The Ongoing Assessment Project

OGAP

NCSM

What's the Good News: Division Understanding Can Be Developed Through the Analysis of Students' Preexisting Knowledge

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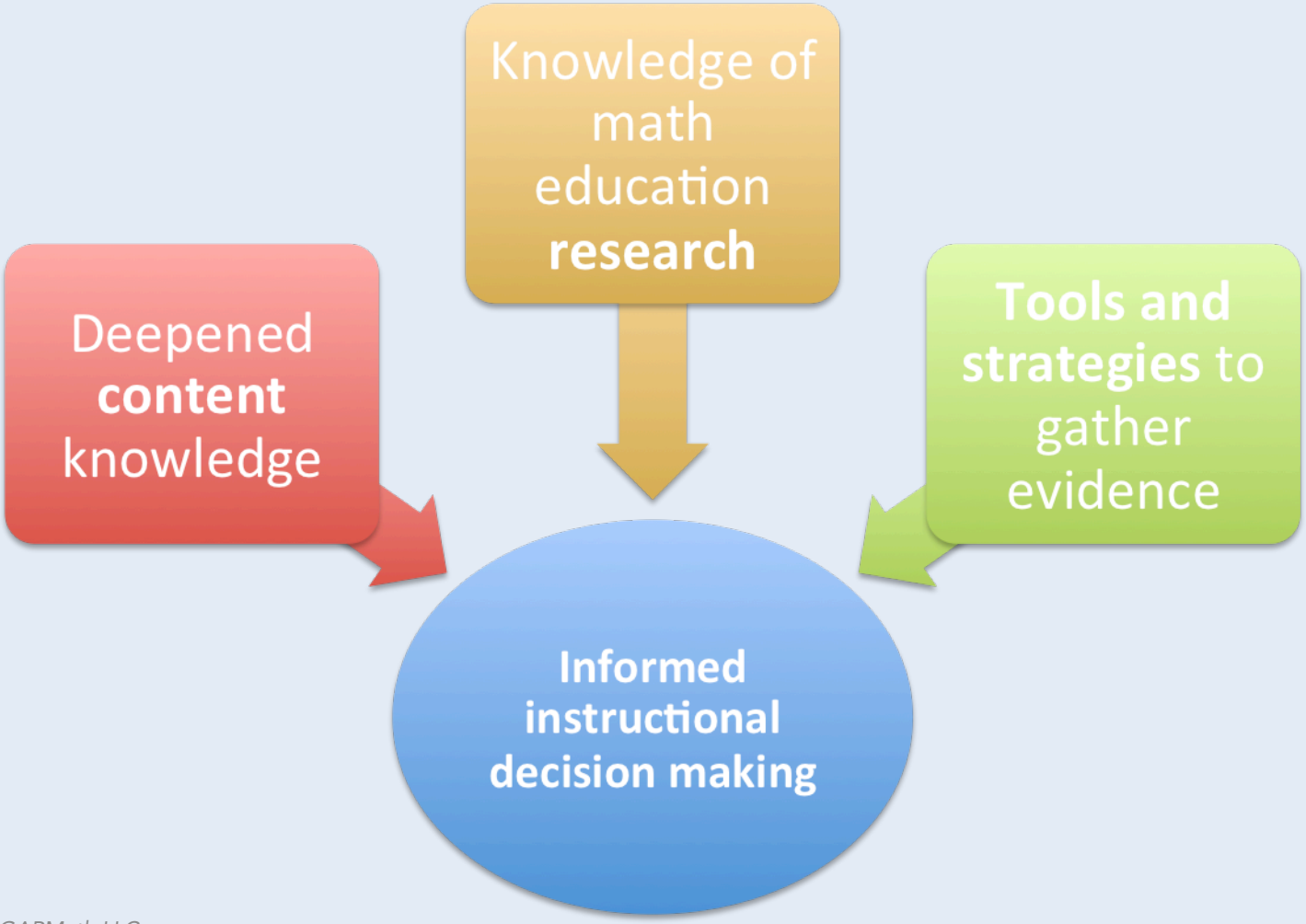
The Ongoing Assessment Project (OGAP)

- OGAP is an intentional, systematic, and ongoing **formative assessment** system designed to gather evidence as students learn specific mathematics concepts (Additive Reasoning, Multiplicative Reasoning, Fractions, Proportions).

