

Excerpt from guidebook accompanying video -- **Schools That Make Sense** -- developed by Lewis A. Rhodes for the American Association of School Administrators, January, 1995. The four-part video & guide suggested a new paradigm for systemic school system change that links the continuous learning needs of students and adults in schools.

4. The First Problem of Systemic Change: Find the System Before You Fix It!

System... what system?

In American education it's become a cliché to blame "the system" and demand *systemic change*, yet there is little agreement as to what that system actually looks like. Some even question whether or not there is a system.

"When you read the myriad of recommendations these commission reports contain, it becomes clear that they are not informed by any conception of a *system*. That is a charitable assessment. . . . those outside the system with responsibility for articulating a program for reform have nothing resembling a holistic conception of the system they seek to influence."

The Predictable Failure of Educational Reform: Can We Change Course Before It's Too Late? Seymour Sarason, 1990

". . . (there is a) lack of agreement on a conceptual model of an optimally functioning education system . . . Agreeing on a set of measures to describe the health of the education system requires broad consensus on how the various pieces of the system fit together. That consensus is elusive and certainly does not exist at present. "Education Counts: U.S. Department of Education, July 1991

"Part of the reason for the interest [in a new Consortium on Productivity in the Schools] is that no one knows how education's component parts really fit together." Editorial, Washington Post, 12/11/92

Yet, there is a system there. People who work in schools increasingly sense that "everything-seems-connected-to-everything-else" -- that their work settings are made up of parts that influence one another, intentionally or unintentionally, as they strive to accomplish their common organizational purpose -- to make a difference in the lives of children. Unfortunately, few people have experienced *positive interdependence* in their organizational systems. Almost universally, "the system" has become autonomy's enemy. And recognizing that one is being affected negatively by a system -- and understanding and perceiving that system so it can be managed productively -- are two wholly different issues.

Today, that latter understanding is the common prerequisite for every major educational reform initiative that attempts to develop a coherent systemic strategy. For schools to be improvable, they first must be seen as *manageable*. Yet even those who think they understand that schooling takes place in a system have trouble seeing it as a manageable entity with boundaries and connected components. There is little understanding of how the "parts really fit together," and how seemingly isolated acts are parts of linked processes even though separated by time and distance.

As a consequence, many policymakers, as well as school leaders, are attempting *systemic change* as if they were characters in the *Blind Men and the Elephant* -- limited by an incomplete understanding of the system with which they must work, with each defining the system from the perspective of the part over which they have most control. Clearly there is a need for a common understanding of the schooling "elephant"-- the minimum viable system of relationships representing a sustainable capacity for responding to the learning needs of children.

Which System?

But in education, where is the system? One can see many "systems" operating in American education and attempts to define them usually produce "cognitive gridlock."

"... it is as though an artist were to gather the hands, feet, head and other members for his images from diverse models, each part excellently drawn, but not related to a single body, and since they in no way match each other, the result would be a monster rather than a man."

Copernicus
in letter to Pope Paul III
(1543)

Where do we start? For example,

- One can look at the levels of schooling a child moves through from pre-school through higher education and think of that as a *system* that will influence the ultimate behaviors of a student moving through it.
- Or one can look at local, state and federal educational policy-making agencies whose budgets provide funding for education and think of that as a *system*.
- Or one can look at all the influences on a child - school, parents, peers, media - and think of them as a *system* of experiences from which a child learns how to act. While these varied experiences are not organized as a system, the child's mind does all the necessary connecting as part of basic sense making. Everything ties together to form a seamless picture that answers two intertwined questions: *What does it mean? What do I mean?*
- Or, finally, there is a system over which educators have the most direct control -- the system of work in specific classrooms, schools, or school districts that is supported, designed and managed as the educational process.

Our starting assumption is that systemic change must begin with the last two "systems"-- the system of influences on a child's mind and the system of adult's work. And we must have ways to work "in" both systems at the same time.

