Connecting Principles to Complex Practices:
My "Simple Rules"

"Where I'm Coming from"

Upon reflection, my work seems to have been informed by core set of *principles* or *simple rules* that I did not have when I entered education. They developed from what I subsequently learned about three interrelated components of the work-settings we call schools:

A- … the human *brain*;

B- … the nature of appropriate physical and social environments that support the work of children's learning; and

C- … the nature of appropriate physical and social environments that support how adults learn from their work.

…and, together, the inseparable nature of *methods* and *mindsets.*

With each, below, I have tried to provide a little explanatory support.

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1. Learning is a *capacity*-development process.

Learning is not a theory or "possibility" -- e.g., all children *can* learn -- but is actually a built-in, on-going process. All children *do* learn -- it is a life process, not a choice!

Although often addressed as an outside-in, "filling-up-the-mind" process, learning actually turns out to be an *inside-out* process that develops the mind's capacity to determine a person's actions.

Acceptance of this principle as a fundamental belief -- a fact-*of-life* -- has major implications for every aspect of the work process called *schooling.* Take assessment for example. First, it means that if society wants children to learn what it feels it is necessary for them to learn, then instructional processes must start at a different place -- i.e., with current information about what children already know, and with the ways that they already have in place for learning more. Schools would need to use "testing" as a diagnostic tool at the beginning and during instruction rather than at the end, and would need to actually know, and use in instruction, each student's perceptual strengths and learning style.

Second, with assessment now playing a functional role in the immediate instructional process, it would be more frequent. This frequency allows it to serve as a measure of capacity-development. For example, visible acts, or performance, indicate what an individual knows -- i.e., has learned -- at that point in time. But being able to act consistently over time in different conditions is an indicator that the capacity exists.

If this seems a "futuristic" dream -- impossible to organize and manage -- remember that "testing" results are used diagnostically in hospitals because society (both practitioners and the general public whose mental models reinforce public policies) accepts certain facts-of-life about the processes of the human body, which, like learning, are *already* functioning. Hospitals' choices do not include making believe that everyone of the same age has the same heart rate or should have the same "treatments.

2. Learning capacity is developed through *interaction*.

A process that develops knowledge from the inside-out requires continual interaction between the "inside" and "outside." These cycles of interaction are most effective when driven from the inside. For example, some 20 years ago, George Locke Land, noted the similarities in the ways that a simple cell and an individual human learn and grow.

> *"In essence, the destiny of a cell, and a human is to reach out and to affect the environment . . . The single process of Nature that unites the behavior of all things is the process of Growth."*

Land suggested that *psychological* processes are extensions of *biological* processes. Both cells and people are purposeful organisms - i.e., their existence can be defined by their actions in pursuit of their purposes. Growth in a simple cell or complex brain follows the same basic formula of action-response. Each acts, then takes in and processes the environment's response to that act in a way that produces learning and growth, and then acts again. It is an *actor* on its environment before it is a *reactor*. Growth in capacity-- physical or psychological-- is thus influenced by the environment's reactive feedback to actions.

Thus, in both cell and human, learning and growth are capacity-development processes that begin and end with purposeful action (e.g., problem-solving) and which create changes in capacity through interaction of "new information" with that previously stored. (Edelman [*Bright Air, Brilliant Fire*] similarly suggests we are born with a basic "programming" for learning, then through the interaction of experience, a process of natural selection continually expands its capacity. I believe he calls it - neural Darwinism- the *mind* forming itself.)

3. Environments that support this interaction must provide "3 M's" -- *Mirrors, Mountains*, and *Models*.

"Mirrors" -- that reflect back the results/consequences of one's own actions so it can be used as valuable "data" for determining the next action and the development of a personal identity.

"*Mountains*" to climb--challenges that they want to overcome, with supportive help developing the skills this "mountain"- climbing requires.

"*Models"* that offer *meaning* – standards of what is accepted as "true, right, and good" to serve as guides, and from which values and beliefs are developed.

