



# Formative Assessment and Self-Regulated Learning

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# Session Overview

1. Review a recently developed *theory of action* underlying formative assessment, produced by a multi-state group of instructional leaders convened by CCSSO;
2. Provide an overview of the *Arizona context* for supporting formative assessment
3. Present findings from a new *REL West study* that analyzed survey results from more than 1,200 teachers and 24,000 students across three Arizona school districts connecting formative assessment and self-regulated learning; and
4. Describe how one participating Arizona school district (*Sunnyside Unified* in Tucson) has worked to advance key formative assessment practices

# *A Theory of Action for Formative Assessment*

Margaret Heritage

Formative Assessment Expert

**Formative Assessment for Students  
and Teachers (FAST) State Collaborative  
on Assessment and Student Standards  
(SCASS)  
Theory of Action**

**Margaret Heritage  
FAST SCASS Advisor, 2010-2019**

# Revised Definition

A **planned**, ongoing process used by all students and teachers during learning and teaching to elicit and use evidence of student learning to improve student understanding of intended **disciplinary learning** outcomes and support students to become **self-directed learners**.

FAST SCASS, 2018  
Council of Chief State School Officers

# International Consultants (2016, 2017, and 2018)



Christine Harrison  
King's College  
London, UK



Jill Willis  
Queensland University of Technology  
Brisbane, Australia



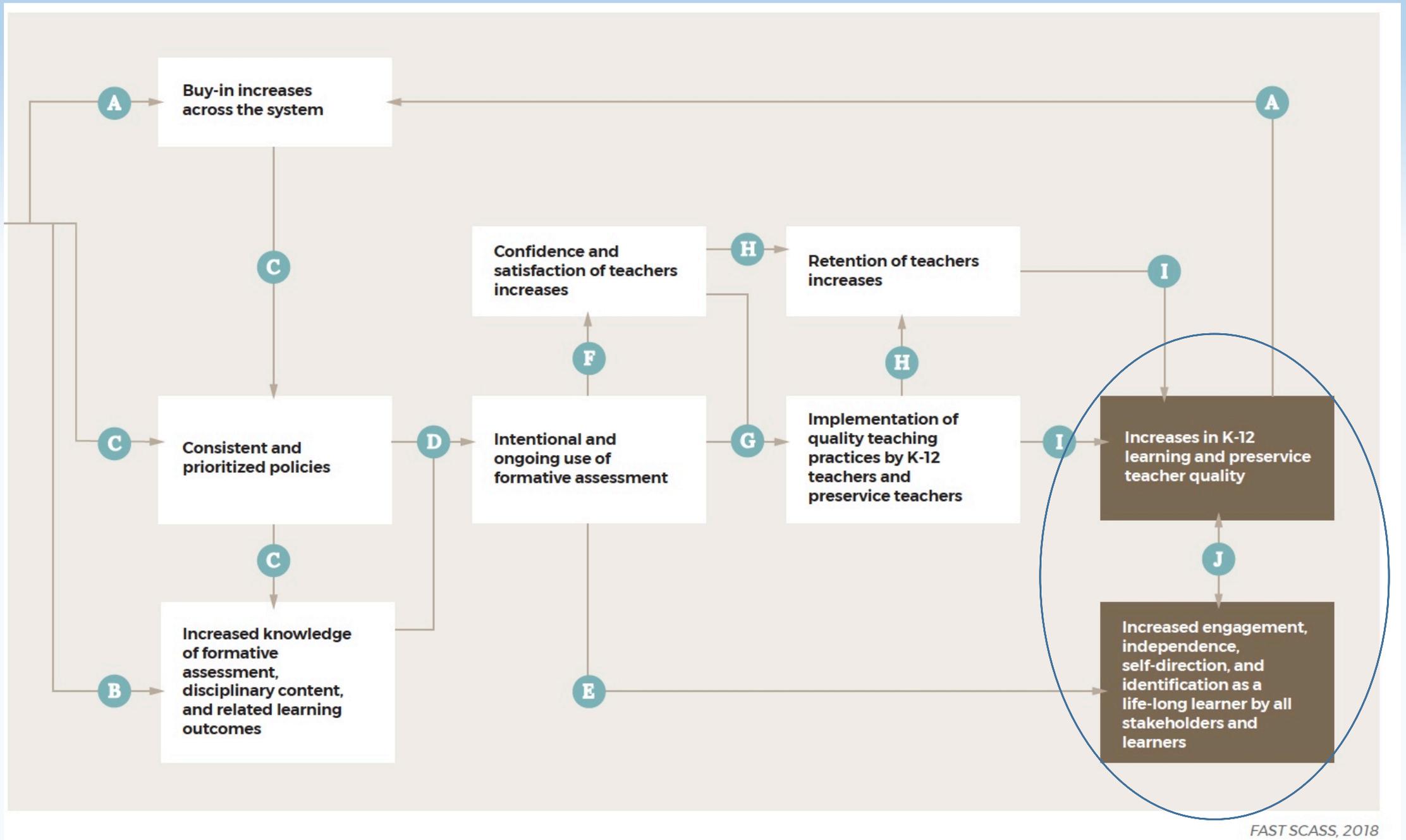
Bronwen Cowie  
University of Waikato  
New Zealand

