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Student Voices  
Perspectives on the Future

● You are here: [Home](#) > [Transforming Education](#)

# The Profound Knowledge School

by [Lewis A. Rhodes](#)

## Deming's Paradigm

W. Edwards Deming popularized the term "Profound Knowledge" to describe a base of fundamental beliefs that provided the context for the ways he made sense of organizations. More current terms for such framing beliefs are "paradigm" and "mental model." Thus Deming's System of Profound Knowledge is not a "system" in the sense of a systematic set of procedures. Rather it is a systemic [i.e. everything-is-connected-to-everything-else], holistic core of fundamental beliefs about organizations -- and the people who comprise them -- that frames the way one perceives, and operates in, the world.

It is profound because it must be imprinted so deeply in the human mind that it becomes a transparent lens framing all that is experienced. As knowledge, it must be believed as the way things are -- without exception. As an example, for physicians Profound Knowledge is a fundamental understanding that when they look at a patient they are seeing an interconnected system of uniquely different, but interdependent, components each contributing to the survival of the whole organism. That deep, transparent understanding provides the continuing context for all subsequent diagnosis and prescription.

For W. Edwards Deming, Profound Knowledge was a core belief that an organization is a purpose-driven system of interdependent human beings, intrinsically-driven to want to make a little more of a difference in the world tomorrow than they did today.

## The Profound Knowledge Checklist

How would you know -- by looking at its schools -- whether a community operated from a base of Profound Knowledge?

There would be common theories about the nature of human learning, and the nature of people's work in organizations, that framed and focused everyone's actions. These theories -- sometimes expressed through visions and missions -- would underlie both policies and practices. Everyone would know why things happened the way they did in the schools.

You would see people -- both children and adults -- seeking to experience or re-experience one of life's natural "highs"-- the internal sense of joy often associated with productive accomplishment, such as:

- knowing you are doing your best
- learning something new on your own
- solving a problem or overcoming a challenge
- knowing that you contributed by helping
- knowing that you are part of something important
- feeling supported or acknowledged by others.

Practitioners would be working in a system purposefully structured to connect them to each other for effective accomplishment of their work. They would be able to take advantage of the interdependence within that work.

They would have access to information and knowledge developed from that work which could be applied to continually improving it.

The school system and community would be learning from those improvements and would have ways to integrate those learnings into new policies and structures that shape the ways-they-do-business.

If the vision of schools, as it is manifested in this checklist, strikes you as a place to which you would like to send your children, work in yourself, or even hire graduates from; and if you were not able to check each of the above boxes for your schools, then consider this. Why do communities lack this profound knowledge? How does this relate to schools' present lack of capacity to operate in ways that seem so logical, helpful, and needed?

And in a world perceived as increasingly fragmented, how

might the lens of Deming's Profound Knowledge provide a way of:

- understanding the "connectedness" of people in organizations,
- understanding and supporting their individual growth as part of their work, and
- serve to frame the right questions on the road to transforming America's schools?

### **Where does Profound Knowledge come from?**

Profound Knowledge is, in Deming's terms, a "theory of knowledge." It provides the "know-why" that makes "Know-how" relevant. Like a computer's operating system, it must be embedded deeply enough in the mind to be transparent. As Alfred North Whitehead noted, "Civilization advances by extending the number of important operations we can perform without thinking of them."

To achieve this degree of deep belief means that it can't easily be taught. Profound knowledge requires profound experience. New practices must be repeated frequently enough until they become automatic--in effect, driven into the mind's procedural memory where they become the transparent infrastructure for just-the-way-we-do-business.

As Lloyd Dobyns & Clare Crawford-Mason noted in *Thinking About Quality*, "Before you can change what you do, you have to change how you think. Before you can change how you think, you have to change what you believe." But this is not an easy process for the "space" is already filled with a "program" -- a set of beliefs already developed from experience that have proved successful in the past. Thus the learning process has to provide for an unlearning process, as part of work, that forces questioning of assumptions and their present consequences.

