ELM Governance and Advisory Meeting

June 20, 2017

ENHANCED LEARNING MAPS
INSIGHTS FOR INSTRUCTION

Welcome and Introductions

9:00 a.m.

Dr. Marianne Perie, co-Principal Investigator

Organization for Today

- Focus first on year we just completed and what has been accomplished
- Include the first full evaluation
- Then move to where we are headed for Fall 2017 and the 2017-2018 school year
- End with discussion of future beyond the end of the project

Accomplishments 2016 - 2017

Multiple areas of progress

- Published 21 instructional units in ELA and created 4 teacher note videos
- Published 24 instructional units in math and created 4 teacher note videos
- Received feedback from teachers via surveys, emails, and new conversation feature in software
- Upgraded software per feedback and transitioning to version that will work on tablets
- 99 teacher participants: 63 math, and 33 ELA

Teacher Notes Videos

- Supplement an ELM instructional unit by
  - Containing information about the learning map models,
  - Explaining how students are likely to learn specific content, and
  - Illustrating how these learning progressions can inform instruction.

- Approximately 3 minutes in length
- https://vimeo.com/202814664

First Year of ELM Grant

Year 2 of the Enhanced Learning Maps Project will repeat this process.

Next

- ELA update
- Math update
- Discussion of new diagnostic assessments
- Lunch
- Software update
- New directions for next year and beyond

Project and Training Goals

Enhanced Learning Maps Project Goal

Research Question: Can the ELM learning map model be used as an organizer for instructional decisions, specifically formative assessment?

End goals

- Useful and valid learning map model
- Research-based, effective, practical instructional resources
- Improved formative assessment practices
- Improved student outcomes

Project Staff

Leadership and Administration

- Neal Kingston
- Marianne Perie
- Dale Cope

ELA

- Sarah Marten
- Sasha Feryok
- Holly Dubiel
- Russell Swinburne Romine
- Jonathan Schuster
- Katie Leman

Technology

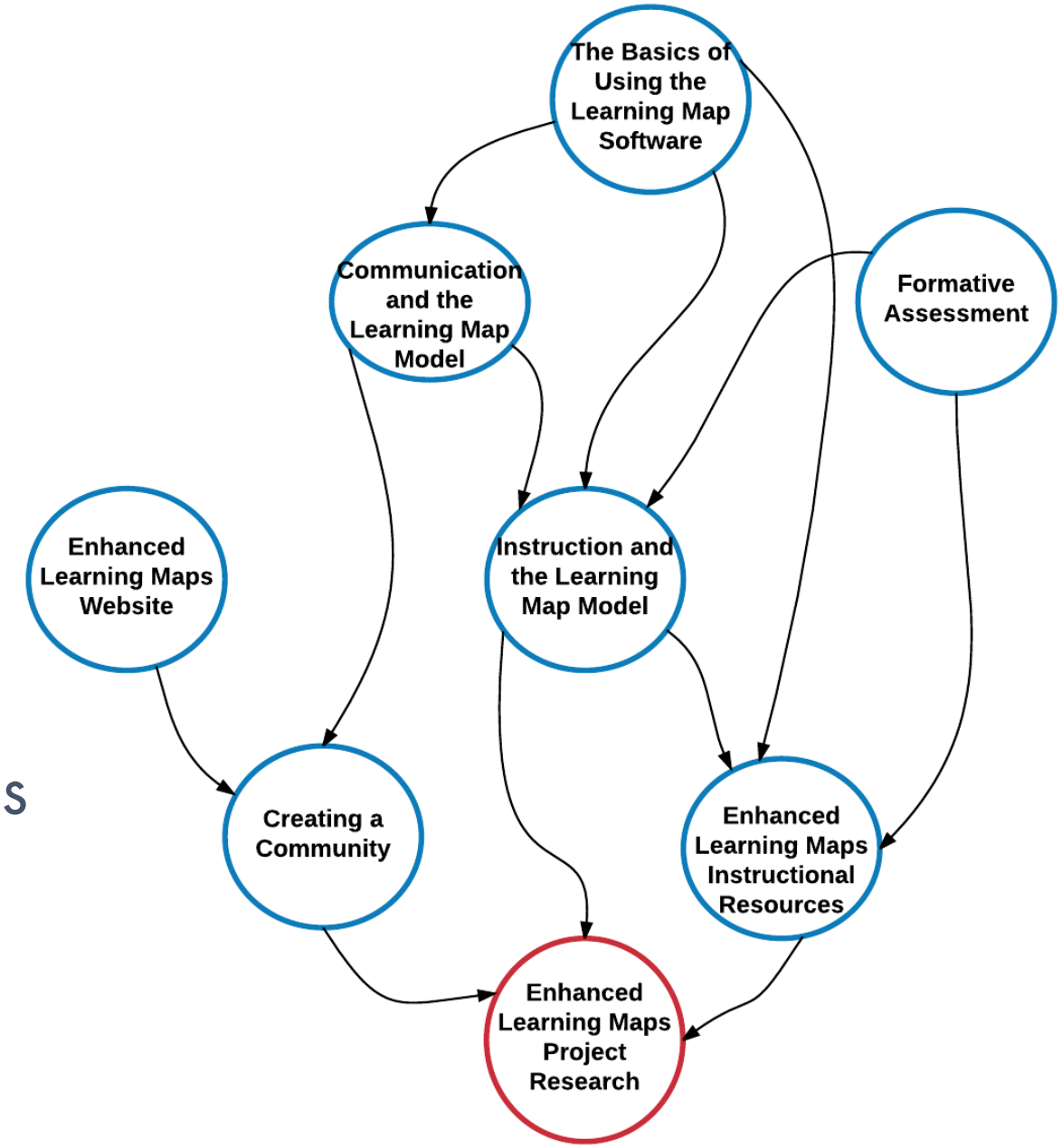
- James Miller
- Chris Gayler
- Dain Vermaak

