1. Realizing the Potential of the New Common Core

The introduction of the new Common Core State Standards CCSS has mesmerized the U.S. with a unifying approach to transforming American education. The promise is that clarity and shared understanding of a small set of common standards could liberate the education system to innovate towards fostering deeper learning and developing all students as world-class thinkers, problems solvers, and collaborators for today’s world.

The risk is that educators and politicians look for yet another silver bullet. Coupling the standards with two cross state consortia responsible for developing assessment systems for each standard may result in an unwieldy proposition with little impact in the classroom for years, if ever. CCSS Implementation could go the wrong way if:

- CCSS simply become new targets that educators must meet,
- teachers are evaluated based on simplistic measures of these targets,
- fear of failure and risk avoidance increase,
- a cottage industry of fragmented quick-fix nostrums arises that siphons off energy for deeper and longer-term change strategies, or
- the CCSS is perceived as too difficult and simply gets ignored.

Our view is that realizing the potential of the new Common Core State Standards to foster meaningful change depends on tapping and bringing to bear three different developments:

• innovation in the curriculum-instruction-assessment nexus
• commitment to organized, high-leverage capacity building at all levels; and
• new understanding of and methods for ‘whole system change.’

To appreciate the window of opportunity from these three developments it helps to see how “basic innovation” occurs in technology - where again and again major breakthroughs that create new industries and transform existing ones arise from unexpected synergies among an ensemble of otherwise independent developments. For example, viable commercial aviation started in the 1930’s with the DC3, a plane that
combined five component technologies for the first time. But commercial air travel only became a major industry with two additional technologies that became commercially viable after World War II, jet propulsion and radar. Similarly, digital computation arose from separate breakthroughs in memory technology (core memory), processing (the semi-conductor), and circuit testing (high speed oscilloscopes). The Internet emerged from continuing breakthroughs in processing, programming and personal computing - and eventually, a decade later, the explosion of portable devices that created a multiplicity of ways to interact digitally.

Interestingly while each of these new technology ensembles brought significant societal change, the real needs addressed were only clear in hindsight. In 1930 no one was asking for fast, safe long–distance air travel; or large-scale machine computation in 1940; or massive interconnectivity in 1980. These needs were “latent” and only glimpsed at best by small numbers of innovators working on component technologies. Similarly, for most, the need addressed by the new Common Core Standards is better student performance. We see the possibilities as far more transformative, the result of decades spent immersed in the potentials of each of the three key “component technologies” cited above.

Innovation in curriculum, instruction, and assessment has the potential transform the culture and process of school from being teacher-centric to being truly learner-centric. Over the past decades, much has been learned about child- and adult development, the diverse ways in which learners learn, the multiple intelligences they embody, the social and emotional aspects of learning, and the basics of the learning process itself like the importance of salience, active experimentation, and constructed (versus imposed) understanding. Sadly, far too little of this can be seen in typical classrooms. But this is changing as more and more teachers learn how to make education engaging and relevant to 21st century learners, including the tragically growing numbers who disengage entirely from our schools.

While there is a tendency to see technology as driving change in the classroom, we believe the deeper driving forces are a maturing of “learner-centered” instructional design and pedagogy, as demonstrated daily by gifted teachers who focus on
- designing the learning process, starting with why this subject matters and including artifacts for active learning,
- engaging students in addressing meaningful problems and in taking responsibility for their own learning,
- facilitating students learning with and from one another.

To state the obvious: teaching is a means not an end. The traditional teacher-centered school substitutes the semblance of teacher control for the opportunity of deep learning for all students. We believe that the days are coming to an end when teachers stand in

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1 Radial air-cooled engines, variable pitch propellers, monocoque body construction, retractable wheels, and adjustable wing flaps. Interestingly, one year earlier, in 1932, Boeing introduced the B 247 that had all these component technologies except wing flaps. It proved unstable on take off and landing, necessitating downsizing the engine, and never became a commercial success see Senge (1990).
front of classrooms and deliver boring lectures to passive students sitting in neat rows based on pre-determined curriculum that engages neither.

Effective instructional design also transforms assessment because it immerses teachers and students in evidence-based assessing daily as a natural by-product of classes working differently. For example, imagine an 8\(^{th}\) grade algebra class where students spend virtually the whole hour working together in teams to solve problems. This not only engages them more directly, it frees much of the teacher’s time to observe how each student is doing. In problem-solving contexts typical to math and much science, students can see directly what they understand and what they do not, and by helping one another they advance their understanding not just their skills in technical manipulation, and do so in a very natural way. As importantly, with his/her time freed up from being the ‘sage on the stage,’ the teacher can judge how individual students are doing and make adjustments – such as offering mentoring specific to a learner, pausing the class to see which students can explain a particular challenge for all, or re-composing student groups to make sure that students having difficulty are paired with others likely to help them. Periodic testing then complements this process by providing teacher and student with additional feedback to enhance the efforts of both, rather than being solitary data on student performance.

But effective assessment strategies for teachers differ from those needed by a school principal or superintendent, or a board member, or a citizen.

This difference illustrates a basic issue that has confounded efforts to use assessment effectively in recent years. In the frenzy to enhance accountability and student performance we have papered over the complexity of assessment. There are several key actors in the system and they need different types of data to support different actions. With little agreement on “Assessing for Who and for What Purpose?” far too many schools today are applying performance indicators appropriate for external stakeholders in their own internal management. For example, data from standardized test scores are far too coarse and infrequent to help teachers adjust their instructional strategies in real time. Trying to improve learning based on such data is like trying to manage a business based on quarterly or annual return on investment figures. ROI is a perfectly appropriate indicator for investors but when used mindlessly by managers, it contributes to the short life expectancy of a great many businesses.

Obviously, the journey from a traditional teacher-centric culture to a learner-centric one is monumental, which is a primary reason why individual and collective leadership capacity building is so critical, so that

- teacher leaders grow in their understanding and abilities to implement new methods in the classroom;
- principals and other building leaders grow in creating school cultures that value collaboration and teaming, risk-taking, and continuous learning; and
- system leaders like superintendents, central office staff and boards grow in their capacity to both support high-aspiration learning cultures in schools and engage and align a complex array of stakeholders in support of ongoing innovation.
As will be explored in depth below, high leverage capacity building blends training and on-site coaching for teachers and administrators, with an overarching aim to foster vibrant peer learning networks, the *sine quo non* for sustaining innovation. While educators are familiar with terms like ‘professional learning communities’ (PLCs), we find that the strategic importance of robust peer learning networks can easily be lost in an historically individualistic profession like teaching. For example, emphasizing innovation in the classroom can often translate to focusing on particular ‘hero teachers’ as *the* innovators and completely miss the importance of larger collaborative networks. Even the term ‘capacity building’ can be heard as episodic training only and completely miss the central idea of building a culture of where capacity building is integrated into the day to day life of schools. Indeed, one of our biggest lessons from working over two decades in helping teacher leaders and administrators is the leverage that lays in the never-ending work of building a true learning culture where all people – teachers and administrators, adults and students - continually learn with and from one another, what one of us has called a “densely developmental organization.” As one teacher recently observed, “If you feel really confident, that means you probably are not pushing yourself. In order to apply this (systems thinking) knowledge with kids, you will need to show your vulnerability, and that is the roadblock. We teachers are the worst at that”

Longer term, we believe that high-leverage capacity building can also re-invigorate teaching as a profession. Amongst all the public pressures to attract better teachers and expel poorer ones, little attention is often given to the developmental environment within which teachers operate. Embedding ongoing capacity building improves teacher quality and student achievement. It increases retention of teachers and administrators truly committed to their craft, and makes more evident those who are not. Over time, it can transform the overall school climate to make education a more and more attractive profession for talented young people. Simplistic fixes to get rid of low performers and hire higher performers will accomplish little without transforming the systems that shape how educators learn.

All of this must be integrated in well thought out strategies for *Whole System Change*. While it is common to espouse ‘a systemic approach,’ most change efforts in public education differ substantially, as illustrated by the ‘drivers’ typically employed:

- External (often punitive) Accountability
- Exclusive focus on individual (typically competitive) development
- New technology
- Reliance on fragmented strategies (often masquerading as systemic)

It is not that these drivers have no place among workable change strategies, but they are

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3 [www.communitycampsnowball.org](http://www.communitycampsnowball.org); “Teachers Talk About Systems Thinking”
4 M. Fullan’s “Choosing the Wrong Drivers for Whole System Reform,” CSE (Australia Center for Strategic Education) Seminar Series Paper No 204, May 2011, [www.cse.edu.au](http://www.cse.edu.au). By “driver” we mean a major policy and set of associated strategies that promise to achieve whole system change.
miscast as lead drivers; as such, they shift attention away from higher leverage strategies. All too often, implementation of major change efforts in education becomes a hodgepodge of standards over here, assessments over there, and teacher appraisal and incentives in still another box. Districts, states, even whole countries, often have great front-end fanfare but without systemic leadership capacities a chronic inability to put the pieces together in implementation.

