



Aporia Consulting Ltd.

# Capacity-Building for Teacher-Level Data Use

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# The DEMOS report

- Brain Gym
- Learning Styles
  - activists, theorists, pragmatists, reflectors
  - divergers, convergers, assimilators, accommodaters
  - verbalisers, imagers, analytics, wholists
  - analysts, changers, realists
  - visual, auditory, kinesthetic
- Multiple Intelligences

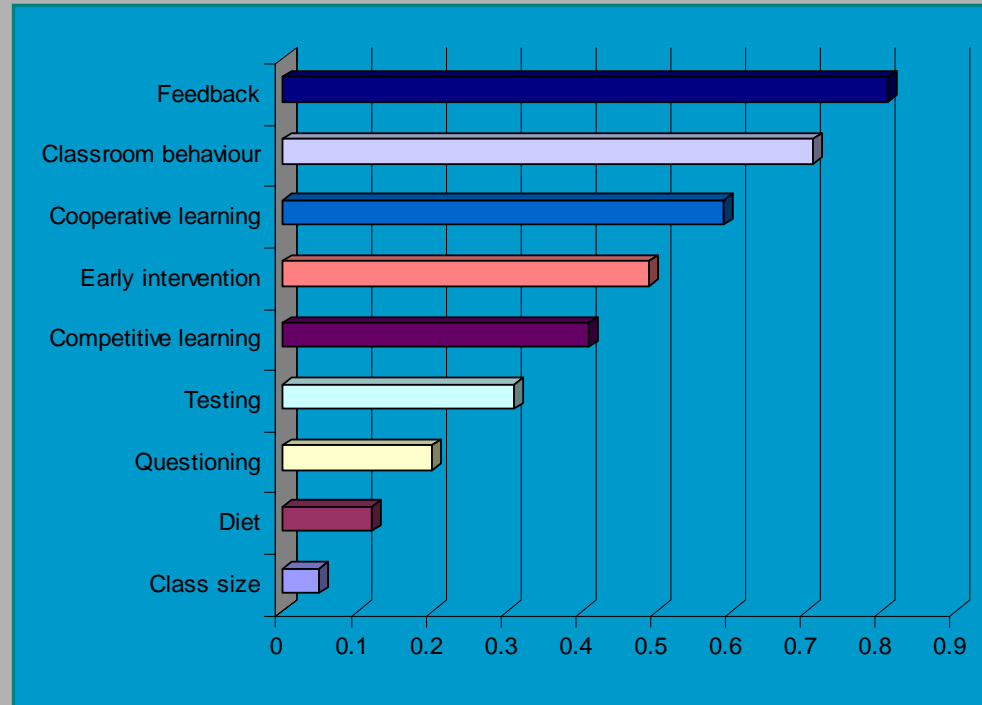


# Howard Gardner...

... I learned that an entire state in Australia had adopted an educational program based in part on MI theory. The more I learned about this program, the less comfortable I was. While parts of the program were reasonable and based on research, much of it was a mishmash of practices, with neither scientific foundation nor clinical warrant. Left-brain and right-brain contrasts, sensory-based learning styles, 'neuro-linguistic programming', and MI theory commingled with dazzling promiscuity.

# Achievement Influences

Learning Influence	Effect Size
Feedback	.81
Classroom behaviour	.71
Cooperative learning	.59
Early intervention	.49
Competitive learning	.41
Testing	.31
Questioning	.20
Diet	.12
Class size	.05



**Feedback is a a major influence on student achievement because it capitalizes on what we know about how people learn**



## National Research Council (2000)

Ongoing assessments designed to *make students' thinking visible to both teachers and students* are essential. They permit the teacher to *grasp the students' preconceptions, understand where the students are in the "developmental corridor" from informal to formal thinking, and design instruction accordingly*. In the assessment-centered classroom environment, formative assessments help *both teacher and students monitor progress*.



# Assessing student understanding of fractions (Grossman et al., 2005)

Which of the following would best assess whether a student can correctly compare fractions?