- OGAP is grounded in the math education research on how students learn math concepts – **Learning Progressions**

OGAP – Knowledge-based Decision Making…

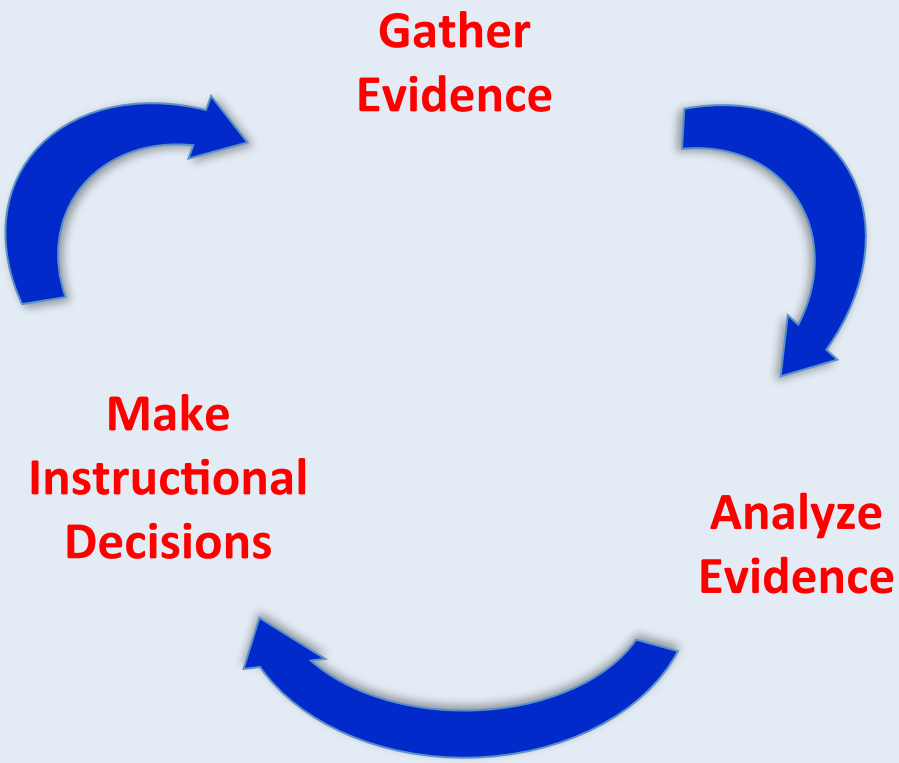


The **Essence** of *formative assessment* is…

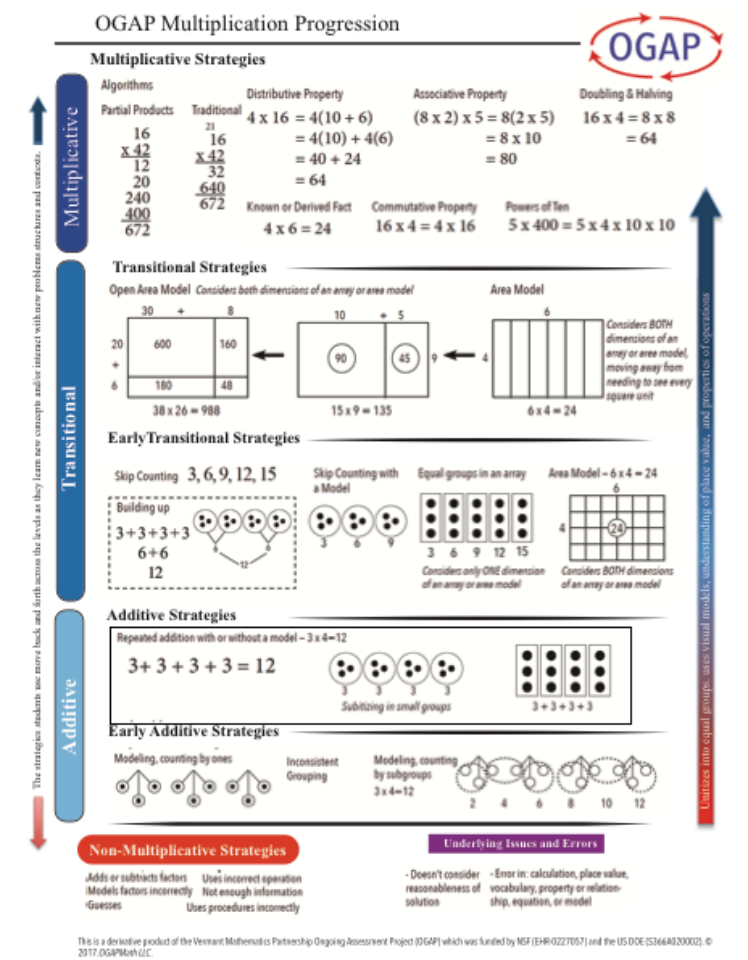
- …"the relentless attention to evidence of student thinking" (p. ix) and the systematic and intentional use of this information to inform instruction and student learning (Popham, 2012).

