<u>CLOSING THE CIRCLE:</u> *LEARNING AS KNOWLEDGE-BUILDING*

The CSILE development story demonstrates the full circle we have completed in our understanding of learning. In the last two decades, cognitive research has documented what we might have surmised: the *capacities* of fundamental processes within each human develop and increase from birth on, but *how* they work doesn't change.

The CSILE developers wanted to create a new educational infrastructure to support development of children's cognitive and social processes. Therefore they studied "expert adult" communities such as scientific research groups, writing communities, jazz musicians, symphony orchestras, various kinds of study groups and special interest groups -- all groups of people committed to continually advancing their knowledge and their individual and collective performance.

Their research resulted in the CSILE knowledge building software which is now in use in a variety of school systems including Oakland; Louisville; St. Louis; Toronto; Cedar Rapids; Palo Alto; Austin; Edmonton, Alberta; and Baffin Island, Canada with a 100% Innuit population. Research has indicated significant increases in students: depth of understanding, ability to understand difficult text, and, in some cases, scores on the language subtests of standardized achievement tests.

Now, the same adult-based, expertise-developing processes which are now used to support *students*' deeper understanding through CSILE, are being reconfigured to support *adults* as they undertake the difficult and challenging work of educational transformation from the classroom out.

The collaborative knowledge building processes and outcomes that CSILE supports are closely aligned with the processes that Peter Senge describes in *The Fifth Discipline* as requirements for creating "learning organizations," and with many of the characteristics W. Edwards Deming described as the "profound knowledge" required for organizations to function as systems of intrinsically-driven, continually-improving learners. This is why we believe it can serve as a relatively common platform for individual and organizational learning.

 For example, the following pages show how Senge's <u>thoughts and concepts</u> translate into school district <u>actions</u>.

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SENGE	**School System**
"Learning organizations are spaces for generative conversations and concerted action. In them, language functions as a device for connection, invention, and coordination. People can talk from their hearts and connect with one another in the spirit of dialogue. Their dialogue weaves a common fabric and connects them at a deep level of being. When people talk and listen to each other this way, they create a field of alignment that produces tremendous power to invent new realities in conversation, and to bring about these new realities in action."	The district knowledge-building strategy develops a process scaffold to support continuing conversations about action among an organization of connected learners.
"In learning organizations, people are always inquiri into the systemic consequences of their actions, rather th just focusing on local consequences."	The vertical composition of the nested knowledge-building communities assures that the perspectives of other parts of the organizations are considered.
"Learning arises through performance and practice."	Quality management principles support the continual application of learning-derived improvements. Moreover, the nature of "implementation" process derives from the same principles.
"…the learning space must be shamelessly integrated into the work space for an ongoing cycle of reflection, experimentation, and action."	The combined knowledge-building, vertical team, and quality management strategies make the entire school system a "classroom" for *in-the-job* learning.

"…learning is too important to leave to chance. It will not be adequate to offer training and hope that people will apply new insights and methods.

Nor will help from consultants be sufficient to bring about the fundamental shifts in thinking and interacting and the new capabilities needed to sustain those shifts. It will be necessary to redesign work if progressive ideas are to find their way into the mainstream of management practice. "

The knowledge-building leadership structures provide places -- virtual and physical -- where teams can meet to safely reflect on structures, identify counterproductive behaviors, experiment with alternative strategies, and design solutions for actual work settings.

Process and content are inseparable. …The separatio between the issues we are interested in and the processe might use to learn about them may be the primary obst potential breakthroughs.

With CSILE supporting continual conversations about effectively responding to children's needs, process is always part of the content.

"Learning occurs between a fear and a need. On the one hand, we feel the need to change if we are to accomplish our goals. On the other hand, we feel the anxiety of facing the unknown and unfamiliar. To learn significant things, we must suspen some basic notions about our worlds and ourselves. This frightening proposition for the ego. …(especially) when we question deep beliefs and mental models. …our mental models are not like pieces of clothing that we can put on and tak off. They are basic constitutive structures of our personality. Most of the time we *are* our mental models. "

The *system visioning* processes in the initial phases of implementation are structured to confront directly the old mental models or paradigms we carry around in education.

… there are no problems "out there" to be solved indepen of how we think and act in articulating these problems.   …Only with the support, insight, and fellowship of a community can we face the dangers of learning meaningful things."

Addressed by the concept of nested knowledge-building communities.

"If we turn to leaders because we hope they know more, have experienced more, are wiser… then this explains why today we must turn to …develop leadership communities. … How those predisposed begin to know each other and to work together involves a cycle of community building activities and practical experimentation. The former must be intense enough and open-ended enough to foster trusting personal relationships and to lay a foundation of knowledge and skills. The latter must offer realistic starting steps in applying new knowledge and skills to important issues."

The approach taps a school system's intrinsic leadership -- based on a hierarchy of knowledge.

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"Building learning organizations is not an individual task. It demands a shift that goes all the way to the core of our culture ...a culture that fragments our thoughts, that detaches the world from the self and the self from the community.

...We need to invent a new learning model for business, education, health care, government, and family. This invention will come from the patient, concerted efforts of communities of people invoking aspiration and wonder. As these communities manage to produce fundamental changes, we will regain our memory--the memory of the community nature of the self and the poetic nature of language and the world--the memory of the whole.

Here is where the *meta-level* knowledge-building community becomes an important component of the strategy. By linking the district to the expertise, perspective, and desire to learn of external "experts," it can facilitate the transfer of the district's knowledge to others, and provide outside expertise to the district in a relevant format.