Mathematics

- Lindsey Weiland
- Nicki Lindner

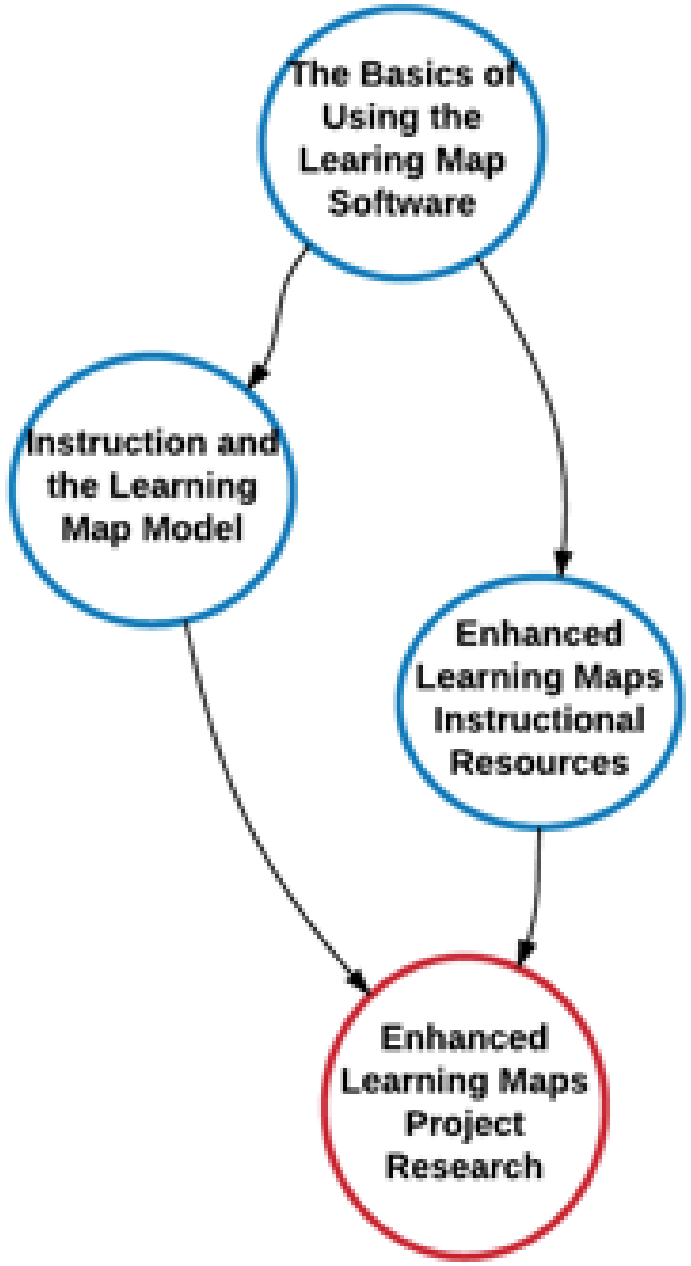
Summer Training

- Expert speakers
- Collaborative activities with
  - learning map software
  - instructional resources
- Share experiences and ideas



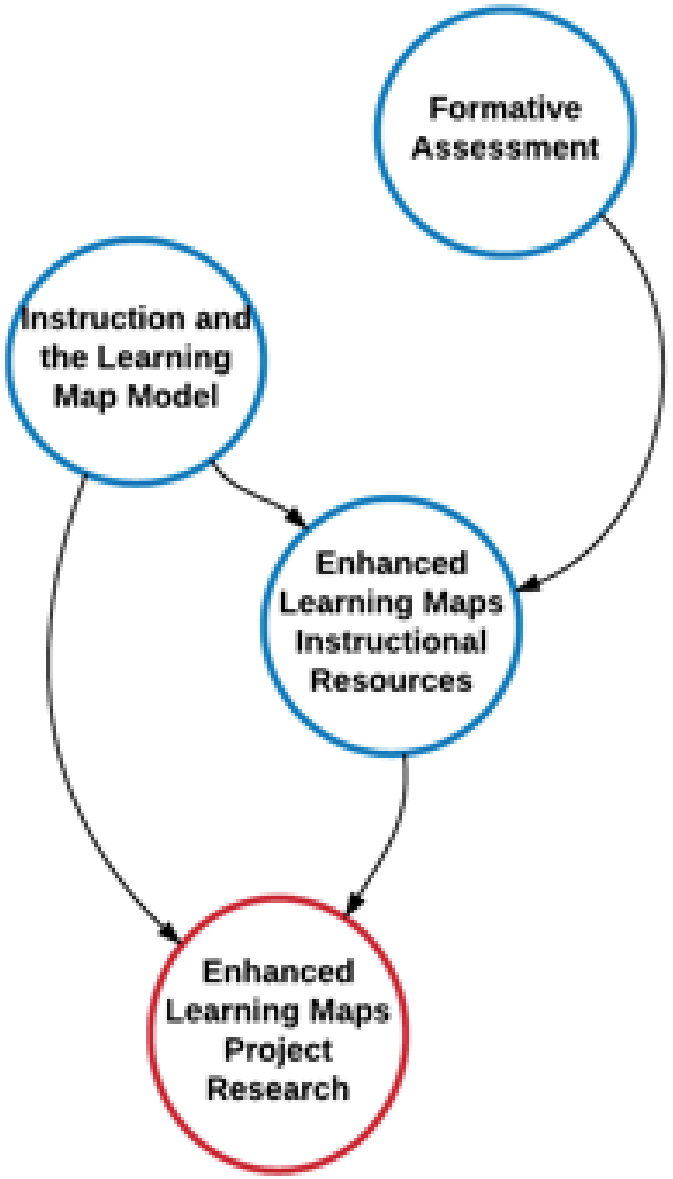
Training Goal: Using the Learning Map Software