In this report, rather than focusing in the three developments separately, we integrate them through exploring the broad process of systemic change and how it plays out in schools and school systems. Part 2 summarizes basics ideas, frameworks and tools for leadership and systemic change – including an adult developmental framework relevant for teachers and administrators alike, core capacities essential for leaders at all levels, and a strategy framework that emphasizes shifts in core assumptions, beliefs and practices like those associated with moving from a teacher-centric to learner-centric classroom. Part 3 shows how these ideas come together to make systemic change an ongoing learning process. Part 4, the heart of the paper, explores building healthy “leadership ecologies” in practice, connecting innovation and change with leadership development at all levels: teacher leaders, school administrative leaders, system leaders, and community leaders - who together can co-create ongoing innovation in instruction and management across the whole system. Part 5 summarizes key challenges that such leadership faces and strategies needed to face those challenges.

We choose the title “Developmental Stories” to express a core idea that can easily be lost behind abstract terms like ‘systemic change,” “innovation” and “whole system change.” Growing organizations in general, and healthy schools and school systems in particular, comes down, again and again, to people’s commitment to their personal and collective development. Organizations work the way they work because of how we work - how we think and interact, our unquestioned beliefs, assumptions and habitual ways of operating, how we define problems and go about responding to them. What is most systemic is most personal in the sense that the system lives in each of us. The dream of systemic change that does not engage all in deep processes of reflection and learning is a fantasy, one that limits otherwise talented and committed people to little real accomplishment. As one mentor of ours said many years ago, “Changing the world is an inside job.”

2. Leading Systemic Change: an overview of guiding ideas, frameworks, and tools

2.1 Foundational Ideas Regarding Systemic Change

Talking to many different school leaders, superintendents, principals, teachers, and board members as part of preparing this report, we found many who saw the new Common Core standards as representing a real opportunity for deepening and accelerating real change in substance, process and outcomes achieved by schools. Typical of these was the comment of Linda Henke, Superintendent of the Maplewood-Richmond Heights district, a small, relatively poor (50% free and reduced lunch) and high-performing urban district in St Louis: “We are looking at the new Common Core as an opportunity to
increase the rigor of our work and move all of our kids to higher levels of critical
tinking.” But most added an important caveat: there needs to be an established capacity
for change. “We will embrace the new Common Core because this could be a vehicle for
changes that could benefit kids,” says Mike Maryanski, Superintendent for nineteen years
of the Tahoma School System (www.tahomasd.us), a high performing suburban-rural
district near Olympia, Washington. “But you can't do any of this without a foundation.”

That foundation starts with shared understandings of the nature and requirements of
systemic change and the leadership communities needed to sustain such change. In the
face of the transformations needed, there is no one magic bullet. But the following five
basic ideas can help in aligning people’s expectations and assumptions.

1. **No One Size Fits All:** effective change strategies must be home grown. They must be
tailored to the realities of each setting and context - to culture and history, to existing
skills and leadership capabilities in place, and to the particular challenges and problems
that must be faced here. All sustainable leadership development occurs while confronting
real issues and accomplishing improvement with these students and these colleagues,
within a specific cultural and social reality, not in some abstract world of leadership
books and in-service training workshops. In each context, it is important to understand
the particular opportunities and conditions, where there is readiness and where there is
not, and to allow this reality to shape the approaches you take.

2. **You Must Build Leadership Capacity at all Levels:** give up the simplistic notion that
only those at the top can create real change. A major limitation on efforts at systemic
change comes with the very way we think about leadership. The challenges that must be
faced are far too diverse and emergent to be successfully met by ‘leadership from the top’
only. You need to be committed to building leadership capacity among system leaders
(superintendents and board members), school leaders (principals and local
administrators), and classroom leaders (teachers). At the system level this means forging
new relationships within and among schools and central office. At the school level,
principals are key to shaping the local climate for innovation through goals and
expectations, deploying resources to build teacher capacity, ensure a safe and respectful
(especially for students) school environment, and leading in developing their own and
others’ capacities for collaborative learning. Teacher leaders are where the “rubber meets
the road” in actually realizing new levels of student learning. They model, motivate and
inspire others to try new practices - guided, as we will see below, by the steady shift from
a teacher-centered to learner-centered classroom, supporting one another in building the
skills and confidence in the journey. Lastly, the complexity of systemic change in
schools demands a ‘multi-stakeholder’ approach that recognizes and invites diverse
community “network leaders” who cross boundaries and can influence the overall
environment in which schools operate - including leadership from the students
themselves, ironically the source of leadership that is most ignored.
3. Leadership Capacity is Collaboration Capacity: isolated heroes can produce isolated changes but not ongoing systemic innovation. Success in systemic change demands a relentless focus on collaboration – individuals in teams, larger professional networks, and ultimately networks of institutions (e.g., schools and school districts) – as part of the change process itself. This is easy to espouse but difficult to do effectively because it depends on skills and support structures. For example, educators often talk of collaboration but avoid dealing with the conflicts that prohibit it. Many carry a highly individualized image of professional practice that renders invisible the skills needed to foster productive conversations around truly complex issues (see Section 2.4 below). Appropriate support structures include grade-level and department teams as a focus for professional learning, reflection and sharing of implementation results, especially combined with capacity building strategies to make these teams effective. Within a district, seek out opportunities for teacher teams to be clustered across schools to learn with and from one another and deepen knowledge as they implement new learning’s.

4. Think Developmentally: systemic change does not arise from pulling a few magic levers but as a consequence of continuous processes of development, individually and collectively. Build new capacities by focusing on developing a clear, common base of knowledge and leadership skills and a commitment to mobilize action at all levels of the system. Tailor and apply this common core of knowledge and skills to specific roles across the system, and pay attention to where people are at in their own development to help them create personal pathways and strategies for deep learning. For system- and school leaders, focus on moving from conflict avoidance to developing affective skills that will allow dialogue and deep conversation, and help to build alignment, shared commitments, and effective accountability systems for student learning. Ensure that there is relentless focus on innovation in instruction, supporting teachers in advancing pedagogy that can move from habitual ways of teaching and working with each other to more learner-centered, flexible, diverse, collaborative, and creative learning environments; to move from memorization and rote learning to complex thinking skills and knowledge application; and to integrate greater skills in assessment to continually improve teaching strategies. Create regular learning opportunities with the emphasis on collaborative learning and effective support to apply the insights and skills in practice, followed by time for reflection and sharing of results.

All this requires a disposition to learning, time, tools, and continual practice. Below we will propose a simple developmental framework and a set of core leadership capabilities that can guide the capacity-building process.

5. Focus on a Few High Leverage Areas: Leaders at any level can only do so much, and getting scattered among too many initiatives is always a danger. Effective leaders strive for “simplexity,” finding the smallest number of high-leverage, easy-to-understand actions that can unleash powerful consequences. In particular, they look for those that

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5 See Fullan, M., Motion Leadership: The Skinny on becoming Change Savvy, Corwin, 2010, p. 6
6 Fullan, M, Motion Leadership, ibid. p.16
create self-reinforcing and self-sustaining ‘virtuous cycles’ of results and further engagement. Keep in mind that “results” include personal changes as well as measurable results like quantitative student achievement. In particular, since the later may take considerable time to achieve, it is important to build momentum through shorter-term improvements like teachers seeing greater student engagement with new learning tools and instructional strategies and administrators experiencing more open and honest conversations around difficult issues.

Specifically, effective leaders of systemic change learn how to pay attention to critical short-term changes that also create an environment for deeper and more enduring changes that may take much longer - key distinctions elaborated in the following strategic framework.