First, we must be able to understand how the *learning mind* takes in and handles the experiences it encounters -- for this is the non-negotiable "system" a child brings to school. In a similar fashion, one enters a hospital with certain systems already in place [e.g., circulatory, digestive, etc.] The hospital, in structuring its capacities to respond to patient needs, cannot ignore those established "transparent" systems without putting the patient at great risk.

Then, we must understand the system of *intentional work* designed to respond to the development needs of that first "system." But at what level of work do we focus -- the classroom? school? or district?

Here it becomes critical to look for the minimum boundary of *viability*. For example, within each person can be found several systems [respiratory, digestive, etc.], and at the same time that individual may be part of several larger systems [family, community, work organization.] But the smallest bounded system that can survive as a unit is the person. It is the same with school "systems." The smallest unit capable of maintaining *sustained* improvement [i.e., changes that do not disappear when people leave] is the school district and its supporting community.

Thus school practitioners are always operating in two parallel "systems." One is controlled through their planning and operational management decisions to achieve the results they want. But, at the same time, they are influenced by the dimensions and relationships of another "system" -- this is composed of all factors that influence the student results they get, whether or not they can control them.

This "two systems" view of schooling may help explain why the work processes of the central office and school buildings seem so disconnected. Each is responding to a different criterion. As an example, the work of curriculum developers in the "first system" starts with what students *must know*. This first system then provides teachers, principals, and other building-level educators with goals for general direction-setting, as well as general support for attaining them.

The work of daily instruction, on the other hand, interacts largely with the "second system." It starts with, and must respond to, what the student *already knows*. And much of this knowledge base increasingly is a product of the "second system" - the one over which educators have little control. As Bill Moyers has noted, the *popular culture* is the "most powerful *chancellor, superintendent, principal or teacher* in America." (1990) The images and fragmented reality that children confront every day -- and from which they evoke meaning and values, provides the canvas and frame on which schooling starts.

Why have we had so much trouble “seeing” these systems?

Although there has been a lot of discussion of shifted paradigms in society, that shift -- at least as far as understanding organizations as systems are concerned -- has not yet taken place. But, if Richard B. Heydinger is correct, the readiness is there.

A shift in the current paradigm is underway when

1. there are *increased arguments about seeing and doing*.
2. there are *extensive reports and data on failures*.
3. there is *dissatisfaction and confusion amongst practitioners*.
4. there is *performance deterioration which alters the political order*.
5. there is an *increased search for alternative approaches*.
6. when *little events lead to crises*.
7. there is *increased dynamism within the system*.

“A framework for examining a current paradigm and assessing its volatility”
cited by Richard B. Heydinger, University of Minnesota in “Assessing the Case for Paradigm
Shifts” - in *On the Horizon* - April-May 1994

Paradigms, as Copernicus demonstrated, have two critical dimensions: a core organizing element to which everything relates, and an “outer” boundary that defines the connected elements. It has been particularly difficult to view schools from the perspective of a different frame or paradigm because both of those elements can now be seen as operating on the basis of *naive theories*.

Of course, no one wants to be accused of holding naive theories. The term itself even sounds demeaning. However, as cognitive psychologists use the term, “naive theories” have a very specific meaning. These are concepts that are formed from simple observation rather than knowledge. As an example, for centuries humankind believed the earth was flat, that the sun and planets circle the earth, and that heavy objects fall faster than lighter ones -- all because they *appeared* to. Many intelligent people held and acted on those and similar observation-supported beliefs -- including people in the church, universities, and governments whose roles depended on the old ways of doing business.

Even today we are learning that the human mind’s tendency to generalize from observable data can still produce naive theories. In fact, at the root of education’s perceived unfixable nature today can be found a “naive theory” of what the work of schools is and how it gets done within a system of influences.