- Learn about the learning map software
- Consider how to use the learning map software in your classroom
- Learn how to discuss maps with other participants



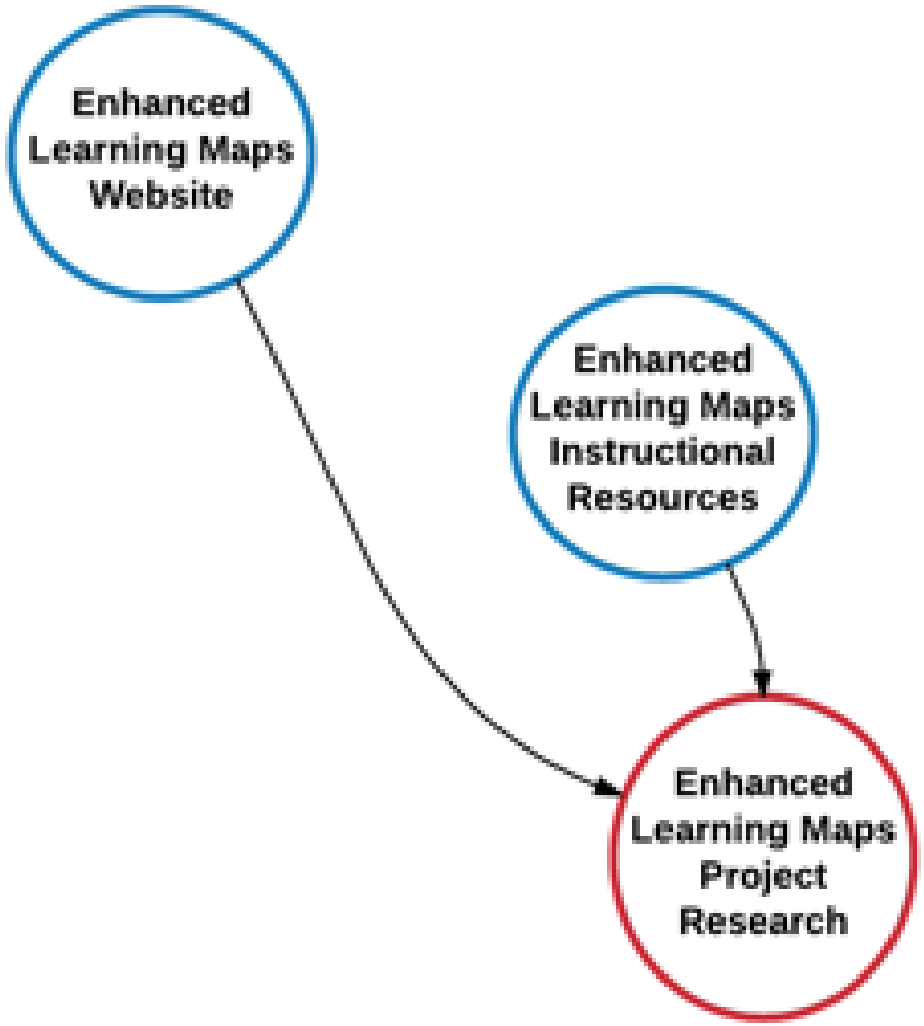
Training Goal: Incorporating Formative Assessment

- Understand the role of formative assessment in the classroom
- Understand how the learning map model supports formative assessment
- Learn how to use the instructional resources to support formative assessment



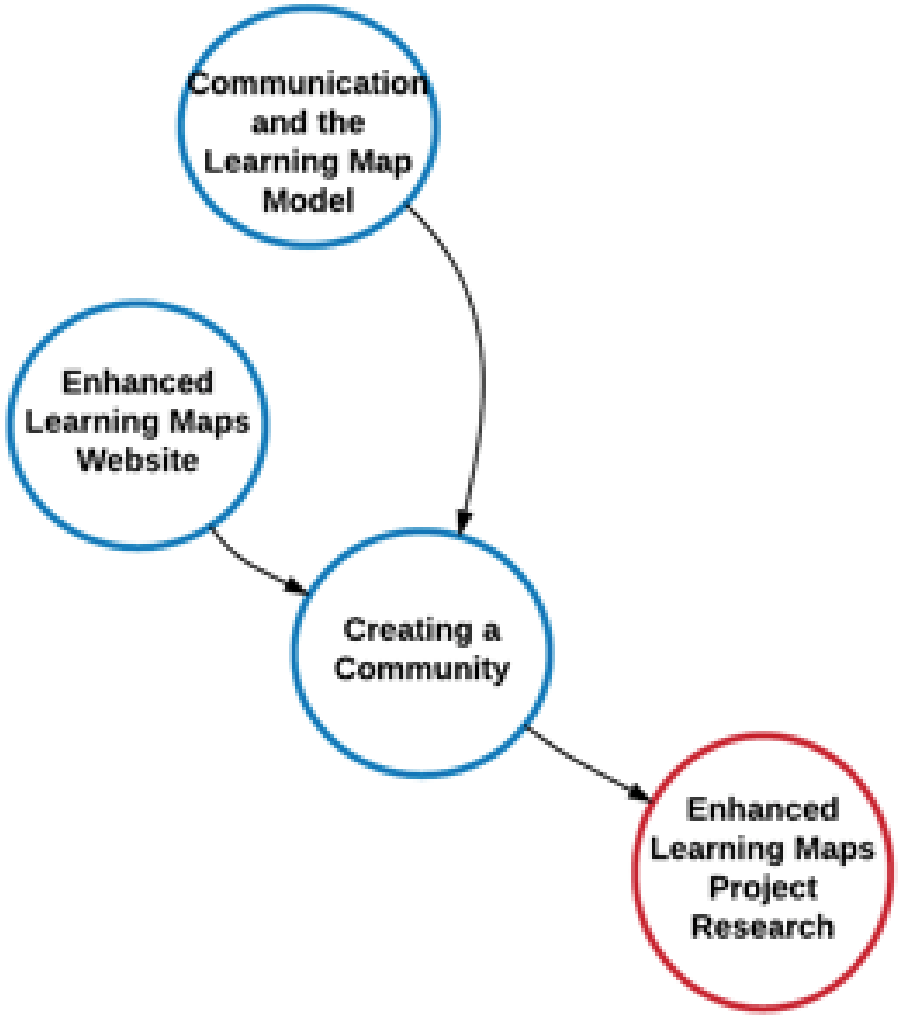
Training Goal: Implementing ELM Instructional Resources