2.2 A Framework for Thinking Strategically: creating the environment for deep learning and change.
Our experience suggests three key areas of focus whereby leaders shape an environment for sustained learning and change: compelling guiding ideas; tools and methods (and underlying theory) that help people develop in order to produce change; and “learning infrastructures” that make available resources (e.g., time for reflection, training and coaching, support for peer networks) that assure that people have the wherewithal to practice with the tools and methods in pursuit of those guiding ideas. These three elements are summarized in the strategic “architecture” on the left-hand side of the diagram below.7

The right-hand side of the diagram summarizes the intended outcomes in terms of a “deep learning cycle:” people (individually and collectively) developing new skills and capabilities, new practices, new awareness and sensibilities, and ultimately new attitudes and beliefs. As this deep learning cycle continues over time, it also builds new peer networks, a key to the resiliency of any change process. The consequences of this deep learning manifest in the “results” achieved in student learning: skills, knowledge, emotional maturity, self-confidence and personal aspiration. Assessing these results in line with overall aims leads to changes in strategy – for example, new tools and methods for teacher development or new guiding ideas, like the new Common Core standards themselves.

Guiding ideas orient people and articulate priorities.

This includes clear purpose and goals. To achieve new outcomes on a large scale, leaders must focus relentlessly on a small number of priorities and mobilize others’ to do likewise. This means an ongoing process to develop a shared understanding around:

- The **purpose** of the change;
- the future **potential**;
- the **parts** everyone will play; and
- a viable **plan**.

Here is where leaders must build bridges that make otherwise abstract ideas real and meaningful for people. For most, the new CCSS is not a motivator because it has no credibility, no track record of success. In fact, in many settings we even recommend not leading with a general term like the “new Common Core Standards” because it will seem like another external requirement to which people must now comply. The first question is, “What does this mean to us?” “Why is it important for us?” “How might it align with our own aspirations for our students?” Serious conversations are needed to come to a deeper understanding, and this initial awareness building will require multiple methods to support making personal meaning of the changes: video, print, study sessions and observations of peers and other systems further along the implementation journey. But remember that purpose is always abstract UNTIL it becomes real in people’s experience. Putting the new standards into use as soon as possible will lead to deeper understanding as educators begin to try new methods and behaviors, and revise their thinking based on actual results achieved.

Compelling guiding ideas must not only create clarity, they must elevate. As William O’Brien, former CEO and mentor in systemic change to many of us, used to say, “The
basic problem today is too many organizations are governed by mediocre ideas.”

Specifically, we believe there is a tragic shortage of compelling guiding ideas in education today, starting with the lack of a compelling consensual answer to the question, “What are the aims of education for the 21st Century?”

But it does not need to be so. Not surprisingly, many of the school systems we have used to help us understand systemic change as relates to the new Common Core have been at work for a long time on articulating their aims. For example, almost twenty years ago, Maryanksi and colleagues in Tahoma undertook a two-year multi-stakeholder (teachers, parents, students, local businesspeople and other community leaders) process to explore and articulate a set of overarching aims for a twenty-first century education and came up with six, which are still used (with minor modification) as the organizing themes for all that they do (the school system website is organized around these themes - www.tahomasd.us)

- Complex thinkers
- Community contributors
- Collaborative workers
- Quality producers
- Self-directed learners
- Effective communicators

Guiding ideas can also address basics regarding how people intend to approach change. For almost a decade, Henke and her colleagues at Maplewood-Richmond Heights have been developing and applying their “model for sustained improvement,” two triangles, one on ‘program’ and one on ‘culture.’ Each highlights three key ideas (their complete image for this is in the Appendix)

**Program:**
- Curriculum covenant
- Personalized service - each child treated like an individual
- Instructional best practice

**Culture**
- A compelling vision: metaphors and mission
- Positive environment: respect, nutrition, beauty; teachers, administrators, students as co-creators of the school
- Continuous improvement

“Schools can be overwhelmed by new challenges like the Common Core if they have not worked on both (program and culture),” says Henke. “Without ongoing work on culture, you can easily lose your bearings reacting to the next set of expectations thrown at you. Without ongoing work on program, you can easily feel that there is no continuity to what you are building in curriculum and instruction over time.”

Secondly, all learning and change requires practical tools and methods that people can employ to build new capabilities, such as tools and processes to enhance teacher

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effectiveness or make help district leadership teams better management decisions. We cannot emphasize this enough; without practical tools that help people build new capacity, they will never be able to do so in practical settings. This is the real significance of a “tool” as we use the term here – it helps with some practical need but, over time, it also alters the tool user. As the old saying goes, “Hammers build buildings, but they also create carpenters.”

But tools without a clear underlying theory of what and how you are seeking to change can create an illusion of change with no real deeper movement. For example, when we examine schools that make real strides with higher-order skills such as called for in the CCSS, we see a consistent use of learner-centered, collaborative classroom strategies. In such a setting, students are continually deepening their knowledge through helping one another. They are more active and engaged. And, because teachers spend much less time delivering information from the front, it frees up their time to be more observant of how each student is progressing and to intervene in much more focused ways when particular help is needed. But the theory behind such instructional design needs to be articulated in order to support teachers in the difficult journey from teacher-centrism to learner-centrism.

Making theories explicit puts key assumptions into the open where they can be tested and refined over time. It is precisely what is needed to make the change process a genuine learning process. As Dr. W. Edwards Deming, pioneer of the quality movement, used to say, “No theory, no learning.” This also relates to the importance “deprivatizing practice” for increasing transparency and accountability.⁹ Because of their advanced academic training, educators can easily fall into a trap of using esoteric terms that isolate them from the larger publics they serve. Leading change in a public institution like schools requires theory that strives for “simplicity without reductionism:” that is both non-trivial in terms of capturing the complexity of a change process and clear enough to be understood by all key stakeholders. This is never easy, but it is a hallmark of effective leadership in our experience.

Third, innovations in learning infrastructure are needed to make it feasible for leaders at all levels to have the time and opportunity to utilize tools and processes for learning and improvement. School systems need to send a message that they are committed to continual learning and capacity building by creating infrastructures to support it. Learning is too important to leave to chance and needs to be embedded in day-to-day routines. Human and financial resources need to be invested in high yield supports including practical and engaging in-service training combined with effective coaching that truly supports teachers in applying new tools and ideas (see Section 4.1 and 4.4 below). There needs to be time for collaborative planning and examination of student work. If we are serious about learning and development, resources must be allocated to make it an integral part of the school’s management processes.

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⁹ Fullan, *Motion Leadership*, ibid., p. 59
For example, Tahoma has established Teacher Leadership Institutes (over ten years ago), whereby peers identify six to ten teacher leaders who then have a series of meetings over the year, including the principal, focused on key developmental issues having to do with curriculum or instruction, and then work as a team to bring back new ideas into practice with their peers. Maplewood-Richmond Heights has teachers organized in Curriculum Action Teams to make the commitment to continuous improvement part of the day-to-day working of the schools. In virtually all the school systems we know where people work to build capacity for deep change, we find innovation in creating meaningful learning infrastructures, as you will see in many other examples below.

Overall, this simple framework embeds two fundamental distinctions that we believe inform effective leadership of systemic change. First, it focuses on the source of results, the deep learning cycle, rather than the results themselves. Everyone cares about results, as they should. The question is always how will you get there. According to the framework, new results are achieved through new skills, new daily practices, new networks of collaboration, and ultimately new awareness, beliefs and assumptions – all connected in ongoing processes of deep learning. Second, it directs leaders’ attention to what they can actually do to enable this ongoing development. Just as a master teacher knows that she or he does not cause learning to happen – only the students can do that – so too does the master leader know that she or he likewise must create conditions for real learning and change and have workable strategies for doing this. Paying attention to the elements in the architecture focuses their actions on key aspects of those conditions. Committing to participate themselves in their own developmental process, especially formal leaders like Principals and Superintendents, gives them understanding and credibility as models of a culture of working together.

2.3. A Basic Developmental Framework

Seeing systemic change as an ongoing process of deep learning focuses leaders on changes that can be sustained, because they are consequence of building individual and collective capacities. While this idea is still relatively radical in education, it has taken root in business over the past two decades, where luminaries from Arie de Geus of Shell to Jack Welsh of GE have argued that the “only sustainable source of competitive advantage is an organization’s ability to learn and adapt.” But emphasizing the deep learning cycle also means we think more rigorously about the processes of human development that such learning enables.

Below we will propose a simple development framework based on four stages that have proven useful in our work in supporting teachers, principals and other building leaders, and system leaders in both innovation in the classroom and building schools and school systems as learning cultures. Such a framework is inevitably a great simplification of the actual processes of human growth and development. But distinguishing these stages, which synthesize many people’s work in the field, helps shape workable strategies to support this development. It helps capacity building to reach beyond knowledge and

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technical skills to embrace “disposition,” the overall attitude and orientation of people in diverse settings facing diverse challenges. Lastly, a robust developmental orientation ultimately extends beyond individuals to working teams, networks, larger organizational cultures, and even the communities within which schools operate.

