked well, **I would like to have the added benefit of the same content area meetings,** to make it easier to implement FA ideas into my class”



Challenges

Results suggest that demands of LTMs vary between mixed groups and subject

Findings

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2) Learning team impact

Participants recognized the positive impact of learning teams on knowledge about formative-assessment practices and classroom implementation

Two Key Developments

1. Well-structured consistent meetings
With in-depth articles and discussions
Kept momentum and fostered personal growth.
2. By identifying Formative Assessment to current practices, the team (and as individuals) gained confidence to dig deeper into content areas.

Impact of learning teams was significantly higher ($p < 0.01$) in learning about formative-assessment practices than implementation of these practices

- Gradual process
- Influence of other factors

Findings

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4) Types of learning reported

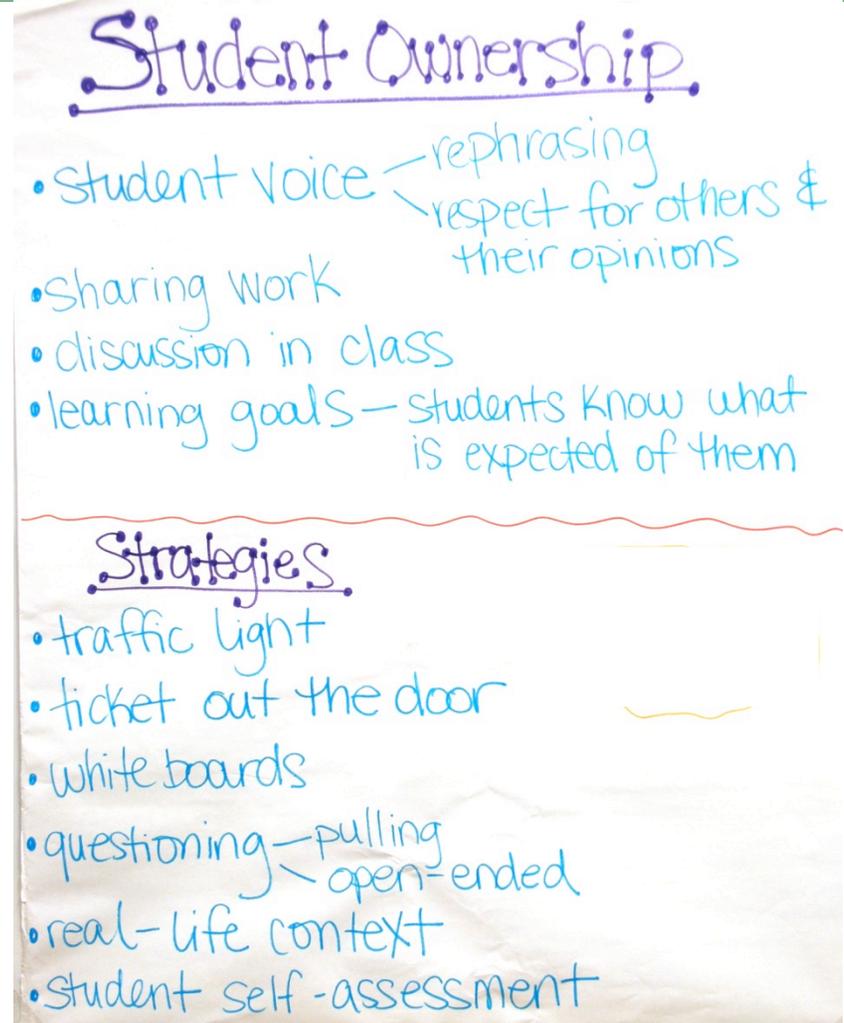
- Knowledge about practical formative-assessment instructional strategies (92%)
- Conceptualization of formative-assessment [what formative-assessment is and what formative assessment looks like] (79%)
- How to fit formative-assessment into the curriculum (79%)

Easiest topic to implement

- Descriptive feedback (49%)

Hardest topic to implement

- Peer- and self-assessment (43%)



