The following concept paper - <u>LEARNING FROM *TEACHING:* The MCPS as a *System* of Learners</u> - delivered to MCPS in January 2001 should now be read from a perspective that recognizes that MCPS actions over the past three years have already created many of the essential elements it calls for.

Consider as you read this, that if, as this paper documents, *teaching* is a process in which <u>interaction</u> speaks louder than words, then the *system's* responsibility is to inform the <u>two ends</u> of that interaction.

- At one end, with *purpose and direction.*

- At the other, with *timely feedback* on the results of the last actions taken by either party in the interaction. This is the "inter" of interaction.

- And informing both, with a continual record of the transactions from which can be seen *patterns and trends* to add additional "process" information to everyone's understandings.

At this point, MCPS's work at the front end of "purpose and direction" includes the continuing development of *Curriculum Frameworks, instructional blueprints,* and the just-beginning exploration of *Baldrige* principles and processes as ways to give direction to the teaching-learning interaction by integrating the purposes and goals of <u>both</u> the teachers and learners involved.

At the "other end" where <u>timely</u> feedback must be continually generated to inform subsequent actions, three essential components are in place, but have not yet been integrated. These are the *Instructional Management System* , the formative component and the process monitoring component of the *System of Shared Accountability*, and the cluster support team structure and processes.

Their integration as part of a coherent information process can give MCPS the <u>sustained capacity</u> to address the scope and nature of its core work -- *teaching…* and then, with that sustained capacity, *instructional leadership* can become a <u>shared responsibility</u> of teachers, principals, and district staff…and *learning,* their <u>shared accountability</u>.

The MCPS as a *System* of Learners

Lewis A. Rhodes

> "Organizations are created when people must cooperatively assume roles and play out role relationships in order to transform inputs into outputs.
>
> Since cooperation is limited by people's limited capacity to process *information,* people seek ways of arranging themselves and the tools of production so that they can overcome, at least to some extent, their bounded rationality.
>
> A particular organizational form can be evaluated by its ability to help people achieve, despite bounded rationality, goals and objectives in an *effective* and *efficient* manner."
>
> (Weick and McDaniel)

We can never have "learning organizations" without first operating as organizations of learners. The link between the two is *information* and, in a fast-changing world, it is more than the *messages* it carries: it is the connecting *medium*. To truly empower all those in education whose decisions influence the eventual learning of students, we must take a new look at the old adage "Information is Power" and ask "for whom" and "in what forms?"

Meeting the needs of *which* learners?

With the current popularity of *information explosions, information superhighways, knowledge management,* and *learning organizations*, it becomes important to consider the particular power of one type of information. Modern America has become a feedback-driven society. On a daily basis, political candidates adjust their strategies depending on the previous night's polls; economists rise and fall based on their interpretation of monthly economic feedback; modern managers constantly scan their operations to gather the data to "work smarter."

Educators, too, as feedback-driven practitioners, have similar needs for continuous self-correction, and for support to modify and adjust their actions. Unlike the rest of society however, their organizations lack adequate means to generate, make accessible, and use functionally that critical form of information.

While we have always thought of the *student* as the "learner" in the classroom, today *others* also are trying to learn from the same teaching interaction; and most of these other "learners" are outside it. . . principals, district administrators and, increasingly, policy makers far removed from the classroom. And without regular means to have feedback on the effects of their actions, they have no valid ways to get information they can trust.

These "outside" learning requirements are driven by needs to make appropriate, large-scale personnel and resource decisions that support effective teaching and learning in classrooms, buildings, or districts. Because of their quantitative dimensions these decisions are "risky." So, as society tries to respond to today's changing educational conditions, the collection of data to feed their learnings have become the focus of major unquestioned, institutionalized processes such as ***testing***, ***assessment***, ***supervision, evaluation,*** and ***accountability*** with major information and reporting "systems" constructed to meet these "external" needs.

By itself, each of these organizational "learning" processes has always been an emotion-laden issue. (When was the last time you felt good about being at either end of any of those processes?) Each is coated with a culture of fear and threat and, as a consequence, these organizational learners have to rely on information collected *infrequently* because of the "burden" imposed on the gatherers; on *inadequate indicators,* such as aggregated test scores and other generalized data; and to compound the problem, some of the data may be of *questionable quality*. That is, tests can be "taught to;" "special" lessons may be taught when the evaluator is present; and supervisory "checklists" can provide the convenience of standards without the discomfort of thought. Moreover, each "learning process" usually requires its own information system, since few trust the data of others. [Note that technology costs are seldom a factor when the information system is to support these external "learning" needs].