Developmental frameworks can be used in productive and non-productive ways. If used to reflect on one’s own development and behavior, they can be very powerful. When used by mature coaches and developmentally-oriented managers they can refine helping strategies. They can create the “scaffolding” needed to help peers build the knowledge and skills that will allow them to move from where they are to the next opening that a person is ready to embrace at this moment. When used effectively, explicit developmental frameworks help avoid one of the great pitfalls of change efforts: creating fear that people are being forced to change. As one of the founders of the Organization Development field, Richard Beckhard, said, “People do not resist change; people resist being changed.” How we create conditions that fall between forcing change and legitimating no change gets to the heart of effective leadership at any level.

The central premise behind all developmental frameworks is that human beings naturally seek to grow. Indeed, we believe that this is the core premise behind all education. By connecting developmental frameworks explicitly to change processes like implementing the new Common Core, they can legitimate a different message to individuals: this is not about making you change, it is an invitation to grow – indeed, that systemic change only occurs as people grow.

But developmental frameworks like that below can also be used to label people or to label our selves – “my problem is that I am just a level 2” – in ways that can be counter to the very aims of development. As with any tool, the way it’s used determines the value it brings - specifically it is important to be sensitive to differences between states and stages, hierarchy and context, and the inherent non-fixed and open-ended nature of the framework.

**States and Stages**

It’s extremely important to realize and acknowledge that there is nothing negative in any of these stages; they are natural. Discerning these stages is not about evaluation, right and wrong. It’s about greater clarity we can bring to the human dimensions of systemic change.

We consider stages as social-biological structures that produce particular functions in our behavior and awareness. They represent more or less stabilized capacities for some significant period of time. By contrast states refer to more fluid moments of operating from particular configurations of consciousness (mental-emotional-physical) within those stages. There is enough evidence and scientific research that suggests that these stages

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11 Fullan, *Motion Leadership*, ibid. p. 45
are evolutionary, meaning one stage exists before the next one develops and successive stages transcend and include prior stages; but sudden shifts in states of awareness at all stages can happen spontaneously.

As aspects of awareness, the stages co-exist and are certainly not linear or rigidly sequential. This means, for example, that even those who have developed themselves to higher stages can move in any moment to operate from any of the lower stages. This is where the distinction between stages and states is especially useful.

<table>
<thead>
<tr>
<th>STAGE</th>
<th>GENERAL CHARACTERISTICS</th>
<th>INDICATORS IN EDUCATIONAL CONTEXT: teachers</th>
<th>INDICATORS IN EDUCATIONAL CONTEXT: administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internalized</td>
<td>• Absorbed within own awareness</td>
<td>• Focus on delivering content optimization of routines &amp; habits</td>
<td>• Does job as defined</td>
</tr>
<tr>
<td></td>
<td>• External &amp; consequence locus of control; difficulty assuming responsibility</td>
<td>• Lacks confidence to try new things</td>
<td>• Focus on execution of plan</td>
</tr>
<tr>
<td></td>
<td>• Low awareness of mental models</td>
<td>• Focus on staying out of trouble</td>
<td>• Tends to be unilateral and authoritarian in mgmt style</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Low attention to student differences</td>
<td>• Pretends conflicts do not exist</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Not focused on others’ development</td>
</tr>
<tr>
<td>Socialized</td>
<td>• Oriented to fitting in &amp; achievement based on external norms</td>
<td>• Teaches to curriculum &amp; achieving required standards.</td>
<td>• Does job as expected by peers and superiors</td>
</tr>
<tr>
<td></td>
<td>• External &amp; approval oriented locus of control; pays close attention to others’ expectations</td>
<td>• Needs clear instructional guidelines, but also starts to integrate new capacities and tools, initially to gain approval and then stature; open to some feedback</td>
<td>• Focuses on achieving results of plan</td>
</tr>
<tr>
<td></td>
<td>• Attached to received (as opposed to self-generated) mental models</td>
<td>• Recognizes student differences as problems to be solved</td>
<td>• Seeks input from others but may or may not use</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Avoids conflicts or seeks to resolve to save face</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Avoids undue risks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Sees organization as complex machine &amp; seeks to optimize parts, including supporting individuals’ development</td>
</tr>
<tr>
<td>Self Authoring &amp; Empathetic</td>
<td>Self-Transcending</td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
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<tr>
<td>- Internal locus of control: autonomous aspiration; holds an internal secure self-identity</td>
<td>- Internal and external locus of control, mutually informing one another; expands awareness to the larger social field</td>
<td></td>
<td></td>
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<tr>
<td>- Self-confident and open to innovation and work with peer coaching.</td>
<td>- Self confident, self reflective, open to real time coaching and collaboration</td>
<td></td>
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<tr>
<td>- Attached to own mental models but self-reflective &amp; open to inquiry</td>
<td>- Operates from deeper awareness(^\text{15}) and expanded locus of control; profound self-less, “de-centered” self identity(^\text{16})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sensitive to the needs &amp; ideas of others</td>
<td>- Integrates heart, mind &amp; will (intentions, actions, attitudes, behaviors, relationships.)</td>
<td></td>
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<tr>
<td>- Committed to personal development and transformation (fundamental in this stage(^\text{14}))</td>
<td>- Holds paradoxes and transcends them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Teaches to students: focuses on individual students’ needs and learning styles &amp; continually looking for effective learning strategies for each student: “what and why for each kid”</td>
<td>- Motivated by commitment to influence a broader field &amp; the common good</td>
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<tr>
<td>- Starts to us different learning environments, tools &amp; strategies to develop complex thinking skills and content: encourages group and cooperative learning strategies; more student autonomy</td>
<td>- Designs learning spaces &amp; transforms social fields.</td>
<td></td>
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<tr>
<td>- Focus on develop deeper learning processes for students</td>
<td>- Co-creates different learning environments &amp; meaningful and transcendent learning experiences; focuses on individual and collective needs and learning styles; fosters autonomy, reflection and meta-cognition processes.</td>
<td></td>
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<tr>
<td>- Connects empathetically with students as unique people</td>
<td>- Uses and co-creates multiple tools, practices &amp; methods to teach complex habits of thinking and relate them to application of knowledge in real-life projects.</td>
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<tr>
<td>- Manages guided by personal vision, values, and personal commitment</td>
<td>- Works in teams and larger networks: flows easily between ‘my classroom’ and larger community.</td>
<td></td>
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<tr>
<td>- Focuses on engaging people in co-created plan</td>
<td>- Regards students as partners in co-creating learning spaces and processes</td>
<td></td>
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<tr>
<td>- Sees conflicts as opportunity for deeper learning &amp; understanding others</td>
<td>- Creates and holds spaces for collective &amp; generative learning</td>
<td></td>
<td></td>
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<tr>
<td>- Active coach to support development of teachers &amp; other administrators;</td>
<td>- Uses conflict as opportunity for self and others to resolve and transcend - eg., uses own learning challenges as vehicle to open collective space for reflection and co-learning; supports others in resolving own conflicts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Seeks to develop school and school system as learning community: testing and building shared theories; encouraging teamwork, reflection and dialogue at all levels; helping people see how system works</td>
<td>- Seeks to support individual and collective development and synergies between two</td>
<td></td>
<td></td>
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<tr>
<td>- Attuned to context: leads school as living community within larger communities and seeks to maximize mutual learning and co-creating</td>
<td>- Attuned to context: leads school as living community within larger communities and seeks to maximize mutual learning and co-creating</td>
<td></td>
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<tr>
<td>- Sees conflicts as opportunity for</td>
<td>- Seeks to develop students as engaged community leaders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- School as a vehicle for societal transformation: cf., co-leads multi-stakeholder transformation processes</td>
<td></td>
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</tbody>
</table>

\(^\text{13}\) We combine here the stage of self-authoring with a “style” of developing deeper connection with others. We define the stage in this manner because the two aspects are especially important in the context of effective education, which centers on social interactions between adults and students and among adults.

\(^\text{14}\) Commitment to personal transformation is key to be able to stabilize in self-authority and higher stages; to be able to cultivate one’s mind-body system and strive to move on to the higher stages. This is the hardest aspect; if commitment is inadequate, one is likely to move back to the socialized stage.

