Session 9

Thinking About Thinking:
Metacognition

Transforming Schools into Communities of
Thinking and Learning about Serious Matters

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My essay on cognitive apprenticeships for the previous session titled "Making Thinking Visible to Build Student Confidence in Imperfect People and Institutions" illustrated why visualizing thinking is so important to my students, and my frustrated and demoralized low income students in particular. Once they visualize their thinking, my students need metacognitive skills to "recognize flaws or gaps in their own thinking, articulate their thought processes, and revise their efforts" (Brown, Bransford, Ferrara and Campione, 1983) if they are to thrive in their, at times, hostile urban environment.

Assuming students become cognizant of their thought processes, without metacognitive strategies those who then attempt to learn independently will likely become frustrated. To learn independently, we all need to apply these strategies "to find information, evaluate when we need additional resources, and understand when to apply different approaches to problems." (Darling-Hammond *et al.,* 2003, pg. 159)

Metacognition has two aspects. According to Darling-Hammond *et al.*, these aspects are 1) reflection - thinking about *what* we know; and 2) self-regulation - managing *how* we go about learning. One of the best strategies for teaching the first aspect, reflection, is questioning. To facilitate questioning, I plan to use a KWL chart to help students reflect on their learning before, during and after lessons. The three column KWL chart has three questions: 1) Know what? 2) Want to know what? and 3) Learned what?

I will instruct students in the second aspect of metacognition, self-regulation, to help them study more efficiently, for example by contacting community resources to discover what has already been invented, or is known, before they "reinvent the wheel" or spend their time proving that the moon is round to answer the question "What is the shape of the shadow cast by the moon on the earth?"

My instruction in metacognitive self-regulation will also help my students persevere by enabling them to independently redirect "the normal frustration that occurs when things are confusing or are not initially productive into further learning and research strategies." (Darling-Hammond *et al.* , 2003, pg. 161) To be effective in life, all students have to learn to manage frustration, perhaps none more so than students from low income families who are uncertain as to where their next meal will come from or how long they will have a roof over their head. In the Bay area in 2016 with rapidly rising house prices many middle income children living in rental housing are uncertain as to how long they will have their current roof over their head.

I am investigating the feasibility of using a program, Fostering Communities of Learning, as a model for instructing students in both aspects of metacognition, reflection and self-regulation. This program, described by A.L. Brown (1997), leads inner-city youth 6-12 years of age to discover the deep principles of domains, such as environmental science and biology, using authentic tasks that affect the daily lives of urban students. Fostering Communities of Learning builds on young children's emergent strategic and metacognitive knowledge to develop flexible learning and inquiry strategies of wide applicability. These are the types of strategies my students need to thrive in the urban environment.

References

1. Darling-Hammond *et al.* 2003. The Learning Classroom: Theory Into Practice. Detroit: Annenberg Media.

2. A.L. Brown 1997. Transforming schools into communities of thinking and learning about serious matters. *American Psychologist*, 52(4): 399-413.