- Locate instructional resources
- Understand the components of the instructional resources
  - Research-based
  - Linkage between the instructional resources and the learning map model
- Recognize how the resources promote formative assessment



Training Goal: Create a Reflective Practitioner Community

- Become familiar with contents of the ELM website
- Collaborate with teachers from different states
- Reflect on how the resources can inform instructional practice and student achievement
- Professional development from some of our advisors



Enhanced Learning Maps Project Evaluation

Governance Meeting – June 20, 2017

50 years of education research, evaluation, and technical assistance

An industry leader in professional development and applied educational research

Evaluation Purpose and Focus

Project Implementation (formative)

Project Outcomes (summative)

Formative (Implementation/Process) Evaluation Questions

- F1: How were the key strategies and activities of the project implemented?
- F2: To what extent were the key strategies and activities implemented with fidelity? What changes were made and why?
- F3: What were the operational strengths and weaknesses of the project during implementation?

Summative (Outcome) Evaluation Questions

- S1: How did the teachers use the learning map resources? What types of instructional decisions did the teachers make as a result of use?

- S2: To what extent did the ELM project achieve its intended outcomes?

Summative (Outcome) Evaluation Questions *(cont'd)*

- S3: How effective was the collaboration among the partner states and participants?

- S4: What project strategies can be replicated or sustained in other states?

Guskey's Model of Evaluating Professional Development Impact

Level 1	Participants' Reactions
Level 2	Participants' Learning
Level 3	Organizational Support and Change
Level 4	Participants' Use of New Knowledge and Skills
Level 5	Student Learning Outcomes

Incorporation of Guskey's Model

Evaluation Question:

- F1: How were the key strategies and activities of the project implemented?

Guskey Model:

- Participant (teacher) reactions to summer training (Level 1)

Incorporation of Guskey's Model
(cont'd)

Evaluation Question:

- S2: To what extent did the ELM project achieve its intended outcomes (e.g., changes in teacher practices using formative assessment for instructional decisions and student learning)?

Guskey Model:

- Participant (teacher) learning (Level 2, prerequisite to S2)
- Organizational support and change (Level 3; influences S2's impact on changes in practice)
- Changes in teacher practice (Level 4)
- Changes in student learning (Level 5)

Data Collection Methods - Formative

- Project Records
- State Partner and Project Staff Interviews
- Training Observations
- Training Evaluations
- Participant Focus Groups

Data Collection Methods - Summative

- Participant
  - Pre/Post Mathematics Content Assessment
  - Instructional Practices Survey
  - Focus Groups
- Student
  - Objective Item Sets
- Project Records
- State Partner and Project Staff Interviews

Findings to Date: Participants' Reactions to June 2016 Training

- Most helpful aspects
  - ELM software and website
  - Activities and resources
  - ELM team
  - Collaborating and networking
- Least helpful aspects
  - Certain presentations
  - Scheduling/pace
  - Lack of availability of some lessons