But by depending on these present processes for data collection, no one's "learning" needs are adequately being met - teachers, administrators, policy makers. . . and most importantly, students. More critically, the unanticipated consequence of meeting these external needs has been the sucking out of the classroom of needed data and time.

Yet, what choice do district decision-makers have? Decisions affecting great numbers of people and large amounts of money must be based on "data" regardless of its quality. Moreover, personnel evaluation is often legally-mandated. It must be carried out if the 2-3% of the staff who may fall below standards are to be helped to improve. And even while the quality of information is acknowledged as poor, the collection of data to meet these

external needs is often "mandated" because of an assumed link to *accountability.*

Learning from the Teaching *Process*

Is it possible that the better quality data which might empower these important periodic decisions could be readily accessible if only two neglected "learners" -- the teacher and the student - could <u>first</u> have their needs met? A recent report noted the nature of these needs,

> "…We also believe school administrators will never have access to the daily operations of classroom environments and their impact on teachers and students until they begin to study the planning and instructional decision-making behavior of teachers through the teachers eyes. Until we acknowledge that teachers are *teachers-in-learning*, that classrooms are *problem-solving environments*, and that learners in those environments all need to trust their own instincts to *try and try again*, to take risks, and know that they will be *supported* in that endeavor, we will never succeed."

No one would go to a hospital that did not organize its information processes to support the front-line needs of those whose success depends upon their capacity to continually "diagnose and prescribe." To understand how this can be just as easy in schools requires going back a step to ask some different questions about how decision makers at *all* levels can have better information about the instructional process and its effects <u>without getting in its way</u>.

Let's start by looking more closely at the <u>similarities</u> and <u>differences</u> in the *information needs* of those who must learn from what happens in classrooms.

Common Focus, Common Process, Common Information... …Common Theory

<u>Common Focus</u>   Education's greatest strength is that all those involved in the process want to make a difference in the lives of the students entrusted to them. This shared concern for children is the common focal point for personal commitment and, when actions positively affect children, serves as a primary source of personal satisfaction.

At the level of "intentions" therefore, all education starts out as "outcome-based." But then each person - whether board member, superintendent, or teacher - seeks feedback about the extent to which the outcome was reached - i.e., what were the <u>effects</u> of his or her decisions on children.   The single source for the range of information that can satisfy these needs? The <u>classroom</u> - the primary setting in which teaching and learning -- and the interaction between them -- can be observed. Decision makers, at all levels, turn to this single arena for data on which to base decisions . . and, importantly, for the information that lets them know <u>they</u> had an effect.

<u>Common Process</u>   What each one then does with the classroom-generated information is the same . . . they use it in an attempt to <u>learn</u> how to become even more effective. This process of reflective learning from experience has always been the most basic element of human thought. Our minds operate as goal-seeking systems. As we progress toward our objectives, we consciously (but most often unconsciously) self-correct -- reflecting on the results of each action, comparing that feedback to our goal, and then using that information to repeatedly adjust our actions until we reach our goal or accomplish our purpose. This basic learning process drives each of us. We're all learners and we're all problem-solvers . . . striving constantly to be more personally effective.

In most work settings, however, organizational structures and procedures seldom acknowledge and support this natural human drive. This has been true for schools as well as industries. But there are some significant exceptions. For example, note what these three <u>management</u> situations have in common.

- As a ship moves through uncertain weather and ocean currents, the navigator is regularly provided with feedback -- first for determining where the ship actually is with reference to where it was "supposed" to be, then for assessing what forces caused the difference. The navigator then uses that information to plan new courses to an ultimate destination. No one is "punished" when conditions beyond their control take them off course. This is expected, and their "rewards" are for using the available feedback to continually plan and implement new courses.

- Similarly, when firing a cannon, a gunner is seldom expected to hit a moving target on the first shot. The standard of operations is "Ready, fire, aim, fire again" as the gap between intended and actual steadily decreases through the use of continuous feedback.

- And in medicine, the fundamental patient doctor relationship is based on a "trial and error" process ["Take two aspirin and call me in the morning"] in which the doctor uses information about symptoms, gathered during diagnosis, to compare to standards of good health, and then determine what actions to take.

The common decision-making condition in the above examples is that they are managing-for-*results*. They must depend upon feedback because they have no choice. They work in an environment of changing conditions, and data about those conditions are fundamental to each decision. Today, all educators confront similar dynamics, *results* are their criterion, and to achieve them they must respond to specific needs in a changing context… but with little access to timely useful information.

<u>Common Information</u> When thinking of learning in a classroom it is difficult not to think first of the students. But there actually have been <u>two</u> neglected learners in classrooms. One has been the teacher whose decisions most need to be informed from *on-going instructional interaction.* Teachers must be able to learn what works and doesn't as they continually monitor the effects of their actions -- adjusting and modifying their intended lesson until there is evidence that its purposes are achieved. They must respond to needs of individual students, but most of the time while working with groups.