# **Program Evaluation Theory of Action**

- **Logic model to show key stakeholders (i.e., levels of the system), program components, and outcomes**
- **Sequence of change activities and links among them (Hara, Millar, Arrigoni, & Kretchmer, 2009)**
- **Explicit chain of reasoning and events and outcomes for program (Rennekamp & Engle, 2008)**

# Across All Levels the System Requires:





# *Formative Assessment in Arizona*

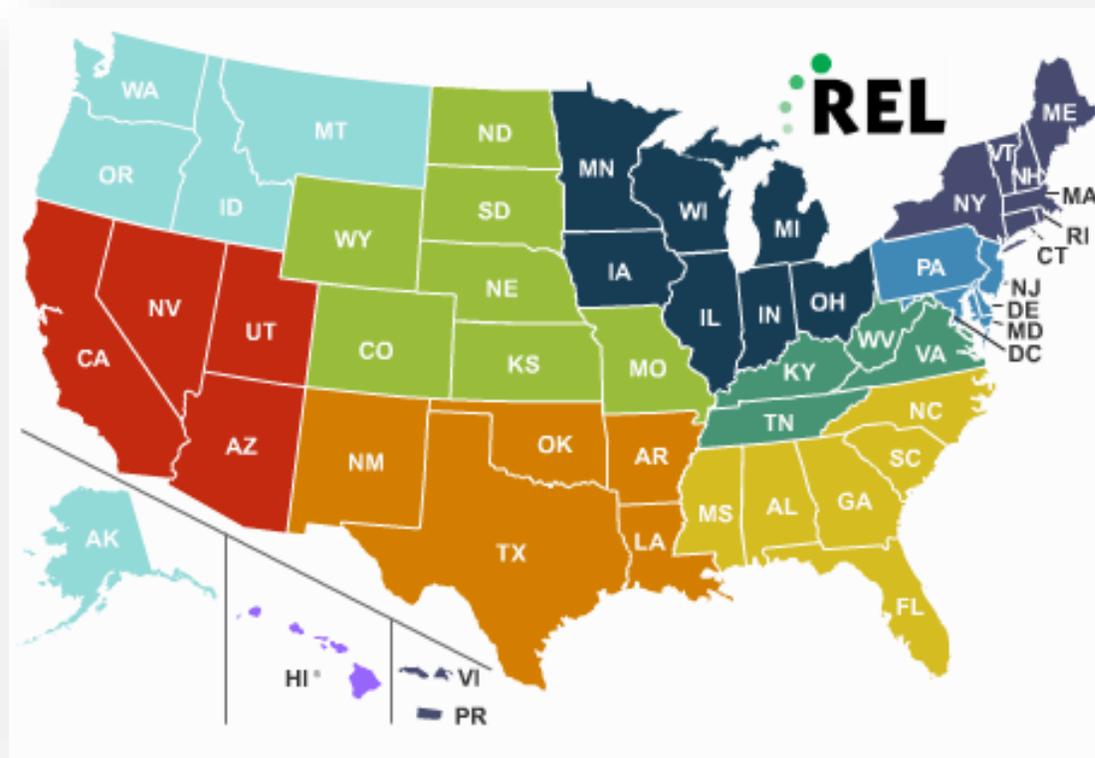
Lenay Dunn

Marie Mancuso

REL West at WestEd

WestEd

Ten RELs work in partnership with local education agencies (LEAs), state education agencies (SEAs), and others to use data and research to improve academic outcomes for students