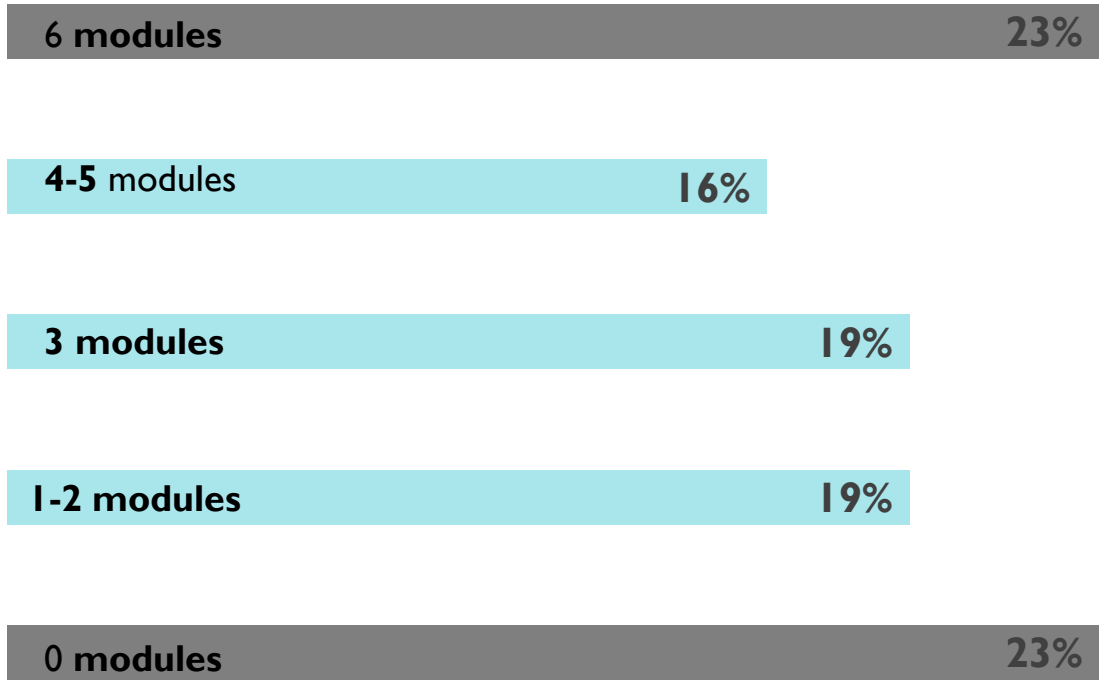
Findings to Date: Participants' Reactions to June 2016 Training

- What was learned
  - More about and importance of formative assessment
  - Using the maps, software, and website
  - Instructional practices
- Overall perceptions
  - High quality (95%)
  - Relevant (98%)
  - Useful (95%)

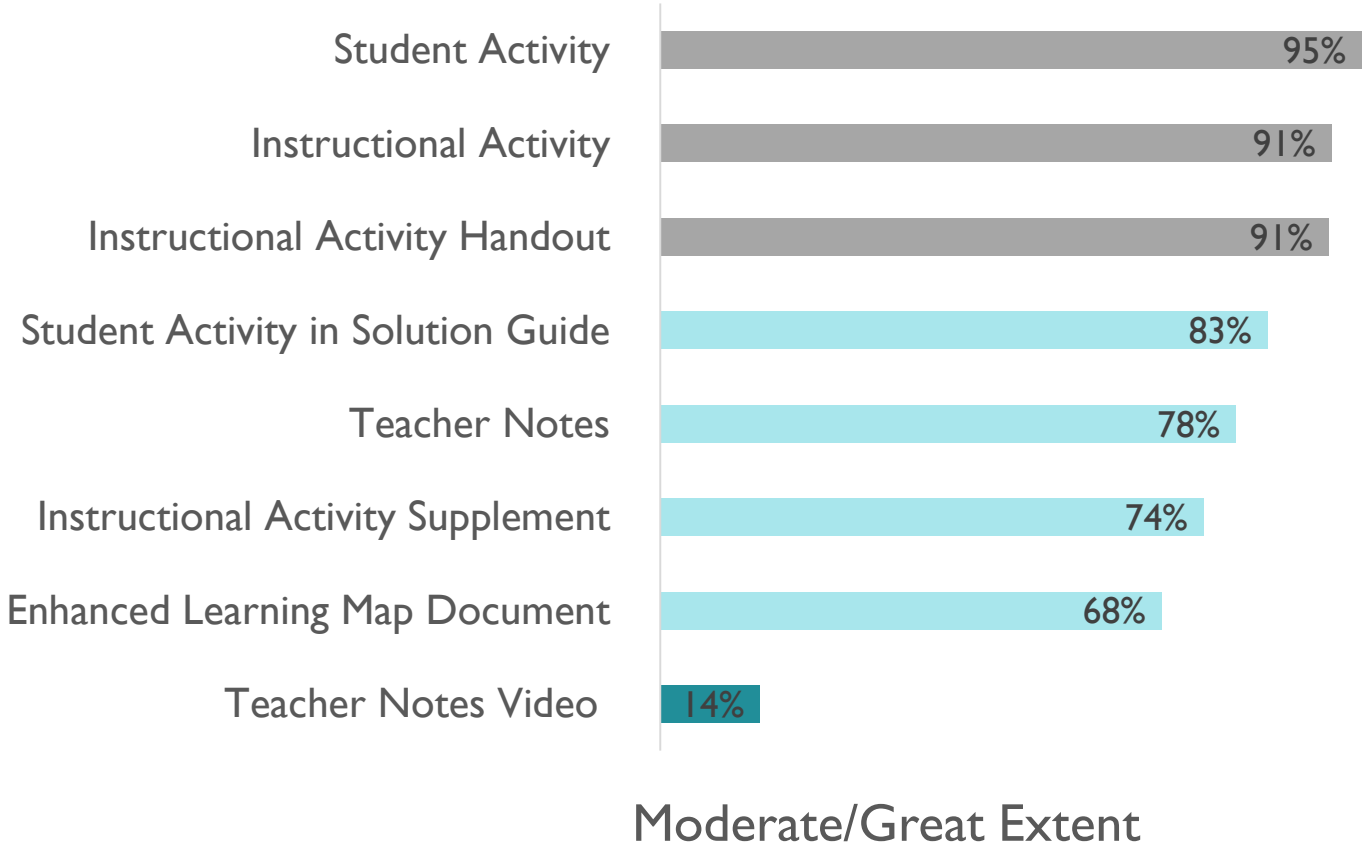
Findings to Date: Cohort I Survey

- 67% response rate (31/46 teachers)
- Majority 5th grade teachers
- Approximately one-half ELA and one-half math focused
- Represented all five states