- To be considered formative assessment the evidence must be 'elicited, interpreted, and used by teachers and learners" (Wiliam 2011, 43).

OGAP Cycle



OGAP Multiplicative Reasoning Framework



- What do you notice?
- What are the key elements of the MR progression?
- What is unfamiliar?
- What questions do you have?

Important Ideas About the Multiplication and Division Progressions

1) Movement along the Progressions is not linear
2) Students' strategies will be at different levels
3) The Progressions provide instructional guidance
4) The Progressions are not evaluative
5) Collection of underlying issues and errors is important

Recommended OGAP PLC Components

Part I: Content (Division)

Part II: Analysis of student work and evidence for instructional decision making

Part III: Selecting items from the OGAP item bank.

EG 63 – Bake Sale

Solve this problem two different ways

The 4th grade class earned $132 from a bake sale.

They decided to donate an equal amount of money to four different organizations.

How much money will the class donate to each organization?

Show your thinking.

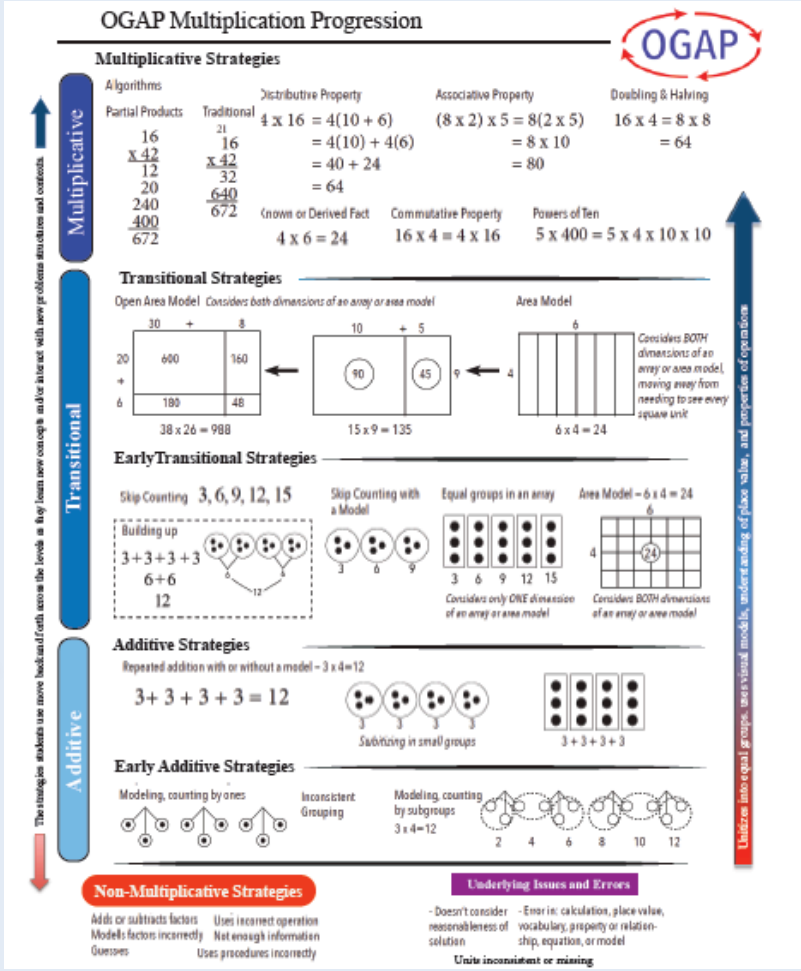
Examining Student Work

1. Sort the student solutions by strategy
   - Not by right and wrong

2. How could you describe the 'piles' you have created? What do they all have in common?
   - Put a sticky note on your piles that describes the student strategy

Examining Student Work

Place each pile of student work on the learning progression



An OGAP PLC

Assess

- Why did you give this problem?
- Solve yourself multiple ways.
- Sort student work by similar strategies.

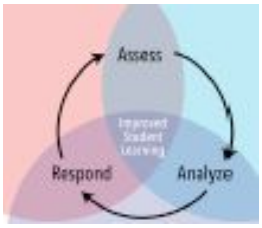
Analyze

- What's the good news?
  (evidence of developing understanding)
- What issues are evidenced in the student work?

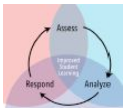
Respond

- What are possible next instructional steps?
- What is the next item you will give and why?

OGAP PLC
Examining Student Work



Date:	**Grade:**
Attending:	



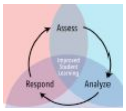
ASSESS

- What task was given?

- Why was this task chosen? What assessment information was needed?

- Solve the given problem multiple ways.

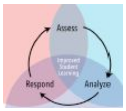
- What strategies might students use (list below)? What errors might be evidenced in the student work?



ASSESS (continued)

- Sort the work by similar strategies. List the strategies below, along with the names of the students who used those strategies.