In the case of schools, the roots of this present base of profound knowledge go back to our first learning experiences in families and schools. This is the "programming" that has to be overridden through processes that can provide new, more effective experiences from which we can learn. At the center of this present lens, or mental model, is a seldom-questioned assumption about the "work" of schools. For instance, ask most people what the work of schools is, and the answer generally will denote some form of delivery or transmission process -- "communicate culture, disseminate knowledge, transmit

information, etc." Yet the job of schools is no more the "delivery of information" than the job of hospitals is the delivery of medicine. True, medicine is "delivered" in hospitals, but only through a managed work process that is designed and maintained to match it appropriately to need. Thus the work of hospitals takes place in a work setting structured and managed to deliver appropriate service based upon continuing individual diagnosis.

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 around the concept of delivery rather than response. The strength of this "delivery" paradigm can be compared to that of Ptolemy's earth-centered map of the solar system. It can be validated by observation, even though cognitive science now had proved that learning is not delivered but "constructed" as part of each student's intrinsic need to make sense.

It is instructive to recall that most people did not accept Copernicus' new base of profound knowledge about the solar system. Actually, they would have no reason to unless their work depended upon it. For instance, had NASA existed at the time--with all of its present-day technology and expertise applied within the old way of framing the reality in which they had to conduct their work--they would continue to do everything right, but seldom get where they wanted to go. They might be willing to listen to Copernicus.

In terms of an essential core of understanding for schools there is some good news today. The results of brain research on the true nature of learning are on the front covers of all the major news magazines, and showcased on network specials. For the first time we have data about how learning takes place that goes beyond just theory. The MRI and other scanning technologies are providing what Galileo's telescope provided for Copernicus -- a way to experience a theory. We now have observable data that confirms many theories about learning and teaching, but more importantly shows us the negative consequences of acting on other theories we assumed were true.

The bad news is that schools have few ways to deal with this new knowledge systemically--i.e.. to apply the knowledge as part of a sustainable system. With the real possibility of finally being able to define a common aim for schools in terms of children's capacities to learn, we must then

address another missing dimension of profound knowledge.

### **What Deming and King Solomon Knew**

Something is missing in the way we run schools. Some say it is sufficient resources. "If only we had more . . . (time, support, training, technology)" is a common response to why schools can't be more effective. Yet in those instances when these resources have been provided, resulting changes are seldom sustained.

"Change it all--change the system!" then becomes the frustrated cry. But attempts to maintain everyday interaction with students, teachers and parents and at the same change organizational roles and relationships becomes an impossible juggling act. Adding to that seeming impossibility is a unique dimension of resource need. Seeking resources from the public for widespread changes in roles and relationships among adults is as counter intuitive as an airline's suggestion that you put on your oxygen mask before helping the child who accompanies you. Our culture's concern for children's well-being is so strong that it makes it almost impossible to have a more total perspective in which the relationships among all elements can be seen and their interdependence understood.

Clearly, the issue is not between helping children or adults in schools, but rather how to address both children's needs, and the needs of the system to better meet children's needs, at the same time. Society could respond to the needs of the forest and the trees if it had a common framework for understanding how it all fit together. In fact, with a way to make sense of their "system," the "missing support" would have been a natural part of a solution for better addressing children's needs.

What has been missing is the underlying wisdom of W. Edwards Deming . . . and also King Solomon. Unlike many present day authorities who tell educators they have no choice but to destroy "the system" before it destroys them, Solomon knew that, if cut in two, a connected "system" of interdependent parts would die. (And importantly he also knew at least one of the two mothers did, too.) Lacking this degree of common wisdom, today's attempts at systemic improvement are largely based on recommendations to break the "system" apart and deal with it in more

"controllable" pieces (e.g., charter schools, site-based-management.)

They all have failed when measured by the Deming/Solomon's standard -- i.e., the organism (or organization's) sustained viability to continue to function as a system. Schools as systems: Fact or theory?

Understanding that organizations are systems (although most times dysfunctional) is a fundamental component of profound knowledge. There can be no exceptions. Why has it been so hard to make sense of schools as systems? Anyone who has worked in schools has directly experienced it as a system. Everything seemed connected to everything else whenever we tried to accomplish something related to common purposes. Like it or not, these characteristics define a system. That schools don't usually operate as systems, or when they try to, frequently act dysfunctionally, does not change the fact of their fundamental nature. If accepting this truth could open up possibilities for taking advantage of its systemic strengths, what gets in the way of acknowledging the inter-relatedness of individuals working to accomplish mutual purposes through an organization? Why does it almost seem counter-intuitive?