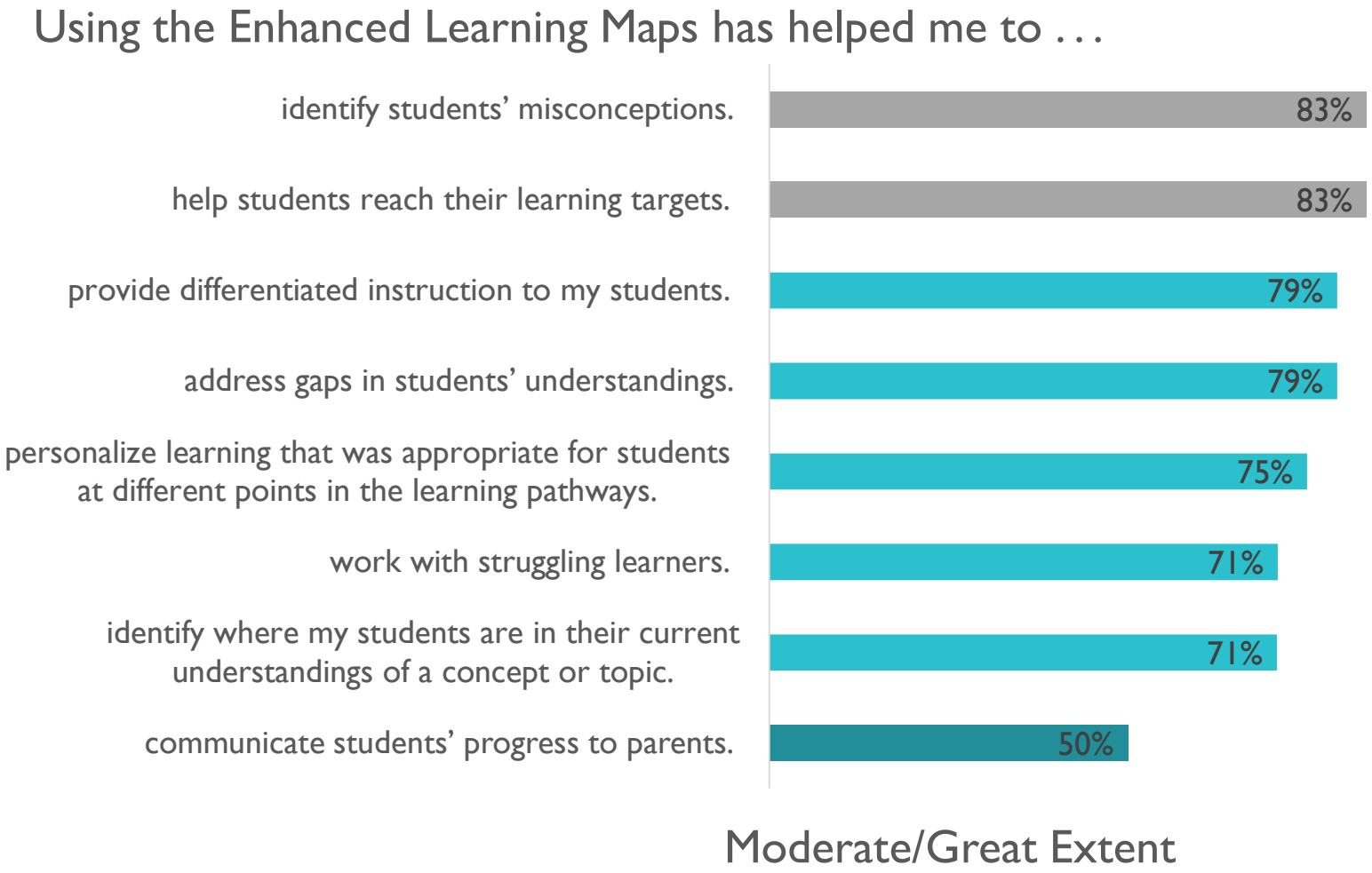
Findings to Date:
Cohort I Survey – Module Implementation