# REL West Educator Effectiveness Alliance

- A longstanding partnership of state & district leaders across Arizona, Nevada, and Utah who are seeking to expand evidence-based supports for teachers & principals to better develop and retain them over time
- Alliance activities include regional events, state-specific strategic planning, & applied research studies (like this one)
- <https://ies.ed.gov/ncee/edlabs/regions/west/Partner/EducatorEffectiveness>

# Formative Assessment in Arizona

- In 2015, partnering with the Regional Comprehensive Center and REL West, the Arizona Department of Education (ADE) launched a formative assessment initiative to provide support and assistance to LEAs:
  - Series of web-based professional learning opportunities designed to build understanding and application of formative assessment practice and its relationship to student identity and agency
  - Statewide formative assessment community of practice; multiple summits attended by teachers and leaders from across the state
  - Active member of Council of Chief State School Officers (CCSSO) Formative Assessment for Students and Teachers, State Collaborative on Assessment and Student Standards (FAST SCASS)

# Current Efforts

- New ADE Teaching and Learning Framework, in which formative assessment is embedded
- Demonstration districts across the state (e.g., Sunnyside Unified School District)

# *New REL West Study: The Association between Teacher Formative Assessment and Student Self-Regulated Learning*

Reino Makkonen

REL West at WestEd

# Study Background

- REL West analyzed data from surveys of students and teachers in grades 3–12 in three Arizona LEAs in spring 2019
- Overall 1,239 teachers (38% response rate) and 24,480 students (47% response rate) completed surveys

District	PK-12 enrollment (2019/20)
Chandler Unified District #80	45,523
Flagstaff Unified District	9,555
Sunnyside Unified District	15,539

# Research Topics

- What self-regulated learning strategies do students report using in the classroom?
- What formative assessment practices do teachers report using in the classroom?
- What types of formative assessment training did teachers report participating in?
- Are the amounts and types of teachers' formative assessment training associated with their formative assessment practices and their students' use of self-regulated learning strategies?
- Are students' self-regulated learning strategies associated with their teachers' formative assessment practices?

# Across districts, students frequently track their own progress, but less often solicit feedback from their teacher or peers

In class I keep track of my own progress.



I try to connect what I'm learning to things I already know.



In class I identify different ways to improve my work.



I set goals for myself to direct my learning in class.



In class I ask myself questions to help me understand what I'm learning.



In class I get feedback from other students to improve my work.



In class I ask for feedback from the teacher to check my understanding.