Unfortunately, for most educators, dealing with the "system" that contains our work most often has been a negative experience. One's own good intentions always seemed to get entangled with other people's. There have been fewer opportunities to experience the positive effects of a well- functioning system -- i.e., people with varying skills and perspectives working to influence common outcomes.

At one level then we already know there is a system there -- we feel it's influences, many times fight against it, and frequently have to pretend its not really there in order to feel some sense of control over our lives. But, like Solomon's living baby, it does exist. Acknowledging and accepting that underlying organic connectedness becomes a critical prerequisite for any attempts to understand and then enhance its capacities. It then requires positive validating experiences to move that acceptance to belief.

However, since that acceptance seems to run counter to both intuition and the present culture, it becomes important to consider why a school system would appear not to be a system to those who have are its veterans and

victims? More importantly, why would a system of well-intentioned people not act as a positive system?

### **Disconnects**

Part of the answer lies in the "spaces" between those people. Three heretofore seemingly unbridgeable gaps isolate people who work in schools because they want to (and feel they can) make a difference in the lives of children. These gaps of purpose, space, and time have shaped the experiences that have "programmed" the mental workplaces in which the long-term and short-term policies and practices of schooling are created. The unwitting result has been the accepted operation of a single system as if it were composed of two work systems--one whose work implements policies for all; the other whose work implements practices for each.

Understanding the nature and relationships among these three "disconnects" takes on critical importance today because they are key to vitally needed strategies that can support a system's capacity to function as a system.

**Purpose:** People daily actions are disconnected from their intended common purposes. This leads to great variation in the mental models or visions which give meaning to what they do each day. Like those in the tale of The Blind Men and the Elephant, the piece each holds soon becomes an end in itself.

**Space:** People are physically disconnected from each other while doing their work -- one teacher to a classroom, one principal to a building, one superintendent to a district.

**Time:** And people's work is disconnected in time from those whose prior decisions influence it, and whose later decisions could be influenced by it.

- It is significant that within the last two decades, new knowledge and understandings have emerged, along with new methodologies based on them, that allow us to address each of these gaps:
- The most fundamental gain in knowledge has come from cognitive science. For the first time we have data about how learning takes place that goes beyond just theory. Human learning is not a "possibility," it is a "fact"--an innate capacity
- that can be enhanced and developed.
- This new knowledge can be applied to the school system's

problems of reconnecting its parts to common purposes. With a common understanding of how children learn as its core, visioning processes can be used to help create common, meaningful, belief- and value-based visions that can provide meaningful frames for daily tasks;

- Technologies now can bridge the real and virtual spaces between people; and
- Process technologies, such as those found in quality management, can help identify the interdependence of actions within an organization so that they can be reinforced and become sustainable, supportive infrastructures. But unfortunately, without a framework of profound knowledge, these proven methods have never been brought together in a single coherent process based upon:
  - a vision of the organizational system's work as a function of its relationships,
  - system leadership as a process which within that vision creates, aligns and sustains those relationships, and with
  - ways for the system to act as a system -- every day -- through integration of the above proven methodologies into a new form of people/technology connectivity that allows individuals within it to continually take advantage of their interdependence.

Such a coherent, connected approach now is possible. It could allow society to achieve the results it requires for all by a process that starts with the specific needs of each. But it must be based upon profound beliefs that lead to a common understanding and acceptance of why and how schools are organically connected through the work of their parts and participants. To get to that level of belief requires profound knowledge to be developed through new forms of collaborative experience.

### **Getting Started at Developing Profound Knowledge**

America may no longer have a choice between business-as-usual in schools and the traditional, frustrating path of fragmented, incremental change. The scope and complexity of society's problems lead to continuing calls for "total" solutions. If America's educators cannot respond, then lying in wait just over the horizon lurk a band of "total" alternatives that may question the need for public education itself.

If Deming's core of fundamental beliefs "make sense," then getting started on developing experiences from which



profound knowledge will emerge will involve three initial steps:

1. Developing community understanding, belief and commitment,
2. Establishing new forms of business-education partnerships in the local community;
3. Managing schools as adult learning systems -- asking different questions about the work processes of schools; and seeking answers in new trust-building forums as part of the work process.

Starting this process will require school districts, and especially the political and social communities that support them, to engage in thinking about things they haven't had to think about before-- i.e., to be willing to examine their beliefs about the work processes of schools, and the scope and nature of the system required to sustain it.