Findings to Date:
Cohort I Survey – ELM Materials Usage



Findings to Date:
Cohort I Survey – Use of Maps in Instruction



Findings to Date:
Cohort I Survey –Use of Maps in Instruction

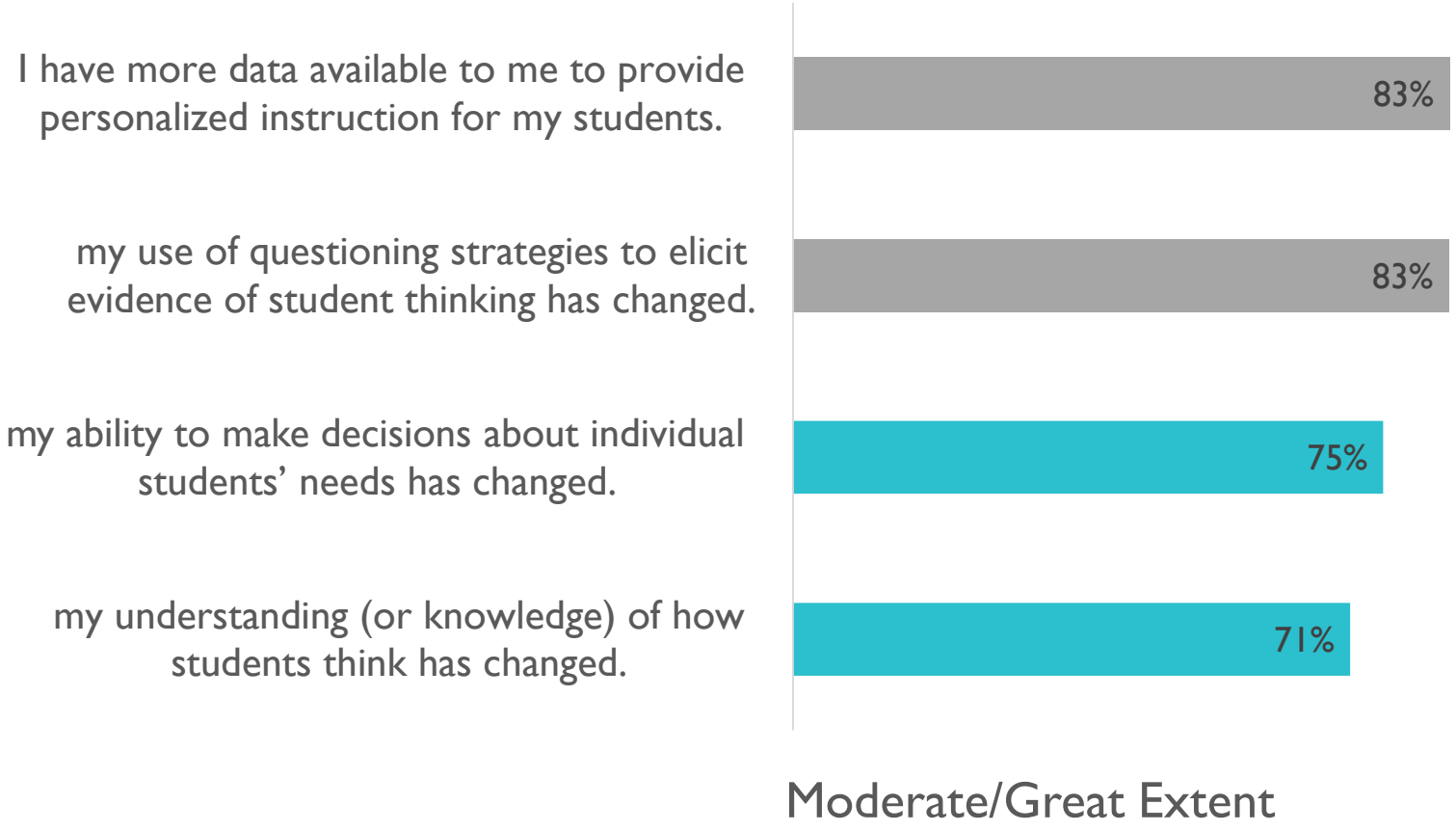
- Creating individual paths
- Specific materials cited
- Identifying and remedying learning gaps
- Identifying requisite skills
- Curriculum supplement
- Curriculum mapping

*"My students **begin each unit** by gluing a **printed copy of the Learning Map** covering the unit into their math notebook. They **end the unit** by **highlighting the nodes** they are **confident** and have become **proficient** with."*

*"I have **implemented the Instructional Activities** and found that after reading the Teacher Notes and implementing the Activities **students seemed to have a better understanding of the learning targets** compared to how I previously taught the modules using the text book resources."*

Findings to Date:
Cohort I Survey – Use of Maps in Instruction

As a result of using the Enhanced Learning Maps . . .



Findings to Date:
Cohort I Survey – Changes in Student Learning

- Greater student engagement
- Better understanding
- Identifying gaps improves instruction

> *"Students like the **idea of choice** and **different paths**. Some of my students would try different strategies, just to see if they could learn something new on the map. Students really pushed themselves to master another concept."*

> *"I have seen the students feel **more confident** in their understanding, more able to ask questions to get clarity, more in **control of their learning**. . .The **students' retention is greater** and they can **transfer their learning** into other areas making learning meaningful."*

Reactions to Data Presented and Questions

Contact Information

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Overview of ELA Map and Resources

June 20, 2017

ELA Year 1: Map

- Revised and developed the learning map
  - 2-5 Reading: Informational Text (RI) and Reading: Literature (RL)
  - 2-5 Writing
  - 6-8 RI, RL, and W

ELA Year 1: Resources

- Focused on grades 2 – 5
- Revised design format based on teacher feedback
- Made foundational design decisions
- Published 21 instructional units

ELA: 2017 – 2018 Resources

Units in the ELM Learning Map Software			
2nd Grade	**3rd Grade**	**4th Grade**	**5th Grade**
RI.2.3 RI.2.6 RI.2.8 RI.2.9	RI.3.1* RI.3.6	RI.4.2* RI.4.5 RI.4.8	RI.5.5 RI.5.8
RL.2.2 RL.2.3*	RL.3.2	RL.4.2 RL.4.3	RL.5.2* RL.5.6
	W.3.2 Prt 1 W.3.2 Prt 2 W.3.2 Prt 3		

Published by September 2017			
2nd Grade	**3rd Grade**	**4th Grade**	**5th Grade**
	RI.3.5	RI.4.1	RI.5.2
	RL.3.3		
			W.5.2

*Denotes a unit with a Teacher Notes Video

ELA Year 1: Feedback

- 33 feedback surveys completed
  - Increase teacher engagement in Year 2
- Successes
  - 95% indicated students were engaged in the lessons
  - 45% indicated **increased student engagement** compared to previous years
  - 96% indicated the Teacher Notes to be helpful

ELA Year 1: Feedback

- Modifications from teacher feedback
  - Sample passages
  - Examples of possible titles
  - State approximate time of each lesson
  - Re-designing two units based on teacher feedback
- Creating passages
  - Collaborating with KU editing team

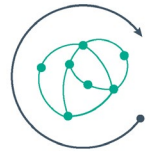
ELA Year 2: Map & Resources

- Complete and revise 5 instructional units for grades 2 – 5
- Revise learning map (on-going)
- Publish 18 instructional units for grades 6 – 8
- Publish 3 teacher notes videos
- Collect and analyze feedback
- Modify units

ELA Year 2: Resources

Available by August 2018		
6th Grade	**7th Grade**	**8th Grade**
RI.6.2 RI.6.5 RI.6.6	RI.7.2 RI.7.5 RI.7.8	RI.8.2 RI.8.5 RI.8.6
RL.6.2 RL.6.5	RL.7.1 RL.7.6	RL.8.1 RL.8.2
W.6.2	W.7.2	W.8.1

Questions?