\(^\text{15}\) Deeper awareness refers to capacity to interact and respond adequately with sensitivity and pertinence to the circumstances, situations or events that arise moment after moment.

\(^\text{16}\) Francisco Varela called this the “virtual self” (see Scharmer, www.dialoguesonleadership.org1999)
Hierarchy and Context
Context can have a powerful impact on how one operates. A person capable of consistently operating at levels 3 and 4 may go back to levels 1 and 2 under fear and stress. Conversely, we all need nurturing and challenging environments to bring out our potentials for levels 3 and 4.

An important aspect of context concerns management hierarchy. For example, a level 3 or 4 teacher operating in a school environment that is predominantly shaped by level 1 or 2 consciousness may rarely operate at her/his potential, or if she does, she will do so by isolating herself from the larger environment. So, too, will a level 3 or 4 principal be constrained in an overall school system that is predominantly level 1 or 2. At least three hierarchical levels need to be considered in the education context: teachers; principals and those shaping the school environment; and superintendents, boards, and others shaping the school system environment. Obviously this hierarchy extends to regional and state superintendents and associated groups who influence the larger context beyond individual school districts.

Realizing environments for successful innovation in education entails appreciating the complex developmental interactions across all these levels, something we will explore below. Teachers’ level of functioning strongly influences the classroom environment and students’ development. In turn, principals, superintendents, school boards and labor unions, and others shape the environment for teachers’ development. Deepening our understanding of these interdependencies is a primary aim of this paper.

Readiness & Movement.
The ultimate aim of any developmental framework is to support people and institutions in growing and evolving those capacities they need to meet the challenges they face and fulfill the commitments they most care about. We will focus below on tools, methods and conditions that can inspire, facilitate, and support movements from one stage to the next.

The first key premise, that human beings seek to grow, leads to the second premise of developmental frameworks: if a person is not exhibiting this tendency in their behavior, it is because of blockages they have encountered, like fear of failing or the need for approval. Developmental frameworks can help people reflect more clearly on where they are at and to diagnose those blockages. This helps them and those seeking to support them in assessing their readiness and clarifying possible next steps.

Lastly, these four levels do not define the totality of development. Eastern and Western traditions of higher stages of consciousness converge in common conceptions that transcend and include these four stages, starting with that the higher stages can only be understood as they are experienced. In many ways what we call level 4 is itself a portal
to higher levels of development. There is no reason to regard the human being as a closed system in terms of developmental potential.

As we will show below, though simple, this basic framework helps understand how education leaders can move from an internalized, self-centered state that constrains teaching and learning to more autonomous and eventually self-transcending states that transforms classroom practices and the knowledge, skills, maturation, and awareness of students. Supporting such movement requires leadership capacities beyond what might be needed to meet more conventional student achievement measures.

2.4 Building Core Leadership Capabilities

“Anybody who wants to be successful with new Common Core needs to be able to help teachers be reflective as they change their practice,” says Maryanski. “You better have a capacity to do this.” And you need to be able to deal with reservations and conflicting views. “What do you do when there is a pushback from the teachers - because there will be?” adds Maryanski. “That is when you need to have deep alignment.”

The alignment Maryanski speaks of - “aligning people and moving in a shared direction” - differs fundamentally from the superficial agreement that change leaders in education often settle for. Getting everyone to agree on everything, in our experience, is neither realistic nor productive. A healthy learning community thrives on differences of views, on people at multiple management levels who have the trust and quality of relationships that they can speak openly about their views, concerns, hopes and fears - and, in turn, be open to having their views influenced by others. Yet, those who comprise a learning community are also continually learning how to do something, to work together to accomplish challenging goals. This is the core leadership paradox: debate and differences in views are essential – but particularly when in service of realizing genuinely shared aspirations. Differences and shared vision. Honoring diverse voices and views and working together for common aims.

From our experience, dealing with these dilemmas successfully virtually defines leadership in systemic change and requires skills in three broad domains: fostering aspiration, nurturing deeper more reflective conversation, and understanding complexity.
Figure 2 Leadership for Learning and Systemic Change

There is an old saw: there are only two sources of motivation in human affairs, aspiration and desperation. When the former is weak, the later asserts itself. This is why so many people adopt the belief that real change only occurs when there is a crisis. Conversely, tapping the power of people’s genuine aspirations means ongoing work to create an environment that nurtures and honors people’s personal visions and, as Maryanski says, helps them to “move from personal visions to shared visions.” “You need to help classroom teachers see,” he adds, “Is it worth it? Can I do it?”

Building shared vision do not arise because those in authority say, “Here is our shared vision” but through ongoing processes of conversation where people continually reflect on what matters to them and what it will take to realize their visions. Such conversations will inevitably focus on current reality as well as visions. They will not only clarify what people truly care about but will bring reservations and conflicting views to the surface. This is why effective leaders need to develop skills for dealing with different mental models as well as different visions. “You will not have much success if you do not build the capacity for real conversations,” says Maryanski. “You will need communication skills, the capacity to deal with the ladder of inference, mental models, and balancing advocacy and inquiry.”

Third, effective leaders at all levels help people see how their work fits within a larger system, how they are interdependent with one another and need one another. As Maryanski puts it, you need to be able “to analyze interactions between the schools and between teachers within the schools.” This also means starting to understand the systemic forces at play and helping people avoid simple quick fixes and search for more fundamental solutions. Over time, people learn that, when things go wrong, rather than just blaming others, we need to pay attention to the larger systemic forces influencing behavior and how we are all part of creating those forces, and need to work together in order to change them.
The above diagram shows the three leadership capacities as forming a three-legged stool, a simple metaphor to convey their interdependence. It is not sufficient to be strong in any one, as it will only create imbalances from underdevelopment of the others. For example, strong visionaries who cannot build an environment that honors differing mental models end up simply trying to impose their visions, a sure-fire way to guarantee that shared visions never exist.

Lastly, each of these three aspects of leadership represent developable skills, and much of our work over the years has been involved in understanding tools and strategies that support their development. The remainder of this section summarizes some of these tools and strategies. A complete summary is not possible in so short a space. Our aim here is to illustrate the importance of practical methods in each area and to give some feeling for the personal work involved in capacity building practices.17

2.4.1 Nurturing aspiration: personal visions and building shared vision

Few ideas are more associated with leadership than vision. Yet, in our experience most efforts to create shared visions bog down in low leverage efforts to sell the vision or to get people to “buy in.” “There is nothing more powerful than an idea who time has come,” said Victor Hugo long ago. Yet this power remains elusive for those who miss the core underlying processes whereby shared visions grow over time.

For example, most miss the foundational connection between nurturing personal vision and building shared visions. Think about it. The only meaning of a shared vision is a transcendent aim that generates and aligns human creative energy. This energy comes from people who commit themselves to something they deeply care about. People who are demoralized, have lost touch with their personal visions, and feel little sense of personal efficacy cannot generate such commitment. In a nutshell, no personal visions, no shared visions. Personal visions are the soil from which shared visions arise. Like master gardeners, masterful leaders know that must nurture the soil nutrients of personal visions in order to grow shared visions. Commitment is complex, shaped by both a person’s level of development and engagement with any particular vision, both of which we will explore below. But that engagement process always centers on finding connections for each of us with what matters to us.

The aim in developing shared vision is not that everyone agrees with the official vision but that each person has a vision about which they truly care and which guides their own work and that these visions align. A useful analogy is how the independent magnetic dipoles in a magnetic field align so that they can carry greater energy. Similarly, diverse people committed to their own and each others’ work can generate enormous energy. In a sense, this is easy to understand in principle in the context of education. As teachers, my passion may be language, or mathematics, or Shakespeare, or students developing their capacity for self-expression, or their ability to reason for themselves. But all these

17 Tools and practices are elaborated in more detail in Senge, et. al., (1994) op. cit. and Senge, et. al, Schools that Learn (Doubleday, 2000 and forthcoming 2012), a fieldbook that focuses exclusively on educational applications.
different visions can align in an overarching shared vision of students growing as human beings.

Just as building shared vision inter-depends on fostering reflective conversation – because people who cannot really listen to one another never generate the respect, trust and shared mutual understanding that shared visions require – so too does it require and enable systems thinking. One connection between shared vision and systems thinking concerns time horizon. When understanding the complex dynamics of any system, you discover tradeoffs between short-term gain and longer-term improvement. For example short term profit in a company can be improved by firing everyone not involved in immediate revenue generation, but longer-term, innovation and customer relationships will suffer and so too will profit. Similarly, teaching test-taking skills may improve student test scores in the short run but at the expense of student (and teacher) engagement and deeper learning on the long run. In most settings there are strong pressures for the short-term because problems are immediate and formal leaders are expected to fix them. But often these short-term actions accomplish little deeper change and problems persist. Indeed, many of the worst aspects of organizational politics arise from people taking short-term actions to make themselves look good and build their personal power base. In our experience, the most effective countervailing balance for the long term is a compelling shared vision that only can be realized in the long run. So, in this way, fostering aspiration in a necessary complement to systems thinking.