Write these fractions in order of size, from smallest to largest:

- $5/8$ ;  $1/4$ ;  $11/16$
- $5/8$ ;  $3/4$ ;  $1/16$
- $5/8$ ;  $3/4$ ;  $11/16$

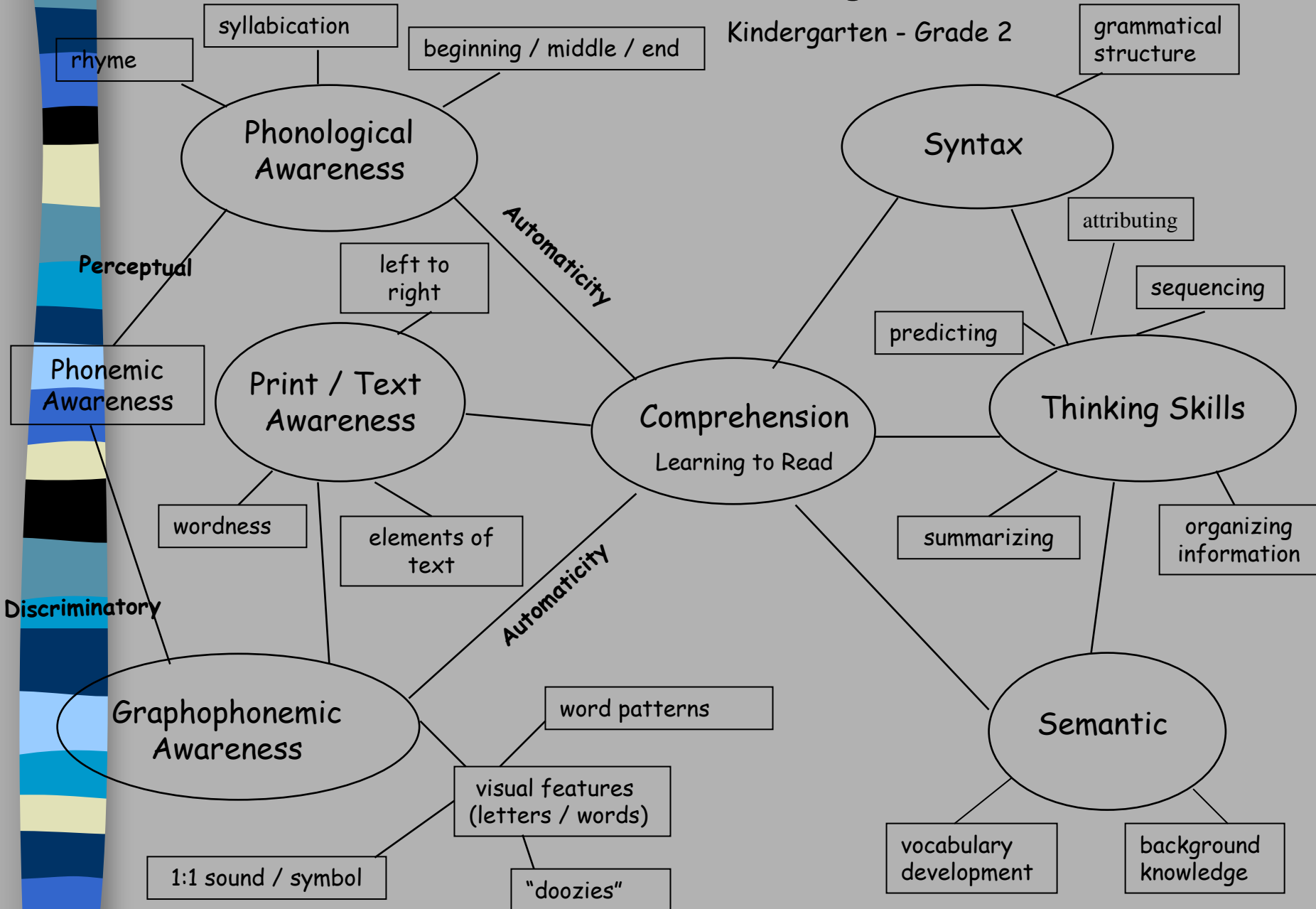


# Conceptions in the *disciplines* and *subjects*

- Historical change as an “event” vs. the “state of affairs”.
- “Recessive Experiences” – Experience with percents as a foundation for learning about rational number vs. whole number reasoning.
- Underestimating amounts of variation in teaching evolution – Sorting sunflower seeds by the number of stripes.