What is this theory? Ask most people what the work of schools is and the answer generally will denote some form of delivery or transmission process -- *communicate* culture, *transmit* knowledge, *disseminate* information. The prevailing unstated theory is that during children’s formative years, the job of the school, family, and church is to *fill them up* with the knowledge, skills, and values they will need to deal with the conditions of future life in healthy, productive ways. In the tape we term this a “dump truck theory.”

Yet the job of schools is no more the "delivery of knowledge" than the job of hospitals is the delivery of medicine. True, medicine is "delivered" in hospitals, but only through a *managed work process* that matches it appropriately to specific individual need. Thus the work of hospitals takes place in a work setting structured and managed to deliver appropriate services based upon continuing individual diagnoses.

Most educators believe that is the nature of their work, also. But they attempt to accomplish that work in a setting that has been structured and managed according to an unstated theory of delivery rather than *response*. The strength of this "delivery" paradigm can be compared to that of Ptolemy’s map of the solar system. It can be easily validated by observation even though many intuitively agree with cognitive science research that suggests learning is not delivered, but “constructed” as part of each student's intrinsic need to make sense.

And there lies the real “data” required for the complete acceptance of the new organizational paradigm for schools, if not for all organizations. Until now, educators have had to operate much as a heart specialist who had never seen the workings of the heart. Although it may be difficult to acknowledge, teaching has gone on for centuries based on assumptions of how learning happens. Today however, we have cognitive science’s new understandings of how the mind actually transforms experiences into stored capacities to act [that is, how it learns.] But these are relatively recent, still developing, and not widely understood. Thus, many still believe learning to be

only a “possibility” [e.g., every child *can* learn] instead of a fundamental biological process like circulation that can be developed and enhanced.

“...the teacher’s job is no longer to ‘cover the curriculum’ but to enable diverse learners to construct their own knowledge and to develop their talents in effective and powerful ways. This changed mission for education requires a new model for school reform, one in which policymakers shift their efforts for *designing controls* intended to direct the system to *developing the capacity* of schools and teachers to be responsible for student learning and responsive to student and community needs, interests, and concerns.”

Linda Darling-Hammond
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The power of the present paradigm

"Civilization advances
by extending the number of important operations
we can perform without thinking of them."
Alfred North Whitehead

Even with new knowledge of the fundamental learning process at which schools direct their efforts, and new understandings of how school practitioners can work to facilitate this learning process, our generation still faces the problem of overriding the prevailing organizational paradigm which lies, invisible, in the deepest recesses of our minds.

Some see this paradigm as a cultural constraint of Western civilization blinding us to the simple truth that was the core of W. Edwards Deming’s entire philosophy. Quite simply, his fundamental belief was that organizations, put together by human beings, become connected systems of individuals -- linked by their work processes to accomplish their mutual purposes -- with each person intrinsically driven to want to have an effect on his or her environment, and willing to learn how to do that.

"Managing results without managing the processes that produce them
is abdication of responsibility."
W. Edwards Deming

Unfortunately, and for the same reasons, accepting this as the fundamental nature of organizational systems is as difficult as accepting learning as part of each person’s fundamental nature. As noted earlier, few people have had totally positive experiences within their systems of work. For many, years of sublimating anger at the system, has led to adversarial roles that became accepted behavior for survival in organizations; part of the transparent *just-the-way-to-do-business*. For example, until now, both labor and management have accepted roles that erode any attempts to function systemically. And in hierarchical structures, we find it hard to believe that people at other “levels” have the same aims, or values that we do.

In both the public and private sectors today, society seems to accept *dysfunctional* organizations as the norm for the same reason that children in dysfunctional families are unaware of their own families’ unhealthy relationships. And, similarly, they see the people in the system at fault, instead of the *relationships* between them.

Thus, except maybe for the person on top, organizations have required unnatural behavior of consenting adults. This might explain a history of revolutions against established authority in religion, government, etc. as these adults periodically withdraw their consent.