Lastly, building shared visions can be dangerous without also shared strategies for moving toward the vision. For example, we have always been worried about leaders who draft lofty vision statements and then broadcast them. Lofty visions are a sure path to cynicism if people do not have tangible experience of moving toward the vision. Visions like “all children develop higher-order skills” need to be balanced with interim goals and benchmarks along the way that will be monitored. Building shared vision is critical, but you need to mobilize action sooner not later. The vision will become more real as people see tangible progress and feel personally engaged in creating that progress. The strategy for moving toward the vision does not need to be perfect. Indeed, the only thing that can be said with certainty about any real innovation is that we do not know all that we will need in order to succeed, which is why it is vital that the overall change process be seen as a learning process, as we elaborate in Part 3 below.

2.4.2 Reflection and Productive Conversation

Having productive conversations, especially around complex problems where there are strong and different views, is not just a matter of good intentions. It is a matter of skill and continual capacity building. Once one starts to grasp the skills involved it becomes clearer why so many teams and groups get hijacked by continuous misunderstandings, forming judgments that are never tested, reacting impulsively to emotions, and failing to ever hear one another – which in turn create vicious cycles of discomfort, mistrust and anger that dissipate energy and prohibit effective decisions and action.
Using tools for making mental models more explicit like the ladder of inference and balancing advocacy and inquiry enables teams to explore difficult issues openly that otherwise would get ignored or settled by decisions made by fiat that command little shared commitment.

The ladder of Inference (figure 3) has its roots in anthropology and the need to develop disciplined approaches to making sense of different cultures. It is no less important in making sense of different people. How many times have you been in a conversation where someone incorrectly referred to your views on an emotionally charged topic? Like an exchange where you point out budget constraints and someone says, “I don't agree with Diane’s position that we should only train people when we have the money,…” Such statements almost always elicit a feeling of needing to defend oneself - because no one wants to have a view attributed to them with which they disagree. The result is usually either an argument or an awkward silence, depending on the perceived costs of disagreeing publicly with the speaker. Yet, the real problems start upstream in the processes of listening itself.

All of us are challenged to listen accurately and in particular to differentiate what the person says from the thoughts and feelings their statement generates within us. Inevitably, our listening occurs through our own filters and interpretations. This is the Ladder of Inference in action: we take in the “data” (directly observable phenomena) of what is said and quickly move “up the ladder” to our own interpretations and conclusions. This movement is not problematic. It is human. We are not recording machines. We do not passively take in the data of our senses. We interact with our world in ways that creates our awareness. Our listening and our internal sense-making arise in braided coils, literally in a matter of seconds. It is easy to confuse the two and grasp only the internal meaning, especially when emotions or time pressure are strong.

**Figure 3**

The Ladder of Inference

I take: actions  
I draw: conclusions  
I add: interpretation  
I select: certain data

Each trip up the ladder...  
...affects what data I select next time.

All Data:  
Anything I can take in through my five senses


Above, Maryanski linked the Ladder of Inference to ‘mental models’ and ‘balancing advocacy and inquiry.’ The former refers to the way we are predisposed to particular interpretations because of past experience. For example, imaging myself as the speaker in the example above, I may have “heard” Diane saying, “We can only train people when there is money” because I experienced my last principal as having little commitment to staff development and frequently citing budgets as the reason. Indeed, that may has been my experience of most of the principals for whom I have worked. So, I could easily have developed a mental model that administrators don't really care about developing people, and this assumption shapes my listening. The need to “balance advocacy and inquiry” gets to the behavioral implications of our sense-making. When faced with hearing a statement with which I disagree, do I immediately advocate my view in opposition or do I first inquire into what the other actually meant? Similarly, when I have a position that I want to advocate, do I share my assumptions and reasoning and invite others to offer different views? Such skills in balancing expressing my views with genuine curiosity regarding others’ views are relatively rare but eminently developable, especially in a work environment that places a high value on capacity for productive conversation.

Lastly, working with the ladder of inference and balancing advocacy and inquiry represent disciplines that tends to lead to ‘cleaner conversations’ over time. Often it is hard to know if people are advocating or inquiring. Many statements in meetings are ambiguous and hard to understand. Often, this occurs because people are so worried about looking bad or saying something that will offend someone that they don't actually say much at all. Over time, practice with these tools leads to more direct, candid and informative conversations. As important, it leads to the ability to talk productively about ‘hot topics’ that often just get ignored in most school settings. Teams that work seriously with such conversational tools develop skills for talking about complex and conflictual subjects in ways that can produce shared understanding and commitment. As Maryanski puts it, “Collaboration is not possible without the capacity to have real conversations.”

2.4.3 Understanding Complexity: Seeing the Larger System
Like collaboration, it is fashionable in education today to advocate systems thinking, but building practical capacity is more difficult. This is in part because of lack of commitment and in part because of not having practical tools. But it is also because systems thinking needs to be married with nurturing aspiration and reflective conversation to really have impact.

Systems thinking starts with an intention to see beyond immediate events and transcend the crisis-oriented leadership culture that afflicts many schools and school systems. A child is hurt in a conflict with another, so parents are called in and playground supervision is increased. Published test scores fall for a particular school, so there is pressure to replace teachers and to devote more time to teaching test-taking skills. A newspaper article publishes an account of a cancelled ethnic studies program, so the superintendent must placate a community group threatening retaliatory action. In each
case, educators may be doing a heroic job of fixing the problem, but there’s a very real chance that each quick fix will do more harm than good in the long run. Moreover, reacting to one event after another can over time develops a kind of “attention-deficit culture.” Life for leaders at all levels becomes about the crisis of the moment, and people grow highly skilled at solving crises instead of looking for ways to prevent them in the first place.

The tools of systems thinking, like the “systems thinking iceberg” below (Figure 4), help leaders develop shared understanding of the deeper patterns and “structures” that give rise to particular events. For the problematic events cited above, these patterns might concern a growing trend of bullying, influx of English as second language learners, or growing disconnects between the schools and the larger community.

Focusing on the structures laying behind the events orients people toward more fundamental solutions than the quick fixes that come from reacting only to the events themselves - like helping children lean how to solve their own personal conflicts. For example, a recent video that has been viewed widely shows three 6-year old boys sitting around a table with a “reinforcing feedback loop” they have drawn of a vicious cycle of “mean words” and “hurt feelings.” The boys drew this loop to better understand why they were having fights on the playground. “First we have mean words, then we have hurt feelings, and then more mean words; then we fight,” says one. The video shows the boys talking about alternative ways they might “intervene” in the system they have created. “We tried saying ‘I’m sorry,’” says another. “It sort of helps, but next time we
are about to fight we are going to try some of these others,” he says pointing to other places that might have “higher leverage.” 19 People are often surprised by the abilities of such young children to look at underlying structures, but in our experience thinking about patterns and underlying systemic structures is natural when students become adept with simple tools of systems thinking like reinforcing feedback loops.

Focusing on underlying structures also helps people appreciate “time delays,” for example the inevitable delays involved in building new capacities to accomplish new goals. For example, Maplewood-Richmond Heights was formerly a low performing district and Henke says that they have learned that in order to achieve significant improvements, “You need to think in terms of years not months.” From 2002 to 2010, Grade 3-11 proficiency in math rose from 14% to 64% and from 29% to 76% in communication arts. Over the same time span, graduation rates increased from 85 to 94% (state-wide rates for rich and poor schools combined are 86%). But, Henke adds, “Our improvement was very slow the first couple of years. But then after four or five years, it started to improve significantly.” She then pointed out that, “Andy Hargreaves (a long time colleague) says that, ‘If a school suddenly gets large increases in academic performance, it should raise red flags. They may well be doing something that they will pay for down the road. Genuine improvement is never achieved overnight.’”