And the other neglected learner, strangely, is the student. For centuries people had become accustomed to thinking of students as recipients at the end of the instructional process. Their "learning" -- a body of content -- is the *result.* But now a model has emerged from the cognitive sciences that makes total sense to those whose jobs have placed them close to learners. Unfortunately it is a model which runs counter to general perceptions -- i.e., it presents learning as a *natural process* whose <u>capacity</u> can be developed. And a process that is largely influenced by the learner him/herself.

From birth on, each person seeks "meaning" -- trying to understand both the world and themselves. From their *interactions* with the surrounding environment they take in information, connect it to what they already know or can do, and construct new knowledge and skills. These new capacities then are tested through *continuing interactions* -- each time increasing that individual's capacity to act intelligently.

Only recently however have schools discovered how to engage students in productive roles as <u>co-managers</u> of instruction by providing them with the information tools that allow them to learn from the interactions of the instructional process. This is not yet seen as a "content-free" requirement for all classrooms.

But that time may be coming. A month before he was nominated as new US Secretary of Education, former Houston Supt. Rod Paige discussing the problems of school leadership noted "that the real work of a school system is what happens in classrooms and schools." Yet, this is an understanding that is not reflected in the "work" relationships portrayed on the organization chart. And, he went on to say, the "major missing link [is]... the <u>untapped power of student effort."</u>

<u>Common Base of Theory</u> Understanding the common nature of information flow in a school system is facilitated by the coherence of the new conceptual bases emerging from separate domains of *learning, instruction and organizational management.* Each makes sense in its own right, but they share a common core concept that organically links them.

The models of *learning* and *teaching* as interactive processes requiring continual feedback may not be totally new. Good teachers have long known this as the essence of "teaching," but it seldom has been possible to align and connect the rest of the organization to support this core, interactive work process.

But now a similar shift has occurred in the field of *organizational management* as they have become in some ways more like schools. As Harvard social scientist Shoshanna Zuboff has suggested, the dynamic nature of today's work requires the worker to be "learner"; and the manager to be "teacher" -- i.e., <u>to create environments where one can work and learn from that work.</u>

At their core, *learning, teaching,* and *organizational* theory each involve the *intrinsic* processing of information. This involves-

• feedback one needs to know he/she's doing good work

• continual construction of meaning from information encountered

• the need to "feel" connected -- development of relationships with others "in community"-- relationships that are at some level made visible, and maintained, through the exchange of *information* in some form.

• flexible control of information sources and tools to enable personal learning from work.

In effect, the nature of the "worksite" has shifted. It now exists in the *mental processes* of every member of the organization. Over the past decade, a broader understanding has emerged outside of schools. As one national leader noted:

"As a leader, your most precious possession is the people you have . . . and what they carry around in their heads;"

". . . 95% of American businesses are . . stuck in model that assumes that brains are needed at the top to manage, by remote control, the production line. and along that line, workers perform very limited, fragmented actions which render their thinking irrelevant. . . . But the earth has shifted its industrial axis. To compete globally, business needs to organize itself anew on a completely different basis: a belief in and the use of the brainpower of front-line workers."

As one looks at how this new definition of work plays out in quality-producing work-settings, it becomes evident that the "work" that produces quality results [i.e., outcomes that meet or exceed the needs, requirements, standards desired] depends upon a caring worker's ability to continuously construct meaning and personal knowledge through <u>interaction</u> with the outcomes of his/her specific effort; and then apply that new knowledge to the next

action -- the more frequent this feedback/learning cycle, the higher the quality.

The leader/manager in this work setting not only creates and manages "environments within which workers can learn from their work," but more importantly aligns and connects everything the organization does to that core work process. As Russell Ackoff has noted, they manage interactions, not actions. As a result:

• Leadership at the *system* level can now be understood as the *management of relationships*.

• Relationships can be understood in terms of *information* -- i.e., like values, relationships can't be "seen" until something happens, someone acts. Those actions, literal or virtual, are "information." In organizations, relationships become formalized by the nature and direction that information flows -- by what one is gives and gets.

• And as a consequence, telecommunications technology is increasingly seen as a "relational" tool.

How does this change the job of the superintendent as *leader* of a *system* whose role is to support the interactive process that connects teaching and learning?

The *information* base of Leadership

System leaders today find themselves caught between theory and practice. Usually hired because of "results" achieved elsewhere and under continual pressure to make "results" happen now, they are told by the gurus of management to give up *Command & Control* leadership styles. "Let go" and first change the culture so others can achieve the results.