□ Never

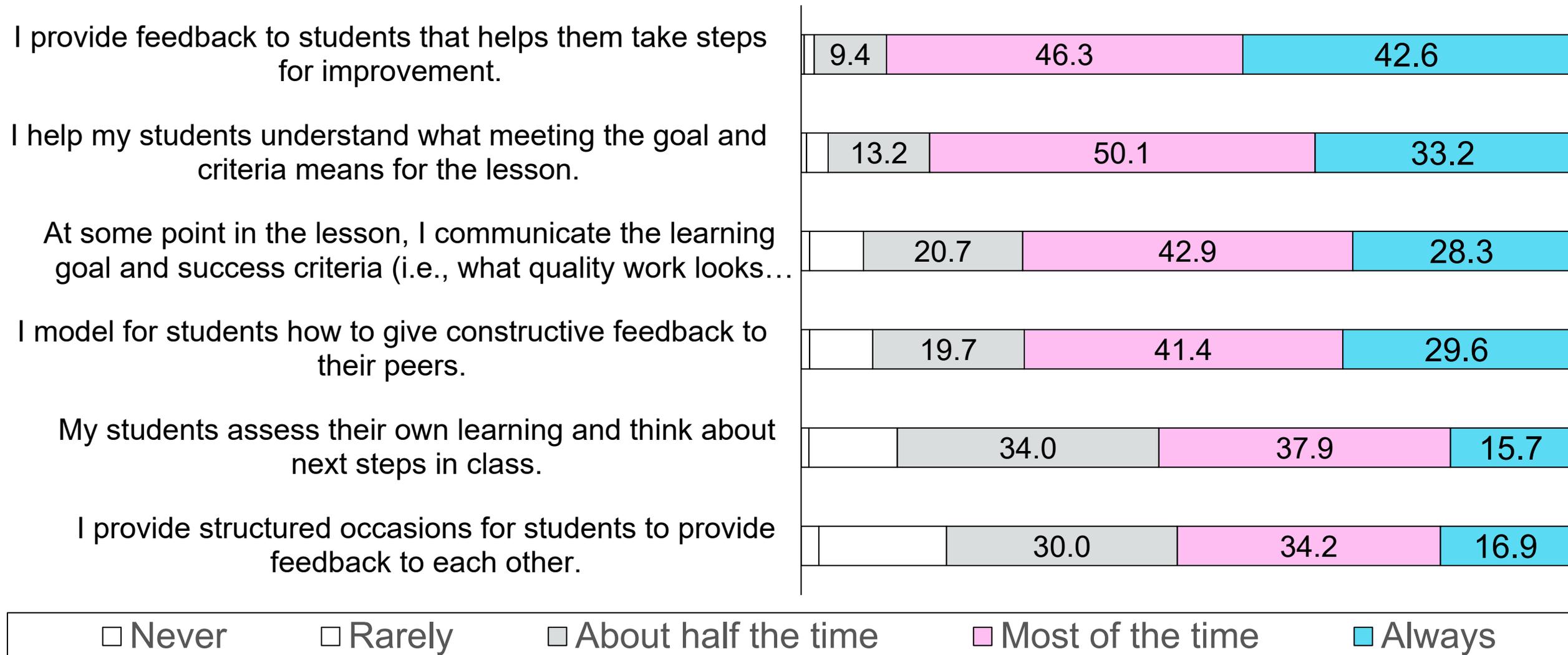
■ Rarely

■ About half the time

■ Most of the time

■ Always

# Across districts, teachers frequently give students feedback, but less often provide occasions for students to give feedback to one another



**Most teachers reported some type of formative assessment training, but the learning formats were quite mixed and difficult to reliably analyze**

- 50% of teachers received their formative assessment-focused training/support via some type of related peer mentoring, observation, collaboration (independent of formal formative assessment coursework)
- 39% participated in formal formative assessment coursework (with/without other supports)
- 11% reported having no formative assessment training or support to date

- Although the differences were small, during an average week, the teachers in the study (across districts) who participated in any formative assessment training:
  - Reported using formative assessment practices more frequently (by +0.25 practices; 0.15 SD)
  - Taught students who reported more frequent self-regulated learning strategies (by +0.11, or 0.18 SD)

Across districts, the least frequently used teacher formative assessment practices had the strongest associations with student self-regulated learning

Teacher practice	Teachers overall (n = 998)	Elementary teachers (n = 336)	Secondary teachers (n = 580)	STEM teachers (n = 286)	Non-STEM teachers (n = 712)
I provide structured occasions for students to provide feedback to one another.	<b>.13**</b>	<b>.15**</b>	<b>.10*</b>	<b>.26**</b>	<b>.09*</b>
My students assess their own learning and think about next steps in class.	<b>.12**</b>	<b>.18**</b>	.07	<b>.17**</b>	<b>.10**</b>
I model for students how to give constructive feedback to their peers.	<b>.09**</b>	<b>.11*</b>	.07	<b>.16**</b>	.06
I help my students understand what meeting the goal and criteria means for the lesson.	<b>.08*</b>	<b>.18**</b>	-.01	<b>.13*</b>	.05
I provide feedback to students that helps them take steps for improvement.	.07	.07	.04	.11	.05
I communicate the learning goal and success criteria for the lesson to my students.	.03	.10	-.04	.02	.03

# Limitations of the Study

- Given the study's low response rates (38% teachers, 47% students), the findings may not reflect the full populations in these districts
  - It was not possible to determine how representative the responses are
  - A different sample of survey respondents might have yielded different results
  - These results may be more representative of teachers with some awareness of formative assessment practices (and their students)
- This was also not a causal analysis; findings are correlational (associations) only