Not all time delays arise in the context of realizing significant new achievements; others are important in shaping negative longer-term effects of supposed improvements. For example, the quick-fix syndrome described above can often be understood by the simple “fixes that backfire” diagram shown below (Figure 5). Here, two feedback processes interact over time: a “balancing” process (B) that characterizes the intended effects of the fix to ameliorate or mitigate a problem symptom and a reinforcing process (R) that involves unintended consequences of the fix (side effects) that often make matters worse. The key to appreciating why this dynamic can confound many leaders is that the unintended consequences usually arise more gradually than the immediate benefits of the intervention. So, increasing supervision on playgrounds may reduce student hostilities in the short term, but it may also result in frustrated supervisors taking time away from things they would rather be doing (including a needed break) and increased agitation and hostilities over the longer term. Similar the “fix” of more focus on test performance may work somewhat in the short run but increased fear and stress may lead to reduced experimentation with better instructional practices and poorer performance in the long run.

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We believe that a fundamental task of leadership at all levels is to help people see the larger systems of which they are a part and seek higher leverage strategies that address the forces in these systems. Building this capacity benefits from tools like the iceberg and system archetypes like Fixes that Fail. But, again, the interdependencies among the three “legs of the stool” matter. For example, seeing deeper systemic forces together can be very difficult without a strong foundation of trust, openness and conversational skills. And, what motivates such learning invariably comes down to commitment to shared visions that truly matter to people. Lastly, such ongoing development requires shaping an environment for deep learning as we described in Section 2.2 above and as we will illustrate in many examples below (Part 4).

2.5 Conclusion: the Challenges of Profound Change
Two ways to define the complexity of any change setting concern the diversity of key stakeholders and the depth of mental models at risk. On both accounts, change in institutions of public education is particularly challenging.

The “stakeholder map” for schools is far more complex than that for typical corporations. This starts with the obvious trinity of student, parent or family, and teacher. On closer inspection, each actually illuminates a whole layer of social reality: (1) “the classroom,” the place and processes where learners and teachers interact; (2) the “school” as a formal institution, including the teachers, school building administrators, and the larger school system administration, up to and including state and even national officials and regulations; and (3) the larger community of parents, community leaders, and the for-profit and non-profit organizations where most school graduates will eventually work. Each of these actors has a real stake in how schools work - and real influence on their success. The picture below (Figure 6) highlights in highly simplified terms just a few of the most basic interactions within and across the boundaries between these layers. If the web of interconnections this reveals seems daunting, welcome to the world of systemic change in education!21

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20 Fixes that Fail is one of eight such system archetypes, recurring structures in diverse settings, see Pegasus Communications (www.pegasuscom.com) or Senge, P. et. al., The Fifth Discipline Fieldbook (Doubleday, 1994).
21 Senge, P. et. al., Schools that Learn, op.cit., p. 18, 23
Figure 6
Basic Interdependencies that Connect
Schools and their Larger Systems

But this web is just the beginning of appreciating the challenges of systemic change in schools. Of all the primary institutions that shape a modern society, education is arguably the one shaped by the deepest mental models. Why? Because for most of us, school was the first stop in a lifelong exposure to modern organizations, and it is the
institution that most shaped our worldview about how organizations work: their rules, norms, and assumptions; their management and leadership; and power and authority. While our family experiences vary a great deal and our professional experiences diverge along many career tracks, our school experiences are remarkably similar. “The prevailing system of management starts in first grade,” said Dr. W. Edwards Deming, famous pioneer of the quality management movement. As Deming pointed out, it is there that, as young children, we learn about seeking right answers and avoiding wrong answers. We learn that mistakes are a sign of failure and that collaboration is cheating. We learn that the goals of “learning” are defined by teachers, not the challenges and aspirations of our lives. And we learn that not only does the teacher set the agenda, she or he is the ultimate arbiter: we know we have ‘learned’ when the teacher tells us we have learned. It is no surprise that most school children conclude, either consciously or not, that the way to get ahead is to please the teacher. Some accept this. Others stay in a state of rebellion for much of their school lives.

Deming pointed out the deep connections of these institutional norms in school and in mainstream work environments. Avoiding blame for things gone wrong and seeking credit for successes (seeking right answers and avoiding wrong ones) virtually defines many work cultures. Once again, the agenda is set by the boss, and it is the boss who often holds the power to assess who has contributed and who has not. Pleasing the teacher naturally evolves in to pleasing the boss. As one life-long Ford employee commented in regard to the quality management edict of ‘focus on the customer,’ “I have been in this organization for 25 years and I have always focused on my customer, my boss.” Clearly, the imprint of what we learned in school about institutional life runs deep, and the power of our assumptions about how schools should work comes to the surface when real changes start to occur.

Mary Scheetz, principal of the first middle school to introduce systems-thinking tools in both classrooms and management over twenty-five years ago (and currently Assistant Superintendent for Curriculum and Instruction in a school District in St. Louis – see section 4.1), tells a powerful story about a conversation with an unhappy parent. By her own assessment, she “got pretty good at allaying most parents’ concerns” about the school’s many innovations. The school had excellent test scores and plenty of evidence that the kids fared very well as they advanced and had to transition into a more traditional school environments. But every once in a while there was a parent whose fears she could not assuage. “I will never forget one father who was just angry, and it was clear that nothing I was saying was making his anger go away. Finally, I asked him, ‘Does (his daughter) like it here?’ He said, ‘She loves it. She is so happy.’ Wondering what could be wrong with this, I waited. Then he said, ‘That is what is wrong. School just shouldn’t be that way, fun.’ Gradually I realized that his anger was about his own school experience not his daughter’s, which anger he was now reliving. He never had the opportunity to love his school and his learning, and he was angry about that.”

Innovators in education need to be prepared for the inner as well as the outer challenges of real change in schools – for parents, teachers, school board members and other influential leaders in the community. All systemic change ultimately centers on changes
in assumptions and beliefs, which are the roots of the norms, management practices, metrics, and expectations that shape all institutions. Unearthing these assumptions is often essential to move forward with innovations that shift the status quo, like implementing the new Common Core. This is why change strategies need to create the conditions for people to build trusting relationships and to engage personally.

This includes the inner work of those seeking to lead as well, as evident at the higher stages of the developmental framework above. As former CEO Bill O’Brien used to say, “The ultimate determination of the outcome of an intervention is the inner state of the intervener.” This reminds us that all who are leading change, from whatever formal positions, are on their own developmental journey of shifting the intertwined exterior and interior realities of how schools work.\(^{22}\)

\(^{22}\) Although we will not discuss them in depth here, practices and tools that support “awareness-based change strategies” have gained increasing importance in our work when confronted by challenges of profound change. These include methods for (1) “systems sensing” like learning journeys and peer shadowing, (2) “presencing” to the deeper sources of commitment like retreats and container building for deep dialogue, and (3) “realizing” like rapid prototyping to learn from doing. See Scharmer, Theory U, ibid, Senge, et al, Presence (Doubleday 2004) and www.presencing.com.
3. The Path: Change as an Ongoing Learning Process

When all is said and done, there is no way forward but by moving forward. As we have said elsewhere, leaders “learn about implementation through implementation” and “communication in the absence of action means almost nothing.” But that said, action without continual assessment of progress, reflection, and adjustment is blind and can frustrate people just as much as no action at all. In short, the “how” of systemic change is to accept change itself as a continual learning process. This follows logically from understanding that effective change strategies must be “home grown” and that overly formulistic approaches imposed on people are doomed to fail. You might think that it would be natural for educators to approach change as a learning process, but the combination of external pressures from stakeholders and traditional anti-learning school cultures make this anything but true.

While disheartening for those looking for simple formulistic approaches, consciously seeing change as a learning process can relieve a self-imposed burden many change leaders feel. You do not have to have all the answers in advance. And, you are not in this alone. But you do need to have clear strategic priorities, like fostering the higher-order thinking skills embedded in the new Common Core and growing people’s capacity to collaborate across boundaries. And, you do need to be serious about reaching out for help and engaging others, which can be hard for those trying to prove themselves. But there are some simple guidelines that will help as you go forward.

Creating a culture of trust and risk taking. This cannot be done overnight. It is one of the key longer-term indicators of progress. In the stories below, we will return often to the challenges and strategies for creating cultures for sustaining innovation in schools. We have already seen this in the emphasis of Mike Maryanski of the Tahoma schools on capacity building and using the ladder of inference and related tools for having “real conversations.”

Transparency and non-judgmentalism. In today’s climate for schools, it is especially important to recognize the “strong 2-way relationship between transparency and non-judgmentalism.” Trust can be fragile. It can take a long time to be built and erode quickly. “Let judgment creep into the relationship and openness recedes.”