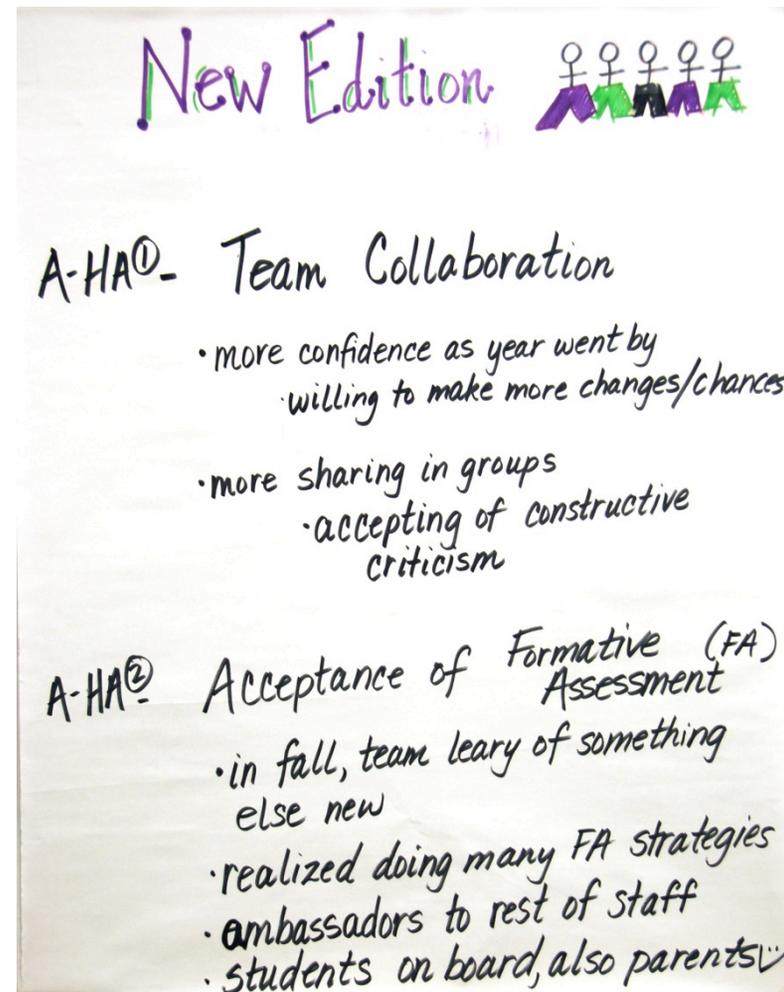
Findings

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Participants' learning in their teams

- Examination of beliefs about teaching, learning and assessment

“You have to be open to challenging your current views of assessment. You need to be willing to take risks to try new things in order to reflect with your learning team to better your teaching to the students' learning.”



Findings

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5) Reservations about Formative Assessment Implementation

Two variables significantly affected the implementation of formative assessment practices in the classroom

-Reservations about time for implementing FA practices in the classroom ($p < .05$)

-Knowledge of *The Formative Assessment Process* ($p < .01$)

Two LTMs who expressed those reservations said:

“I thought that was the process was exceptional, but I have serious reservations about the significant amount of time that I'm required to be away from the building”

“There wasn't enough time to cover everything thoughtfully. We really only dipped the surface”

Conclusions

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How do coaches' and learning team members' (LTMs) characteristics affect LTMs' implementation of formative assessment practices in the classroom?

Participants who implemented successfully classroom formative-assessment practices reported:

- having a positive learning team experience
- learning about concepts of formative assessment
- having enough time for implementation and being supported in schools

What do coaches and LTMs learn in terms of formative assessment practices over the course of the professional development and through the learning teams?

- practical formative assessment strategies to involve students in the process
- concepts about formative assessment
- examination of the own teaching practices and making changes accordingly

Limitations of the study

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- Limited evidence
- Survey: self-reported responses about learning and implementation
- Sample
- Identification of learning teams and participants Need of linking participants to learning teams and demographics

Bibliography

- Allal, L., & Mottier Lopez, L., (2005). Formative assessment of learning: A review of publications in French. In: *Formative assessment – improving learning in secondary classrooms*. (pp. 242-264). Centre for Educational Research and Innovation. Paris: OECD Publishing
- Athanases, S., & Achinstein, B. (2003). Focusing new teachers on individual and low performing students: The centrality of formative assessment in the mentor’s repertoire of practice. *Teachers College Record*, 105(8), 1486-1520.
- Assessment for learning: the impact of national strategy support. Publisher: Office for Standards in Education, 2008 (October) Reference no: 070244. Retrieved on Dec 2, 2010 from: <http://www.ofsted.gov.uk/Ofsted-home/Publications-and-research/Browse-all-by/Documents-by-type/Thematic-reports/Assessment-for-learning-the-impact-of-National-Strategy-support>
- Black, P. & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice*, 5(1), 7-73.
- Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the black box: Assessment for learning in the classroom. *Phi Delta Kappan*, 86(1), 8-21
- Black, P. & Wiliam, D., (2005) Changing Teaching through Formative Assessment: research and practice. The King’s-Medway-Oxfordshire formative assessment project. In: *Formative assessment – improving learning in secondary classrooms*. (pp. 223-240). Centre for Educational Research and Innovation. Paris: OECD Publishing
- Brookhart, S., (2007) Expanding views about formative classroom assessment: A review of the literature. In: *Formative classroom assessment: Theory into practice*. (pp. 43-62) New York: Teachers College press.
- Brown, G. T. L., Lake, R., & Matters, G. (2011). Queensland teachers’ conceptions of assessment: The impact of policy priorities on teacher attitudes. *Teaching and Teacher Education*, 27(1) 210-220), doi:10.1016/j.tate.2010.08.003
- Buck, G. A., Trauth-Nare, A., & Kaftan, J. (2010). Making Formative Assessment Discernable to Pre-Service Teachers of Science. *Journal of Research in Science Teaching*, 47(4), 402-421.
- Daws, N. & Singh, B. (1996). Formative assessment: to what extent is its potential to enhance pupils' science being realized? *School Science Review*, 77 (281), 93-100.