# Key Takeaways and Considerations

- Students less frequently solicited feedback from their teacher or peers
- Teachers less frequently provided occasions for students to give feedback to one another
- However, facilitating student peer feedback and self-assessment had stronger positive associations with self-regulated learning

# Key Takeaways and Considerations

- Consider ways to more strongly emphasize teachers' effective facilitation of peer student feedback and self-assessment
  - This will look different in different grades and subject areas
- Explore contextual variations:
  - Roll out trainings in a subset of schools (then compare results to other schools)
  - Examine teachers' use of formative assessment practices in different grade spans and subject areas

# *Connecting Research & Practice: Formative Assessment in Sunnyside Unified School District*

Pam Betten

Sunnyside Unified School  
District



# SUNNYSIDE

Unified School District

**Established in 1921**

**Surrounded by two First Nations**

**2,000 employees**

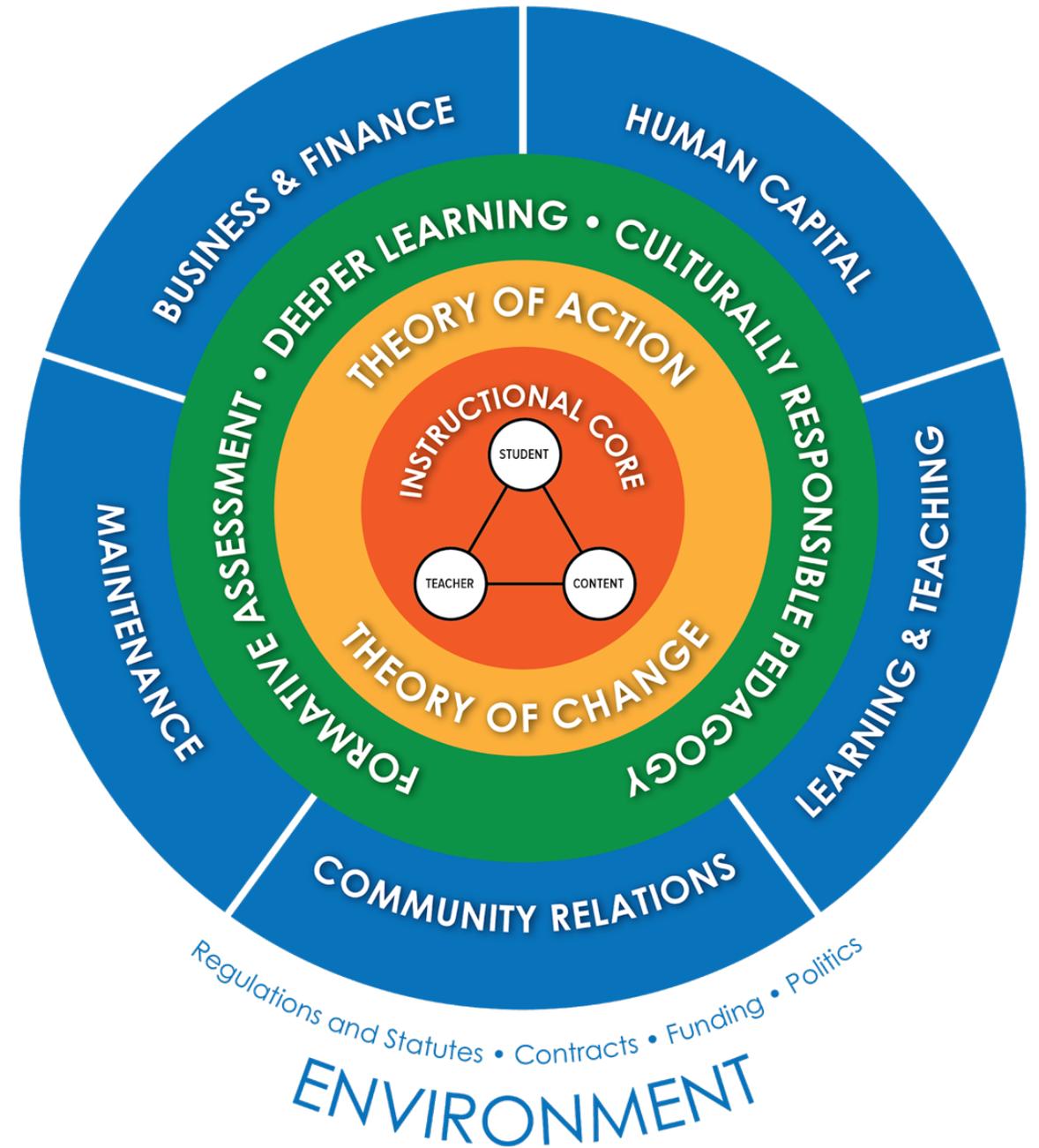
**21 schools**

**Serving 15,648 students**

**84% Hispanic**

**86% qualify for free or reduced lunch**

# SUSD Coherence Framework

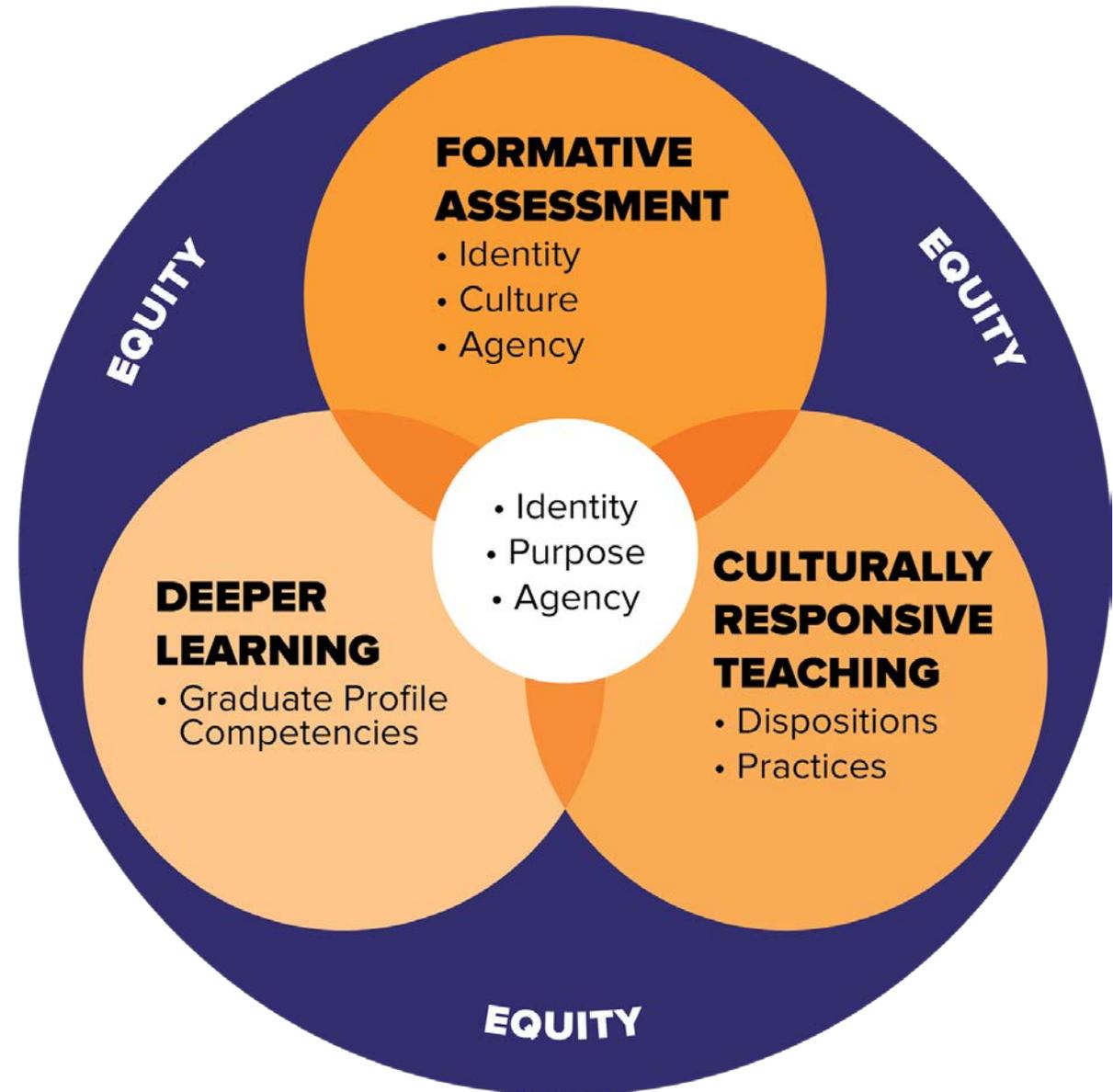


# The Coherence Framework: Strategies

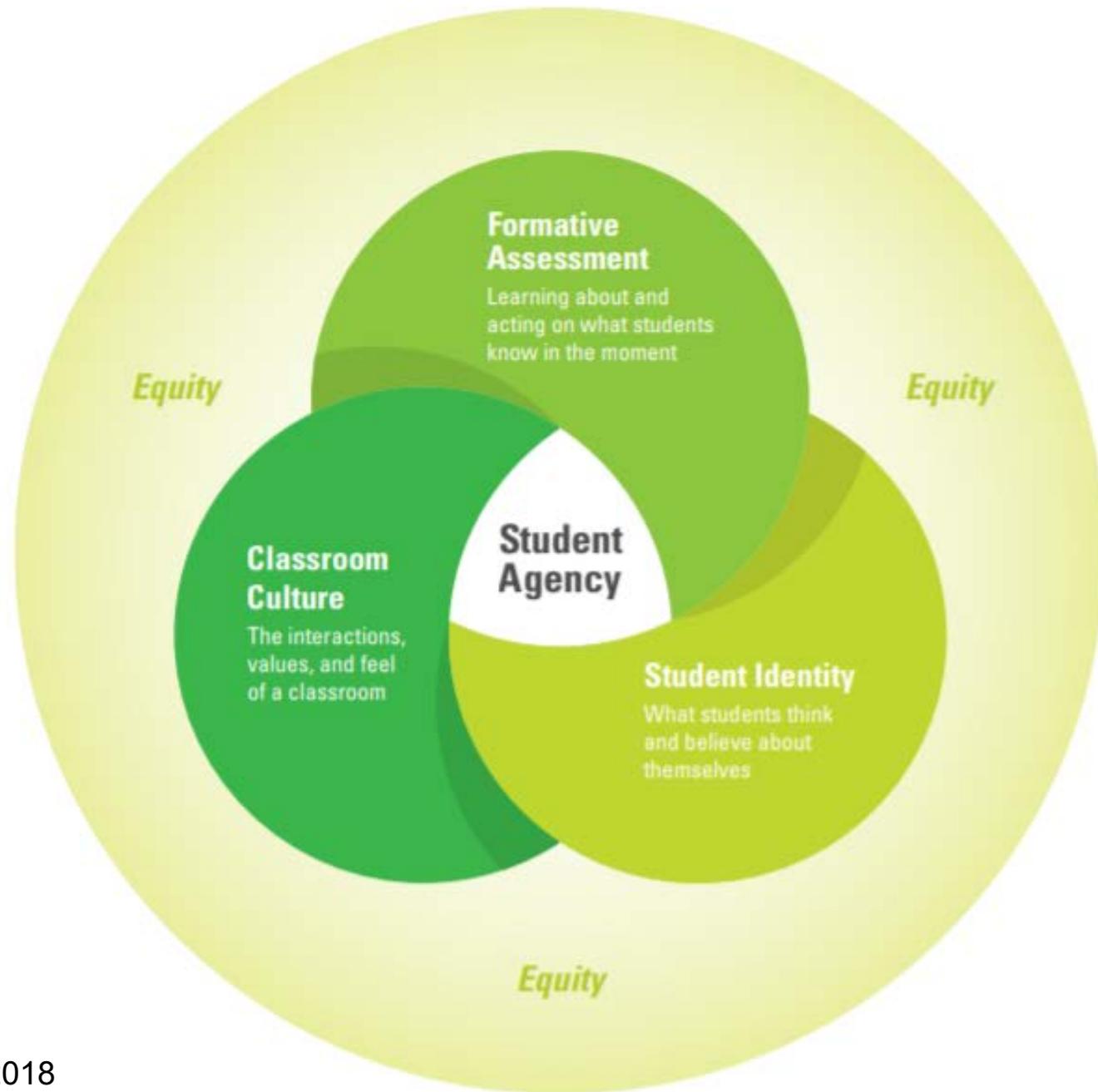
A set of actions a district deliberately takes to provide capacity and support to the instructional core