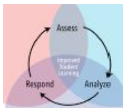
- Locate the strategies noted above on the appropriate learning progression.



ANALYZE

- What is the evidence of developing understanding?

- What issues or concerns are evidenced in the work?



RESPOND

- What are possible next instructional steps?

- What is the next item that will be given to students? What mathematics does it address?

The Ongoing Assessment Project (OGAP)

OGAP Overview

Started in 2003 in Vermont, OGAP is a systematic and intentional formative assessment system in mathematics. It is based on mathematics education research on how students learn specific concepts, common errors students make, pre-conceptions and misconceptions that impact the learning and application of new concepts.

OGAP provides formative assessment training in:

- Additive Reasoning,
- Multiplicative Reasoning,
- Fractions,
- Proportionality

OGAP Formative Assessment System

This system involves using specific knowledge described below and the OGAP Learning Progressions/Frameworks to:

- Gather and analyze evidence about students' pre-existing knowledge to guide unit planning
- Implement a continuous and intentional system of instruction based on evidence in student solutions. This includes:
    - Regularly using instructionally embedded OGAP formative items.
    - Using the OGAP Framework/Learning Progression to analyze evidence in student work
    - Making timely and effective instructional modifications based on evidence of student understanding

OGAP Training

Central to all OGAP trainings is a focus on teacher knowledge. Specifically, this knowledge includes:

- mathematical content specific to the related mathematical content
- mathematics education research on how students learn specific mathematics concepts
- deep understanding of the related research-based OGAP Framework/Learning Progression
- formative assessment practices specific to mathematics.

In addition, OGAP training includes personalized school or district follow-up support focused on helping teachers effectively embed OGAP formative assessment into their practice.

OGAP Experience

OGAP has worked with a variety of partners including the School District of Philadelphia, Charleston County, SC School District, Maryland Department of Education, AMSTI statewide initiative in Alabama, and Omaha, Nebraska Public Schools to name a few.

To Learn More About OGAP

- Visit ogapmathllc.com
- Contact Beth Hulbert beth@ogapmathllc.com