Bibliography

- Forbes, E., (2007). Improving the knowledge and use of formative assessment: a case study of a model of formative assessment in a K-3 science curriculum. (Doctoral Dissertation, University of Maryland, 2007). Abstract retrieved October 6, 2010 from http://gateway.proquest.com/openurl%3furl_ver=Z39.88-2004%26res_dat=xri:pqdiss%26rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation%26rft_dat=xri:pqdiss:3267194
- Heritage, M., (2007). Formative Assessment: What Do Teachers Need to Know and Do? Phi Delta Kappan, 89(2), 140-145.
- Jett, P., (2009). Teacher Valuation and Implementation of Formative Assessment Strategies in Elementary Science Classrooms. (Doctoral Dissertation, University of Louisville, 2009) Abstract retrieved October 6, 2010 from http://gateway.proquest.com/openurl%3furl_ver=Z39.88-2004%26res_dat=xri:pqdiss%26rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation%26rft_dat=xri:pqdiss:3370032
- Mc Millan, J., (2003) Understanding and Improving Teachers' Classroom Assessment Decision Making: Implications for Theory and Practice. Educational Measurement: Issues and Practice, 22(4), 34-43.
- Otero, V. K. & Nathan, M.J. (2008). Preservice elementary teachers' views of their Students' Prior Knowledge of Science. Journal of Research in Science Teaching, 45(4), 497-523. Popham, W. J. (2008). Transformative assessment. Association for Supervision and Curriculum Development. Alexandria, VA
- Song, E. & Koh, K., (2010). Assessment for learning: understanding teachers' beliefs and practices. Paper presented at the 36th Annual Conference of the International Association for Educational Assessment (IAEA) Bangkok, Thailand. Retrieved from <http://www.iaea2010.com/fullpaper/104.pdf> on October, 6, 2010.
- Stiggins, R., (2006) Balanced Assessment Systems: Redefining Excellence in Assessment. Portland, OR: Educational Testing Service. May 30, 2006.
- Yin, Y., Shavelson, R. J., Ayala, C. C., Ruiz-Primo, M.A., Brandon, P. R., Furtak, E., et al. (2008). On the impact of formative assessment on student motivation, achievement, and conceptual change. Applied Measurement in Education, 21(4), 335-359.
- Webb, M., & Jones, J. (2009). Exploring tensions in developing assessment for learning. Assessment in Education: Principles, Policy & Practice, 16(2), 165-184.
- Wyllie, C., Lyon, C., & Goe, L. (2009). Teacher professional development focused on formative assessment: Changing teachers, changing Schools. Research Report. New Jersey: Educational Testing Service.



2010-2011 RESEARCH & PRELIMINARY FINDINGS

MICHIGAN STATE
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Research Question

- How does the FAME professional development model influence teachers' learning and implementation of formative-assessment practices?
 - Learning team make-up
 - Content specific, grade-level specific, school-based, multi-school, administrator present
 - Type of coach (teacher, administrator...)
 - Formative-assessment tools and strategies



2010-11 Data Sources

- Coach and learning team surveys:
 - Fall Launch (beginning of school year)
 - Coach N=70; LTM N=348
 - Winter (middle of the school year)
 - 1st Year Coach N=37, LTM=150
 - 2nd Year Coach N=2, LTM=7
 - Spring (end of the school year)
- Video of learning team meetings (10 learning teams)
 - Interviews with coaches and learning team members
 - Video of classroom teachers using formative-assessment strategies and tools (1-2 teachers per focal learning team)



Initial Analysis

- Descriptive statistics on Fall and Winter surveys
- Content coding of open-ended survey responses
- Preliminary video analysis of learning team meetings



Who are our coaches?

- Coaches had a variety of roles: Teacher (31%); Building Administrator (23%); District Administrator (26%) and ISD Administrator (21%)
- Many coaches (59%) did not have prior experience facilitating a group of adult learners
- Coaches reported “some” to “substantial” knowledge about formative-assessment practices (73%)
- Many (58%) were participating in the project for the first time
- Motivation to be a coach: To learn more about formative-assessment practices



Impact of coach's job

Teacher

- *“Being a teacher places me on ‘even ground’ with my colleagues....”*
- *“Our LTM’s mentioned that they felt more involved in the process since it felt teacher led and teacher driven”*

Administrator

- *“Being at the ISD I can reflect and consider experiences across school districts...”*
- *“Being based in the central office, I have had the opportunity to work with teachers from both of our MSs more closely... teachers have greatly appreciated someone from central office working with them very closely, learning with them, etc. and I’ve benefited ...”*

Who are our learning teams?

