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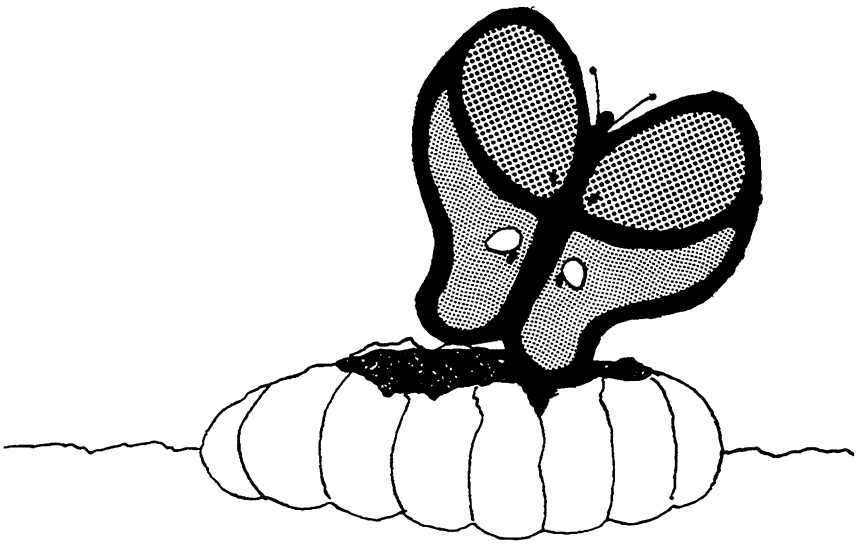
An Emerging New Paradigm of Assessment



I believe that something like a paradigm shift is happening in education today. American physicist and historian of science Thomas Kuhn (1962) popularized the concept of paradigm shift in his classic work *The Structure of Scientific Revolutions*. In science, a paradigm is a conceptual system or worldview that dominates people's thought and perception. A paradigm clearly defines what is "real" and what cannot be real in a given culture or era. It identifies legitimate problems, offers methods for solving them, and provides various screens or eyeglasses for evaluating and interpreting various data and experiences. For example, the accepted paradigm in the Middle Ages placed Earth at the center of the universe. This worldview controlled what people actually saw when they gazed at the heavens and what was considered acceptable in philosophical and theological speculation. In another period, the "flat Earth" paradigm provided the boundary for people's imagination and thinking.

Any questioning of the assumptions of the accepted paradigm is usually discouraged or, at best, not supported. Data and experiences that challenge the dominant view are often suppressed or ignored. As it becomes more and more difficult to disregard elements or ideas that just don't fit into the dominant paradigm, however, what Thomas Kuhn calls a "paradigm crisis" develops.

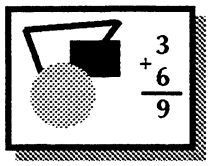
According to Kuhn, when it is no longer possible to disregard "anomalies" or to fit them into the old worldview, the situation is ripe for a shift to a new paradigm. Kuhn (1962) describes the dynamics of this shift:

> Normal science ultimately leads only to the recognition of anomalies and to crises. And these are terminated, not by deliberation and interpretation, but by a relatively sudden and unstructured event. . . . Scientists often speak of the "scales falling from the eyes" or of the "lightning flash" that "inundates" a previously obscure puzzle, enabling its components to be seen in a new way that for the first time permits its solution. On other occasions the relevant illumination comes in sleep. No ordinary sense of the term "interpretation" fits these flashes of intuition through which a new paradigm is born. (122–23)

The old and new paradigms at first seem to represent entirely different and conflicting worldviews. What actually happens, however, is a subsuming of the insights of the old paradigm within the new, emerging paradigm, which results in a dramatic transformation in perspective and subsequently in practical living.

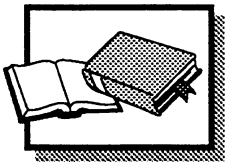
Part of the catalyst for the paradigm shift that I suggest is under way in American education is the theory of multiple intelligences. This theory presents us with a new understanding of human intelligence and learning and thus is a pivotal point for a dramatically new understanding of the potential of students. Many key discoveries in research have contributed to the shaking of the foundations of all our previous understanding of human intelligence, or in the language of Kuhn, have created sufficient anomalies that we are experiencing a paradigm crisis:

- **Intelligence is not fixed or static at birth.** In the past, we thought that one's intelligence was more or less determined by heredity and could be assessed through tests yielding a quantifiable intelligence quotient (IQ). The IQ, we thought, would reveal what an individual's intelligence capabilities were. This idea of fixed intelligence, however, did not take into account the wide variety of environmental, cultural, and socialization factors that affect the development of intellectual capacities. Many researchers now feel that we may have defined intelligence too narrowly and that it is a far more flexible and plastic phenomenon than we previously thought. In fact, these researchers are now looking at intelligence as a set of capabilities that are continually expanding and changing throughout one's life!



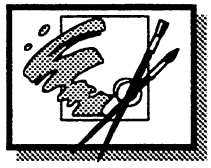
Logical-Mathematical Intelligence

Deals with inductive and deductive thinking, numbers, and abstract patterns; sometimes called scientific thinking



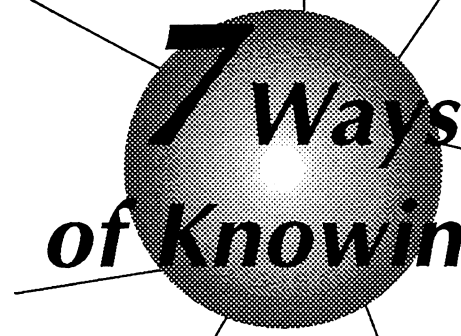
Verbal-Linguistic Intelligence

Deals with words and language, both written and spoken



Visual-Spatial Intelligence

Relies on sense of sight and ability to visualize; includes ability to create mental images

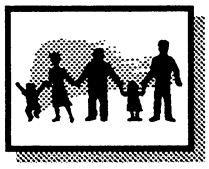


Intrapersonal Intelligence

Relates to self-reflection, metacognition, awareness of internal states of being

Bodily-Kinesthetic Intelligence

Relates to physical movement and the wisdom of the body; uses brain's motor cortex, which controls bodily motion



Interpersonal Intelligence

Has to do with person-to-person relationships and communication

Musical-Rhythmic Intelligence

Deals with recognizing tonal patterns, sounds, rhythms, and beats

* Adapted from *Seven Ways of Knowing: Teaching for Multiple Intelligences* by David Lazear (Palatine, Ill.: Skylight, 1991).