4. Universal principles include *us*, too.

It's obvious that the learnings from cognitive science are providing remarkable insights about the process of learning and how to support it physically, socially and emotionally. Less obvious perhaps is education's natural preoccupation with applying these universal principles to *children alone*.

Thus we seem surprised when the same principles that seem to work for children (e.g., the human mind learns (expands its capacity to act) from purposeful interactions with the environment) have similar results with adults in schools. For example, in a March, 1996 *Educational Leadership* article, Bruce Joyce presents "new learnings" about "collegial interaction" as a more powerful professional development approach than structured training and teaching. At times like that we seem like the Moliere character who suddenly recognized that he could speak prose.

5. The shortest route to public awareness of how children's minds work may be through adults' understanding of how their *own* minds work.

Two premises -- about the power of personal experience in the context of insights from brain research --underlie this principle.

- I have found that these principles seem to "make sense," when people have opportunities to reflect on their personal and professional lives. Their personal experiences as veterans or victims of schools, families, and work settings can enable them to connect with what is known about the internal joys of learning and how theirs was, or was not, supported.

> "…(a passion for learning) isn't something you have to inspire them with; it's something you have to keep from extinguishing. Human beings are by nature passionate, curious, intrigued. We are by nature theorists. We seek to connect, find patterns, make sense of things. We wouldn't last our first two years if we weren't that way.

> Unfortunately, kids stop expecting school to be a place where they use their curiosity and theoretical abilities. They think of school as a place to find out what someone wants from you or how to appear to conform. That's true of our successful students and our failures both."--- Deborah Meier's [Principal, Central Park East School, NYC]

In fact, the universality of this experience may suggest that it derives from *natural laws "* that many find they have bumped into at some time in their personal or professional lives.

- But is this realization compelling enough for people to want to apply them in their own schools and communities? This is not new knowledge. In fact it has been that repeated personal experience over centuries from which the enduring learning theories have developed--but *only as theories*.

- What is different today is the level of knowledge about the *natural* learning process already "pre-wired" in every human brain. Today's research using brain-imaging technologies (PET and CAT scans, MRI, etc.) is doing for those "theories" what Galileo's telescopes did for Copernicus' theory. *"Once something is seen, it can't be made to be unseen,"* noted Brecht in his Life of Galileo. The unprecedented clarity about brain function that this technology reveals provides information that cannot be ignored without accepting the consequences.

Now because "scientific" research validates what intuition and personal experience tell people is the way their world really is, the route to new learnings for both practitioners and the public need not be "training"-dependent. It can start in the present and be constructed on an internal platform of personal experiences.

We can build on this common base of experience and knowledge of the mind to change minds. "*Change comes when the contained recognize the shape of the container*" noted a community activist many years ago. In this situation that "container' is the human *mind.* And what it contains is the context we commonly term "the culture."

As with McLuhan's fish, who could not understand how much of their behavior " was determined by the nature of the water that was the context for their existence, we have to raise people's consciousness of themselves as learners and the "learning process" that serves as the medium and context for their thinking and actions. .

Much of the current paralysis, frustration, and blaming in education can be traced back to the ubiquitous nature of this "container." It "sees what it believes," and "believes what it sees." It sets us up for a continual struggle between *methods* and *mindsets* because it frames our rationality, and then continual direct experiences that don't seem to fit. Structural changes such as site-based management, teacher empowerment, shared-decision-making, charter schools, etc. that seem to make sense and should work, …don't. And even when they do, they seldom become accepted and sustained. And it drives us crazy. We try harder, fix weak links, even turn to blaming others before giving up and going on to the next great hope or hype.

6. Organizations can't learn, only *people* can -- *one brain/one person*

These *natural* principles suggest that organizational "actions" are, in effect, the outcomes of human thought, driven consciously or unconsciously by *each* actor's search for meaning. When we try to change organizational actions and structures, we are really aiming at the "thought processes" behind them.

Our target then is a singular one -- the thought processes of purposeful, meaning-seeking people. Any permanent changes in schools can only come from changes in that mental "workplace"-- where personal and organizational routines are stored in the form of beliefs, assumptions, and previously-effective strategies.