It is doubtful that most school systems can sustain a commitment to system-wide changes affecting accustomed roles and relationships without the influence of more permanent community forces. The turnover rate of superintendents and board members makes the establishment of a committed community base essential. Moreover, clarifying a common base of beliefs and community values provides not only a rationale for change, but also can help develop the community's understanding of their own influences on the work of schools, and the nature and boundaries of the actual "system" influencing children's learning.

Maintaining a commitment to systemic, incremental change in school districts will require establishment of new partnerships between "system" leaders in schools and those with similar responsibilities in corporate America. This partnership of learners, who in Deming's terms "work on the system" could begin to ask some different questions about how to achieve quality results in America's schools. As the similarities and differences between the work settings of schools and businesses become clearer, they would begin to discover some new answers and begin to see additional possibilities for community collaboration.

These new partnerships with business and industry also can provide needed credibility for the development of public commitment to this long-term approach, promote confidence in the human processes they know work in other

settings, and serve as a local balance to, and influence on, local and state policymakers. For example, outside of schools it is accepted that with large-scale, incremental change the daily indicators of success will be small, and situational -- seldom the more glamorous products of protected research settings. Not having to first "prove" new approaches to policymakers through small scale, "researched," pilots that cannot model the essential systemic nature that makes the processes work, means that the school district's support processes can focus on ensuring school effectiveness, not just proving it.

Developing this type of understanding and continuing support may not be easy. Remember, most US industry still does not accept Deming's fundamental beliefs. Even those few who have adapted Deming's ideas to their own work may not yet understand how to transfer those concepts to school systems because schools have not been understood as managed work settings.

The current excitement and interest in the findings about the nature of the learning brain has been quite naturally focused on its applications to children's learning in homes and schools. Accepting that it applies equally to the adult brain will be a critical understanding for developing strategies for today's adults to learn how to transform their own systems.

With development of that recognition, there can be "learning" partnerships among the adults in communities who care about children's futures. These can focus on the requirements of those whose daily actions depend upon their abilities to learn-as-they-go -- school practitioners. This partnership will require dedicated educators,--teachers and administrators--whose strongest link is their common commitment to children to address "management" issues without the guilt that forces them to first usually tell people "of course we're doing it for the children." All will recognize that the desired lasting changes in the content and processes of instruction depend upon the management capacity of their overall "system" to integrate them into regular work processes.

This, too, will not be easy. Many teachers and administrators, caught up in their daily work, have lost confidence that there is any way to modify their organizations systemically. They can't get "above" the

necessary daily focus on children before them to see how their own work processes are systemically connected, and they lack continuing data that would allow them to see where in the system's procedures the problems lie. Thus, even as they call for "restructuring" of those same organizations, they often turn to partial approaches, or approaches that cut them off from their "system," because they have never seen nor personally experienced systemic, organizational change.

### **The Learning Organization as an Organization of Learners**

Overcoming this barrier requires personal experience with possibly better ways to operate provided within a framework that supports learning at an individual and organizational level. With quality management processes providing a learning infrastructure, within the regular district structure, it can be possible to provide functional opportunities to focus district-wide problem solving on the core instructional process that is the work of the buildings. Vertically-structured, cross-functional work groups, as part of regular practice, can serve to develop sufficient trust to start identifying new, more effective relationships. As these relationships begin to work, insights will develop as to how they might lead to new, more effective roles. And finally, as the roles are experimented with, possibilities emerge for new policies or rules. Through these types of work settings, new school structures emerge from practice rather than being imposed from the top-down or bottom-up. Change--or continual improvement-- becomes an inside-out process.

In this type of holistic, system-wide management-as-learning process, incremental change becomes the norm -- success can breed success. Because the instructional process and the system that supports it can be managed together coherently, a district can simultaneously produce "good" results, and improve its capability to produce even better results next time. In fact, the common process that links everyone's role in the district becomes a continuous, never-ending search to more effectively respond to learning needs of children.

As followers of Deming's ideas in other settings have already demonstrated, quality results require consistent leadership, effective systemic management, and a common

belief-based framework for understanding among all members of the system. This shifted vision, paradigm, or framework -- providing a common map that connects the whole and its parts to its purposes -- becomes a primary tool of school system leadership.