This "chicken or egg" dilemma determining which comes first -- *methods* or *mindset* -- can't be solved. Changes in both must emerge from the same experiences. But to perceive *how* requires questioning the assumptions underlying present feelings about "command and control."

"Command and control" are what leaders are accountable for. That is not negotiable. The real issue is "of what?"

Traditional views of this role encompass allocating and organizing *tangible resources* required to address the organization's problems. These are:

> • people
>> • space
>>> • time
>>>> • materials

The newly understood role of system leader calls for them instead to allocate and organize *intangible* resources so that those closer to problems can more effectively allocate and organize the tangible resources required to address them. These *intangible* resources:

> • trust
>> • information
>>> • knowledge

Of these, *information* is the most powerful.

Total Management for Results: The Connected Listening and Learning *Teaching* Organization

The nature of modern life requires that organizations be able to listen, learn, and respond holistically. To do this, a school system must provide an environment where people can trust the information they get. This means not only that they must trust each other enough to give open and honest information, but they must understand and trust how everything "fits"-- the connecting relationships. They must have a vision that encompasses everyone's relationship to a common purpose.

Policy makers believe they are addressing the major information needs of school reform when they focus on "standards" and "assessment." One provides indicators for direction, and the other indicators of where one is. But until now they have had no process for connecting them. Measuring results has taken precedence over ensuring them.

As we have seen, in schools there is no information-driven process [comparable to what might be found in the modern hospital] that would first allow continuing generation and analysis of "assessment" information to support daily diagnostic decisions, and to ensure their alignment with overall directions.

Today, however, organizations working with both knowledge management and quality management have been providing paradigm-shifting experiences that have uncovered new ways of looking at work in organizations. One "discovery:" a results-driven management process requires a fundamentally different kind of information support. Required is a technology-supported information infrastructure that goes beyond data, and traditional concepts of

management information systems.

An information infrastructure to support such *response*-ability would:

1. Provide continually updated background information about the conditions to which schools respond. For example, teachers would have daily, up-to-date data about each student that would include not only quiz and test results, but information about learning styles, personal strengths, etc.   Students, as the other primary decision-maker and learning manager could access and use their own data.

2. Support self-correction. Provide quick turn-around of information generated by student acts, while something still can be done to take advantage of any unanticipated results, and/or to remedy any problems uncovered.

3. Provide analytic assistance at the classroom and school level. Because teachers and principals have worked in such relative isolation, their analytic skills frequently have withered from lack of use. Quality management processes derive much of their power from their use of team-based analyses. Software that supports local analysis also can be an important tool. Technology can add value in analysis and understanding to ensure that "data" turns into institutionalized knowledge as the organization "learns."

4. Provide access regardless of setting. In particular, information must be accessible at the professional's workspace -- this includes the home.   One characteristic of professionals is that an important part of their work is done at times when they are not in direct contact with their clients. They reflect, research, strategize, and plan at times and in places where they will not be distracted. For teachers and administrators [unfortunately], this is most often at home.

5. Aggregate and analyze information at the building level. Districts can provide scanning information, desegregated data, and research that will support, and inform, the principal's role as instructional leader.

6. Support, and increase the frequency of, organizational interactions. These mostly informal exchanges serve to align and connect isolated actions of individuals and work groups as they fulfill the school system's aims. MCPS's school support teams can be the key linkage points for the two-way exchange of information needed at both "ends" of the system.

7. Provide access to others' experiences through electronic "communities of *interest*" and "communities of *practice*." Problems faced by today's teachers and schools differ so much from those of the past that learning from each other's experience has become a fundamental requirement for effective schooling. Facilitated electronic-conferencing can allow meaningful exchanges of experience and expertise to tap MCPS's rich base of experience and expertise in its own buildings and classrooms, and to operationalize the interdependence of roles.

In-the-job learning

Today, the tools and processes of knowledge and quality management -- supported by the availability of information technologies -- can allow MCPS's leaders to develop and support the system of learners necessary for the system to be a learning organization. The development of such an information support system requires what is a new form of development process for schools -- *in-the-job learning*.

The consequences of such a process of learning from daily work include:

*   development of trust and relationships based on it,

*   overcoming a culture of information anxiety exacerbated by the climate of "standards and assessment" , and

*   providing opportunities to learn how to apply unfamiliar data and information management tools to daily work as part of that work.

As a results policy makers and practitioners, alike, can be empowered to:

*   crack walls of professional isolation with networks of mutual support;

*   provide access to information and other resources at the places and times needed for timely responses;

*   establish and maintain new organizational relationships through supportive information flow; and thereby

*   contribute to what schools can achieve -- and at the same time, to what educators can *do*, and *be!*

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