7. What people learn as they become more effective must ultimately be stored in the organization's way's of doing its work. This *sustainable capacity* must become embedded in the infrastructure of human relationships that are a system's functional connections.

But, as Deming would often ask: *By What Method?*

As an organization, the school is *already* a system - i.e. a collection of interrelated functions intended to accomplish a common purpose. That it doesn't usually operate as one or, when it does, acts dysfunctionally, does not change the fact that the system of relationships is an accountable unit whose most important acts are those that influence the individual actions of its "parts" as they work to attain that common purpose.

Accepting that it already a system as a universal principle/fundamental belief/fact-of-life, provides a more holistic framework and a different starting point for actions. For example, systemic change strategies can start at the *sine qua non* of any system -- its connecting *relationships*. By focusing on the system's functional connections, the system can, from the beginning, act as a system.

This has two profound implications. First, as changes take place all the involved and related parts of the system can adjust. In any system of interdependent parts, this continual adjustment process is fundamental for changes to be sustained. In living systems it is called "growth," in organizations it is called "continual improvement."

Second, it can allow us to address why, regardless of changes in policy and practice, *all* efforts so far to make fundamental modifications to the processes of schooling have failed. Schools have not had the capacity to change themselves as a sustainable system.

For student, teacher, or school system, changes in performance over time are a consequence of learning. A new capacity has been developed. And, as with student learning, *change*--a term more frequently applied to organizations and the people who work in them than to the students--is an *inside-out* process.

- If *sustained change* is a critical indicator of learning, then the school system must have an internal capacity to learn how to fix itself and at present that capacity does not exist. The scope of this problem was illustrated in a report from the Consortium for Policy Research in Education (CPRE) based upon a 3-year study of educational reform in schools, districts, and states and supported by OERI/USDE and the Carnegie Foundation.

> "The most critical challenge is to place learning at the center of all reform efforts--not just improved learning for students, but also for the system as a whole and for those who work in it. For if the adults are not themselves learners, and if the system does not continually assess and learn from practice, then there appears little hope of significantly improving opportunities for all our youth to achieve to the new standards.
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> For this to happen, however, requires a fundamental change in orientation …to one in which all work is designed and evaluated with an express goal of enhancing capacity to improve student learning.
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> …impact on improved learning will depend upon what happens within the system itself. Our data suggest that what is needed is a coherent and strategic approach to capacity building, one that takes into account the needs and goals of the individual learner, school, and district, and state, not just for the immediate initiative, but for the long term. Only in this way can systemic reform's promise of "top-down support for bottom-up "reform be fully realized."
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> "Building Capacity for Education Reform," O'Day, Goertz, & Floden, December 1995

- Because school systems have not been able to operate in that fashion, a belief that school systems can't learn (and therefore change) has become an unquestioned assumption underlying the *culture* of schools. Moreover, it has become a self-fulfilling prophecy as concerned reformers in foundations, government, and industry have poured millions of dollars into isolated, building-centered, demonstrations that usually survive only as long as outside support is maintained. Yet, seldom was the *system* itself included in the reform as an active learning partner.

And the districts themselves had no ways to do that because school systems lacked an infrastructure of processes needed to support the organization's own continuous learning.

Thus, there has been little evidence of systemic change, because it has been impossible to attempt anything systemically. Reformers have been trying to "scale-up," while the organic nature of the system called for ways to "scale-out" -- to develop new capacities from the inside-out.

8. In summary, another principle comes to mind. *The scope of a problem changes its nature.*

We are dealing with a problem whose holistic scope - the school district or *system* - changes the nature of how it can be solved. Its solution requires capacity development (learning) strategies that may at first appear as both *counter-intuitive* and *counter-cultural*. They don't fit the ways we think change happens.

These "new," and more natural, learning strategies support a school system's capacity to change itself by enabling a community and its school district to develop:

- Self-awareness of themselves as *a purposeful system of purposeful people* managing a supportive environment for *learning*;
- A sustainable infrastructure that supports *collaborative work* among those people; and
- Compelling reasons that serve to "drive" everyone through the difficult experiences of working in new ways and learning from it together.