With that Profound Knowledge framework:

- communities can take as realistic goals the same scale of changes in outcome quality and worker productivity that appear in other workplaces:
- practitioners and entire school districts each day can experience the satisfaction of becoming more instructionally-effective. And
- America can discover that it is possible in school districts today to restructure and manage "whole" school systems without stopping them.

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### **Related Resources by the Author**

Schools That Make Sense -- Four-part video & Guide-- presenting a new paradigm for systemic school system change that links the continuous learning needs of students and adults; January, 1995

Dr. Deming Talks to Educators -- Five tape synthesis of a special workshop by W. Edwards Deming for educators., January 1993

"Seeking New Connections: Learning, Technology, and Systemic Change," Learning and Leading With Technology, International Society for Technology in Education (ISTE), May 1996

"Teachers as Teaching: Person or Process,?" Quality Network News, May/June 1995

"Building Capacity for Sustained Improvement" (with Gail A. Digate,) The School Administrator, March 1995

"Profound Knowledge -- 'A Theory of the Business', "Quality Network News, January/February 1995

Copernicus, Deming, & Schools: Finding a System that Makes Sense, GOAL/QPC, November 1994

"The TQM - Technology Critical Connection," chapter in Quality & Education: Critical Linkages [1992] ed. Betty L. McCormick;

"Is There a Standard for Meeting Standards?" (EdWeek, April 6, 1994) and reprinted in ASQC's Quality Division News;

"Knowing . . . When We Don't Know What To Do," Quality Network News, March/April 1993

"Schools as Hospitals: What Can We Learn about School Management by Examining Medical Care?" The School Administrator, June 1993

"On the Road to Quality" [chapter in *Developing Quality Systems in Education*] ed. G.D. Doherty; Routledge Ltd., UK, [94];

"Why Quality is Within Our Grasp . . . If We Reach," *The School Administrator* [Nov. 90]; and "Beyond

Your Beliefs: Quantum Leaps Toward Quality Schools," *The School Administrator* [Dec. 90].

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### **About the author**

Lewis A. Rhodes' career as association executive, consultant to federal and state government, director of national projects for foundations and government, private sector consultant, and as a university faculty member has centered on problems that arise when people try to work together effectively in organizations.

In recent years this has focused on issues of systemic leadership and management for schools and other community human service organizations. Currently, his work integrates principles of Collaborative Knowledge-Building and Quality Management with information technologies to develop sustainable infrastructures that can support schools as they transform from organizations of natural learners into natural learning organizations.

He was a member of the 1996 Board of Examiners for the Malcolm Baldrige National Quality Award; and currently is a principal of SABU, Inc., a consulting group that deals with problems of organizations as coherent systems and AASA Total Quality Network Liaison. He was an active participant in the transnational 21st Century Learning Initiative since its inception in 1996. In 1997 he developed *Connecting Leadership & Learning*, a major strategy paper for AASA's Center for Connected Learning.

From 1987 to 1995 he was Associate Executive Director, American Association of School Administrators. He has written extensively with articles appearing in practitioner journals such as the *Phi Delta Kappan*, *Educational Leadership*, *The School Administrator*, *Education Week*, *Converge*, and *Quality Network News* in which he writes a periodic "Leading the Charge" column.

Prior to AASA his efforts -- as Assistant Director at the Association for Supervision and Curriculum Development (ASCD), a faculty member at Central Michigan University and the University of Nebraska, and project director for several national research, training and technical assistance programs -- similarly focused on problems of communications and management in education and other human services. During the 1960's he directed the Ford Foundation's National Project for the Improvement of Instruction by Television. In the early 1980's he developed the US Department of Education's Project BEST (Basic Educational Skills Through Technology).

He has served as consultant to the U.S. Department of Education, Secretary of Health and Human Services, National Institute on Drug Abuse, National Endowments for the Arts and for the Humanities, as well as numerous state and local education agencies.

His experience as an organizational development consultant in the private sector includes Director, Communications and Training for Applied Management Sciences, Silver Spring, MD (1976-83); Coordinator of Corporate Communications Metropolitan Group Companies, Washington, D.C. & Minneapolis, MN(1975-76); Vice President, E.F. Shelley & Company, Inc. Washington, DC & New York, (1968-75).

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