

Sen. Sonia Chang-Diaz, Chair  
Joint Committee on Education  
State House Room, 111  
Boston, MA 02133

Rep. Alice Hanlon Peisch, Chair  
Joint Committee on Education  
State House, Room 473G  
Boston, MA 02133

Dear Madame Chairs:

I wish to thank you for the opportunity to speak before your committee. I plan to distill a few important concepts regarding education and testing in this brief period of time. Metaphorically, this is much like writing about a sophisticated issue within a little Facebook box—where there is far more to convey than the space and time available.

What I intend to do is to fuse economic data presented by Nobel Laureate Paul Krugman, and another Princeton economist, Alan Blinder, with an analysis of teaching methodologies and evaluation strategies that enhance rather than limit cognitive skills needed for the 21st Century labor force.

Krugman points out that jobs which do not follow explicit rules are ones which: “... will tend to grow even in the face of technological progress. He further indicates that, “Computers ... excel at routine tasks, cognitive and manual tasks that can be accomplished by following explicit rules” [“Degrees an Dollars”, NY Times, March 6, 2011].

Blinder emphasizes that: “... rule-based jobs are much more susceptible to computerization... jobs that can be broken down into simple, routinizable tasks are easier to offshore than jobs requiring complex thinking, judgment and human interaction.” Blinder claims that some of the jobs that are being off-shored are “statistical analysis, computer programming, manuscript editing and security analysis, to name just a few.” [Blinder, World Economics, Ap. 2009. p.43.] Blinder further states that, “Service jobs that are potentially vulnerable to off-shoring amount to about 20-30% of total U.S. employment in 2004.” [ibid, p.44.]

The above data situates the discussion of developmental cognition within the context of labor opportunities in the future. Simply put, the way that we teach students to think will have a profound impact upon their ability to acquire meaningful work in the future. Unfortunately, many people involved in the, so-called, “Educational Reform Movement,” are pushing for standardized tests. These drive pedagogy toward concrete thinking rather than the formal operational thought that represents the type of thinking needed in the 21st

Century.

Formal thinking, a term first articulated by the developmental psychologist Jean Piaget, involves acknowledging that problems often need to be approached from multiple vantage points simultaneously. Analyzing and interpreting each frame is critical, yet demonstrating how they are intertwined and mediated is a skill that neither a rule-bound machine nor a standardized test can accomplish. Formal thought allows students to consider possibilities that do not exist, but through the construction of logical projections may become actual solutions. Formal thinking includes the development of empathy for others, and it requires that academic material be relevant to students.

One does not learn to think in complex ways by obtaining information and regurgitating it back through standardized tests that delimit complicated interactions into one static answer or a multiple-choice decision. On the contrary, learning must include the process that Piaget refers to as, *Decentering*. Arguably, it helps to dismantle ethnocentric views and mono-cultural prejudice. Decentering occurs when students are afforded the opportunity to question and become critical of existing paradigms. This type of thinking is fostered through critical writing, seminars and projects that address multivariate real world problems. In order to accomplish these goals we should be focused upon hiring and maintaining bright and talented teachers as well as reducing class size throughout the Commonwealth.

Lastly, I would like to thank you for your time and to ask you to consider my comments as part of your deliberations.

Sincerely,  
Tom Meyers, Andover

cc: Joint Committee on Education Members & Staff  
Sen. Patricia Jehlen, Vice Chair  
Rep. Danielle Gregoire, Vice Chair