While all organizations today are coming up against this anti-“system” cultural bias, education also must overcome the deep-set assumptions, if not beliefs, about the *work* of the system as “delivery.” How did this delivery paradigm gain so much power? How did it become an almost universal learning? Cognitive science suggests one possible answer.

During children's formative years the work of the child is to develop those capacities they will need in the future -- but they develop those understandings, skills, and values in response to challenges they address in the present. The work of the educator, as we can now see, is to provide the opportunities for those capacities to develop and continue to be enhanced.

Picture then, a child between the ages of three to five -- a natural learner, intrinsically driven by wonder and curiosity, seeking to make sense, trying to discover what things mean and -- by testing and discovering their limits - - what he or she means. And the child is put into a world that is organized logically to do the work it believes it is supposed to do.

There is no doubt that if the school's task is knowledge delivery then knowledge should be compartmented into disciplines and levels for easier delivery by specialists. Time should be allocated for maximum efficiency so that the greatest number can be moved through required experiences. Space should be compartmented for easy management. Since teaching-as-delivery is what it is all about, decisions about what is taught become more important than those about how it is to be learned. And although the child is "pre-programmed" as a trial-and-error learner, errors -- a major source of learning -- become punishable because they interrupt the delivery process.

"This can create a kind of Alice in Wonderland world in which people ultimately begin to nod blithely at the inevitability of incompatible events -- a world in which educators cease to try to make sense of their environment for themselves as professionals or for their students. They have to explain the procedures and policies that students encounter only in terms of what some faceless, external, and presumably non-rational 'they' say we have to do."

Linda Darling-Hammond
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What is a child to do... but to try to make sense of this. They do not know that this is not the way things are supposed to be. Unlike the heart and lungs, systems which present simple "we function or you die" choices, the mind is more accommodating. It adjusts and modifies itself as part of understanding the information it takes in. Thus, as in dysfunctional families, or systems, it figures the "system" is okay and it must be "me" that is the problem.

"When teachers are unable to help students make sense of the school environment, the students [and often their teachers as well] become alienated. Young people are very good at identifying things that do not 'make sense' and rejecting them. They find other ways by which to organize their time, their thinking, and their lives. Solving the problem of contradictory policies is a prerequisite for solving the problems of student engagement and learning in schools."

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Children have to develop beliefs that explain what happens there, and roles for themselves that allow them to survive in that setting. They learn to *react* to authority, instead of developing their own sense of what is important, thus becoming increasingly extrinsically motivated. They learn that "wholes" have to be cut into parts to understand them. They learn a variety of ways to cope -- to "beat the system." "Good" students may play the game, and sometimes this makes it work for them; "bad" students frequently resist. They may be labeled as behavior problems or poor learners and soon file that in their self-concept. Many students learn to drop out figuratively, if not literally.

And in the end almost all of us bought the model. That's the way it's *supposed* to be...if there is a problem, it is us.

"[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 else wants from you or how to appear to conform. That's true of our successful students and our failures both."

Deborah Meier, Principal
Central Park East School, New York City

What we need to know to fix the system

Thus, the roots of the present paradigm, the *theory of our business* in schools, run deep. To shift to a new paradigm based on a different theory requires two key bodies of knowledge.

First, understand the paradigm you are leaving behind. “Change comes,” someone once said, “...when the contained realize the shape of the container.” What has trapped us in the present paradigm has been limited understanding of the learning mind -- both children’s and adults’.

We now have to find ways to communicate effectively to policymakers and the publics that support them what we know about learning, and especially what the consequences are for both children and adults when we operate schools as if this fundamental human process was not true.

And second, we must provide work experiences that can be transformed into learnings with enough regularity that they can become operating beliefs -- the transparent *just-the-ways-we-do-business*. Providing those experiences as part of work is the primary leadership and management issue for school leaders and policymakers today.

“If you act as though it matters,
and it doesn’t matter...
then it doesn’t matter.
If you act as if it doesn’t matter,
and it does...
then it matters!

Harlan Cleveland
Hubert H. Humphrey Institute
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