- Coaches were fairly familiar with their teams (67%) and learning team members generally knew each other well or very well (96%)
- Learning teams mostly from the same school (37%) or same district – multiple schools (31%)



Yes (LA, math,
science, SS,
art/music) 17%

No 83%

▪

Yes, positive	71%
Yes, negative	2%
No impact	16%
Not sure	11%

“It has helped to bridge our campuses together. It has helped to create a greater awareness of the curriculum at all three of our school divisions”

Winter Survey Results

- *“The same content has been beneficial. [I] have had a team from different content levels and they had a hard time relating themes to their content.”*
- *“...Sometimes F-A strategies/tools used by the elementary team members aren’t given full value as they’re tinged as elementary”*

Who are the learning team members?

Job Responsibility		Numbers
Classroom Teacher		304
Elementary	27%	
Middle School	35%	
High School	29%	
Special Education	9%	
Building Administrator		66
Elementary	39%	
Middle School	42%	
High School	18%	
Department Chair		20
District Administrator		22
Other		7



Who are our learning team members?

- Professional Experience
 - 0-1 year: 3.8%
 - 2-5 years: 12.9%
 - 6-15 years: 46.8%
 - 16+ years: 36.5%



Why join learning teams?

Manner in Which Recruited for Learning Team?	Percent*
I was recruited	15%
I volunteered	53%
I wanted to improve my professional practice	34%
I was interested in learning more about formative assessment	41%
I was interested in joining a professional learning team	19%
Other	1%

*could choose more than 1

Fall Survey Results



Fall launch – reported learning

F-A Knowledge?	Pre-Meeting	Post-Meeting
Quite a Bit	7%	44%
Some	26%	54%
A Little	54%	2%
Not Much at All	13%	0%

Fall Survey Results



Fall launch- Pre-meeting

Current assessment practices

- 43%: Only summative assessment
- 20%: Only formative-assessment
- 12%: Both summative and formative
- Remainder – a combination of strategies

Current understanding of F-A

- 65%: To determine what students know
- 27%: To inform, guide, modify instruction
- 4%: Unsure what it was

Fall Survey Results

Learning team activity

- Teams have met frequently
 - Twice (8%)
 - 3 times (20%)
 - 4 or more times (72%)
- Length of meetings
 - 45 minutes or less (8%)
 - 1-2 hours (24%)
 - 2-3 hours (43%)
 - More than 3 hours (24%)



Focus of learning team meetings

F-A Components Discussed by Learning Team	Percent
Planning	65%
Learning target use	89%
Student evidence	65%
Using self-assessment	68%
Using peer assessment	51%
Goal setting	46%
Providing descriptive feedback	65%
Activating prior knowledge	59%
Formative assessment tools	84%
Student and teacher analysis	16%
Using formative feedback to guide instruction	70%
Instructional decisions	46%
Other	8%

*could choose more than 1

Winter Survey Results



Very Effective	22%
Effective	56%
Neutral	17%
Ineffective	3%
Very Ineffective	2%

Winter Survey Results

Impact of FAME model on teachers

- *It's really great to have a think-tank of positive and motivated individuals to share positive examples with and to think through plans that didn't work as expected. It makes it easier to think about formative assessment specifically when we meet each month for that purpose.*
- *It is encouraging to meet with other teachers who are implementing formative assessments: we challenge each other to continue on the path we have chosen, there is an accountability to the group piece, as we share what we are doing the focus becomes clearer to the individual and the group, and we support each other in our research and practice.*



Impact of F-A on students

- *The clearly defined learning targets help them understand and focus on what they are learning. It also helps them to self-assess whether they are on target or not.*
- *Students seem to be placing more importance on their during-class learning and like knowing exactly what they expected to learn. I have more and more students wanting to redo assignments to show their knowledge and explain their understanding the best way possible. There have been more one on one interactions and conversations about content between teacher/student and student/student when the descriptive feedback is given on assignments.*



Video analysis

□ Preliminary Themes

- Teachers' formative-assessment knowledge and practices
- Impact on student knowledge and practice
- Role of coach & learning team members
- Team building and norms
- Feedback & questioning
- Use of resources



Focus on the process



Focus on process



Implications & next steps

- Professional Development → Teacher Learning → Teacher Practice → Student Learning
- Measuring student learning/achievement
- Volunteers with a lot of experience