# Learning to Read

Kindergarten - Grade 2





# Purposes of Classroom Assessment

- **Assessment for learning**
- **Assessment as learning**
- **Assessment of learning**



# Assessment For Learning

- designed to give teachers information to modify and differentiate teaching and learning activities
- acknowledges that individual students learn in idiosyncratic ways and
- recognizes that there are predictable patterns and pathways that students follow.
- assessments designed and used to determine what students know and gain insights into how, when, and whether students use what they know.
- helps teachers streamline and target instruction and resources.



# Phase 1: The “Looks Like” Project

- Mission – Defining Teacher-Level Data Use & Locating Images (a follow-up from the first year’s PNC research)
- Structure – A facilitated “working group” over 3 sessions
- Changes:
  - Leadership
  - Task requirement: From finding to building images
- Recommendations for Phase 2



# AFL Properties from Phase 1

- **Clarity of Purpose**

“That Assessment FOR Learning as a classroom assessment purpose is clear to the teacher and students.”

- **Explicit Learning Progressions**

“Clear links to curriculum expectations and the learning progression towards understanding (exemplars).”

- **Intended transparency of current knowledge**

“Current knowledge on the continuum of understanding (towards the expectations) is made visible for students and teachers.”



## Cont'd

- **Pedagogical next steps informed by evidence**

“The pedagogical next step is informed by reflection on evidence (and this would manifest itself in differentiation); errors are considered as information.”

- **Students' next steps informed by evidence**

“The students next step is informed by reflection on evidence (feedback is descriptive not evaluative); errors are considered as information.”

- **Assessment supports metacognitive development**

“The assessment supports the students development of metacognitive awareness.”



# Cont'd

- **Integrated process**

“Assessment for learning is an integrated process not an isolated event.”

- **Multiplicity and intentionality**

“There are multiple methods (reliability) but the method choices are intentional.”

- **Assessment differentiates**

“You see different kids at different places doing different things that are targeted.”



## Phase 2 of the “Look Likes” Project

### **Districts that choose to participate in developing these images are expected to:**

- Identify existing initiatives that provide promising prospects for building good images of AfL. These need to have a clear discipline or content focus that will direct the composition of the team and be located in sites with strong administrative support.
- Commit the time of a curriculum person with expertise within the given content area (“facilitator”) to coordinate the process of developing the AfL image and record the detailed case example as an image of AfL. As well, facilitators are expected to be part of the GTA-PNC AfL project steering group and attend sessions as outlined in the workplan below.
- Engage in the ongoing evaluation of the implementation of these AfL approaches and their impact on the students who are in the schools that participate.



## Phase 2

- Case teams in each participating district will be established with facilitators attached.
- All case team members will attend anchor sessions with Aporia Consulting Ltd. focused on planning and capacity building in relation to assessment for learning.
- Facilitators and the Project Leader will meet with Aporia consultants to plan and develop scaffolding for the case teams.



## Phase 2

- Facilitators will develop and capture the images of AfL with the case teams and report to the Project Leader.
- Aporia will conduct an ongoing evaluation of the implementation of the AfL images in the cases and of their impact on the students in the participating schools.
- The Project Leader and Aporia will prepare a report for the PNC Steering Committee that includes the images, a cross-case analysis of the process required to develop the images and ideas for implementation.
- GTA-PNC districts will receive the images, properties and implementation ideas for use in their own context.