Actions are derived from a set of interrelated theoretical frameworks that support our Theory of Action:

- Formative Assessment
- Deeper Learning
- Culturally Responsive Teaching



# Guiding Principles



The Formative Assessment Process is used by the teacher and students to *notice, recognize, and respond* (Bell & Cowie, 2001) to student learning in order to enhance that learning, during that learning.

***The way students learn and the way adults learn are very similar. In highly effective adult learning communities, we see the same elements that we see in formative assessment classrooms, including:***

- ✓ a focus on learning
- ✓ shared school vision
- ✓ reflective dialogue
- ✓ collaboration
- ✓ shared responsibility coupled with high expectations for the learning of all students in the school
- ✓ individual and collective efficacy
- ✓ supportive social climate
- ✓ “deprivatizing” of practice (collaborating, sharing practice, and planning with others)
- ✓ learning from errors
- ✓ common language

# Principles of Systemic Approach to Leading for Teacher & Student Agency

- No hierarchy in learning
- We learn the work by doing the work
- Professional learning as “thought partner” work
- Reduce variability within and across sites
- Grow teacher practice through an inquiry cycle that mirrors formative assessment and the student experience
- Quieting the noise and championing a relentless focus!

# Structures/Levers

- Courses focused on Formative Assessment and Student Agency
  - Leveraged various “courses” to build foundational knowledge of formative assessment constructs
  - Moved from individual participation to Lead Learner model to Full-Scale Sites
- Leadership Agency
  - District Curriculum & Instruction Department
  - Lead Teachers
  - Leaders (Principals, Assistant Principals, Coaches)
- Instructional Rounds – Cadre Walks
  - Developing Thought Partners
  - Honest, vulnerable dialogue
- Making the “work” central to Curriculum & Instruction
  - Transparent Intentionality across content, program, and practice
  - Constant and consistent messaging around the definitions and the expectation – no mixed messages

# Where are we now?

Year 5 (2020–2021)

- All 21 sites expected to implement formative assessment work
- 8 sites are working with partners to establish Demonstration Sites
- Curriculum & Instruction Team is deliberate about constantly weaving formative assessment into professional development and curriculum
- Monthly Leadership meetings are about Formative Assessment – Even Now!
- More formalized adjustments to Teacher and Principal Evaluation
- Formative Assessment is a core construct to teaching and learning in Sunnyside and is reflected in our Graduate Profile and Coherence Framework with close attention on Identity, Purpose, and Agency

# Student Quotes from Hybrid and Remote Learning

*“Hey partner, what is our success criteria?”* - Kindergartener

*“I think I found a different strategy. Can I share my screen and show it?”* - 7th grade math student

*“Can I use my math tools? I can solve equations with 3 easier when I use tools.”* - 1st grader

5th grade Student A: *“What do you think ‘bustling’ means, because I’ve never heard it before?”*

5th grade Student B: *“Should we search it up?”*

*“I placed myself on 2 on the continuum because my partner is right - I need to work on my conclusion and make it stronger.”* - 6th grader

10th grade Student A: *“I didn’t hear anything bad from it.”*

10th grade Student B: *“Yeah, but what do you think I should write my counterclaim about?”*

*“I think I don’t know where to go, can I show you my screen? I want you to see where I am lost.”* - Kindergartener (to his teacher)

# What are we learning in this current context?

- **Leadership Conditions:** Being intentional about cultivating a learning culture that fosters the development of identity and agency in both teachers and students.
- **Formative Assessment:** Mirroring the formative assessment process of inquiry, reflection, and feedback for professional learning.
- **Vulnerability, Mutual Trust, & Intellectual Rigor:** Understanding the impact on the development of Learner Identity and Agency.

# Thank you!

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