Overview of Math Map and Resources

June 20, 2017

Math Year 1: Map & Resources

- Focus on grades 5 – 8
  - Edited the learning map model to reflect research recommendations
  - Published 24 instructional units (6 per grade) addressing a total of 38 standards
  - Published 4 teacher notes videos (1 per grade)

Math Year 1: Map & Resources

Currently Available			
5th Grade	**6th Grade**	**7th Grade**	**8th Grade**
5.G.4	6.EE.2.a,c	7.G.4*	8.F.2,3*
5.NF.1,2*	6.EE.6,7	7.NS.1	8.EE.7
5.NBT.5	6.NS.5,6	7.RP.3	8.SP.1,2,3
5.NBT.6	6.RP.1,3.a*	7.EE.1,2	8.G.1,2,3
5.MD.3,4	6.G.1	7.G.1	8.NS.1,2
5.OA.3	6.SP.1,2,3	7.SP.8	8.EE.8

*Denotes a unit with a Teacher Notes Video

Math Year 1: Feedback

- 63 feedback surveys completed
- Successes
  - 98.4% of surveys indicated students were engaged in the lessons
  - 60% of feedback surveys indicated **increased student engagement** compared to previous years
  - 93.7% of surveys indicated teachers found the Teacher Notes to be helpful

Math Year 1: Feedback

- Successes
  - "I was blown away by the thinking, strategies, and discourse that occurred during this lesson. It makes so much sense to pull from their knowledge of the 4 representations (graph, table, equation, situation) instead of focusing on just one at a time. The math was more intuitive and less contrived compared to how it has felt in previous years." (8th grade systems of equations)

Math Year 1: Feedback

- Areas for Improvement
  - Images and headings in teacher notes
  - Time estimates
  - Within document links
  - Unit specific additions/adjustments

Math Year 2: Map & Resources

- Edit the learning map model to reflect research recommendations
- Publish 18 instructional units for grades 2 – 4 (6 per grade) addressing a total of 24 standards
- Publish 3 teacher notes videos for grades 2 – 4 (1 per grade)
- Revise instructional units for grades 5 – 8
- Collect feedback for instructional units for grades 2 – 8
- Create diagnostic tools for grades 2 – 8

Math Year 2: Map & Resources

Available Fall 2017		
2nd Grade	**3rd Grade**	**4th Grade**
2.NBT.5	3.OA.1,2,3	4.OA.1,2
2.NBT.1	3.MD.6,7	4.NBT.2
2.OA.1	3.G.2	4.NF.2
2.OA.4	3.NF.1,2	4.G.3

Available Winter 2018		
2nd Grade	**3rd Grade**	**4th Grade**
2.MD.9	3.OA.8	4.NF.3
2.G.1	3.MD.3	4.MD.5,6

Overview of the Diagnostic Tool

June 20, 2017

Diagnostic Tool

- Emphasis for pre- and post-test items is based on the nodes and lessons in each published unit
- Classroom and student level detailed reports
- Results directly tied to the learning map
- Teacher and student friendly user experience

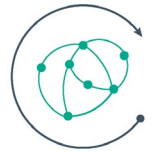
Diagnostic Tool

- The Purpose of the diagnostic tool for **The Enhanced Learning Map Project** is
  - to validate the nodes and connections in the map
  - to further enhance teachers' ability to improve instruction and student learning
- The Purpose of the diagnostic tool for the **teacher participants** is
  - to differentiate lessons and build personalized student learning maps
  - ability to assess success of lessons

Reporting

- Important part of diagnostic assessments is providing actionable reporting
- Because incorrect answers are linked to specific nodes in the map, we can generate node-level information about how well a student has learned each node in a map.
- Information can place a student on a map and show the nodes mastered for a group of students like a class.

Questions?



Lunch 12:00 – 12:45

Overview of Software Enhancements

- Capturing Conversations
- iPad version
- Mapping State Standards

Changes in Direction for 2017 - 2018

- ELA grade focus
- Change in partnership composition
- School visits
- Recruitment

Recruiting Colleagues

We need state help recruiting teachers.

- Next year: a total of 100 teachers per state
  - ELA grades 2 – 8
  - Math grades 2 – 8
- Next year's training will be in state
  - Find a time to overlap with existing conference if possible.

Improving connections between SEAs and volunteer teachers

- Mapping standards to curriculum
- Selecting passages
- Supporting recruitment process
- Increasing use of tools among all teachers
- Supporting ongoing software use
- Piggyback state-level training with another conference
- Changing nature of governance meetings

Evolving the project into a future grant

- Other subjects:
  - Writing
  - Algebra
- More depth within this framework: Passage alignment
- Changing the audience: Expanding tools to make them student facing

Thank You!

KU ACHIEVEMENT & ASSESSMENT INSTITUTE
The University of Kansas

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