This balance between transparency and non-judgmentalism can quickly deteriorate in the face of pressures from external stakeholders’s for greater accountability. We know no way to address this but by working to expand the circles of trust to encompass these key stakeholders. This is why it is so important to build shared commitment to a common purpose, and why it was the first principle we emphasized above. When this process is done well, using the leadership tools and skills discussed here, it lays a foundation for

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24 *Op cit.*, p. 60.
trust that can help people temper legitimate demands for greater transparency and accountability with realistic strategies that also build the safety people need to experiment and learn.

**Reflective Doing.** In terms of practice, effective leaders learn to become “change savvy” by “reflective doing,” what Donald Schoen called “reflection-in-action.” They are action oriented, but they are able to also reflect on their actions. They value tangible results, but they also value deeper conversation. As Tahoma’s Maryanski said, they use tools like the ladder of inference to balance advocacy and inquiry.

In a sense, this idea follows directly from seeing change as a genuine learning process. Action is essential, but so too is stopping regularly to see how we are doing. In that stopping lays a critical opportunity to not only judge success and shortfalls but to *ask real questions*, like “What is working as we intended and what is not – and what does this tell us about the assumptions and mental models that underlay our strategy?” “How are we (school management team or system management teams and boards) part of what is limiting our accomplishments?” While reflective doing is foreign to many school management cultures, we have seen countless examples where, as groups develop even rudimentary skills in doing so, the results they can accomplish increase significantly, creating further confidence to continue their learning. Here, too, is where sensitivity in appreciating the developmental stage and readiness of different learners is important in shaping effective change strategies, as we will illustrate in the next section.

**Beware fat plans.** All management involves planning, but too many managers hide behind their plans as a defense mechanism to protect themselves from criticism, especially in highly charged environments like those facing many schools today. In the fast changing world of today’s organizations, plans that take months to develop are usually dead on arrival. Plus, while the ‘committee develops the plan,’ you miss precious time and opportunity to engage actors at many levels in getting moving in the action-reflection cycles of real change.

There are good reasons people want plans. You need clear overarching aims and goals and the basics of a shared strategy to align people’s actions, as we have stressed above. You need to identify interim milestones and how you will monitor progress relative to those. But the complexity and uncertainty of real change argues for simple plans and lots of adjustment as you go.

Doing this well though requires engagement of diverse stakeholders. Our approach to planning in general comes down to a simple rule of thumb: “an ounce of engagement is often worth a pound of superficial *agreement*.” Reach out and engage key stakeholders like board members, including those who are most critical. Get them to help in shaping the aims and goals and basic strategy of the plan. Engage them in periodic reviews of

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25 Schoen, D., *The Reflective Practitioner*, and *Educating the Reflective Practitioner* (complete references)
progress. And, most importantly engage them in first-hand contact with innovators on the front lines: the more time they spend in schools, talking with teachers and students about their work, the more they will be inspired by changes that are already occurring and the more they will appreciate the practical challenges people are up against. When they then see “data” on measurable progress it will have far deeper meaning for them. Over time, people will feel like they are part of the learning process and the need for “CYA” (politely translated as “cover your assumptions”) fat plans will decline naturally.

Celebrate the Journey, and Learn from and Leverage Success, however imperfect

Ongoing monitoring and use of data for improvement is a key strategy. Provide opportunities for schools and systems to learn about implementation by analyzing and sharing their journey. This allows them to go deeper to capture the innovations that are occurring and share those practices. The power of this is reinforced in the recent McKinsey Group finding that the greater the capacity of teachers, the more peers become the source of innovations. We have found Learning Fairs, Learning Labs and Collaborative Networks to be useful strategies for fostering productive and powerful conversations that propel work to deeper levels. CCSS implementation is an opportunity to leverage sharing of best instructional practices as teachers create new learning experiences in their classrooms.

Search out early innovators and have them share their journeys. Select key innovators and ask them to help in identifying tools and resources that will propel implementation and create user-friendly options. Set aside resources used for buying out time of key innovators’ time in order to support them in helping others (another hi-leverage “innovation in learning infrastructure”). The return can be measured by tracking how key innovations spread and the impacts on student learning. Remember that all sustained learning and change entails building momentum. The simple truth is that no one knows fully what will be needed in advance, and all effective change strategies emerge over time, as people take steps and adjust and share as they go.

This is also important as a strategy for engaging those who are non-committal. People want to see new approach in action in contexts with which they can identify. We have found that rather than forcing people to comply, often the best strategy for those not committed is simply to wait until peers are having success and they become curious as to how this is happening. Those who truly care about student learning will usually overcome their skepticism when they see viable strategies and tangible results. Those who do not will then also stand out.

Communication during implementation. Even though you do not have all the answers and your communications may be far from neat, communication is a key to engagement, and engagement is the key to building shared commitment and responsibility. Beware the tendency to wait until “everything is clear” and then let people know how things are going. It never will be, and the dangers of communications aimed at manipulating people’s opinions – either to make a ‘positive impression’ so that everyone will feel good about themselves or a “negative one” to (presumably) motivate people to change – are considerable.
**Conscious sense-making.** Our experience is that there are two cornerstones of effective communication strategies: agreement on appropriate data to share regularly and frequent opportunities for serious conversations to help in interpreting that data.

“Fact-based management” is a cornerstone of today’s well-managed businesses, and effective leaders use to build alignment and shared responsibility not to punish people. This means relentless efforts to identify aims and meaningful data, rather than simply accepting what is expected of your system (like test scores). Ask people what would be meaningful for them as indicators of genuine progress or signals of the need to re-think and adjust. For example, many teachers and good principals will be interested in attendance rates and surveys of student engagement, and good system administrators and board members in teacher surveys regarding their learning, along with retention and recruitment data. All public schools are obligated to provide certain data. Too few seize the opportunity to ask what else they would want to know to support their learning and improvement.

The other key here is recognizing that facts by themselves mean nothing; people also need to learn how to think together about the facts and what they mean for their actions. Learning how to gather data and use evidence strategically to assess and adjust is a cornerstone of a learning culture. Here is another place where the conversational skills presented above are crucial. People draw different conclusions from the same data, but usually lack the discipline to explain clearly their reasoning in doing so. A simple example: increasing attendance rates could mean more students are more engaged or that more disengaged students are dropping out of school and no longer being counted in measuring attendance. The real payoff in terms of shared understanding and shared commitment will always come when people who need to support one another in real change together develop the skills to reason and assess how they are doing together.

“Behaviors before belief.” In a sense, this problem is the converse of the preceding one. We commented before about the fragile nature of superficial agreement; what we did not say is that this is an especially problematic trap among educators. Because many have been life-long products of the education system, they have a tendency to over-analyze problems and assume that people’s beliefs will change based on evidence. We find this unrealistic and often a subtle impediment to real change. If you believe you cannot swim, rational arguments to the contrary are unlikely to help. You simply need to have a good teacher who can help you, step-by-step, start to swim. And you need to start in the shallow end of the pool.

Likewise, we find that getting people engaged in ways that take into account their fears and developmental stage, and then helping them with practical steps in their own learning is the most reliable way to help them also change their beliefs. Beliefs built up over a lifetime naturally change slowly. But they can change, given enough new experience that supports alternative beliefs.

**Excitement prior to implementation is fragile.** Just as you need strategies to engage
people who have contrary beliefs, be wary of “over-excitement” and even worse zealously. The former can be short lived; often those who get very excited at the outset of change efforts fall by the wayside when difficulties arise. Enthusiasm is important for all of us in undertaking daunting challenges, but we need enthusiasm tempered by patience and perseverance for the long term. Likewise, those who are convinced that this is the ‘right answer’ can easily turn off other more skeptical and pragmatically oriented people, who might be the very ones most important to the overall change process.

We have often found over the long term that the most important leaders turn out to be “open-minded pragmatists” who were not the ones jumping up and down most enthusiastically at the outset. They are not easily convinced. They have seen enough failed change nostrums to have developed a healthy skepticism. But they do care deeply about what is accomplished and what can really benefit kids. As we said above, some may be non-committal at first and an effective strategy often comes down to respectfully not forcing them to change. Once they see tangible benefits, their knowledge and credibility often becomes key for drawing in many others like them.

These are but a few of the simple ideas by which effective change leaders at all levels can guide the ongoing learning process. Stepping back, they all link together in one overarching principle that integrates leaders’ capacities to keep two feet firmly planted in current reality and their vision of the reality they truly seek to create.

The Core Leadership Principle: Generating and Sustaining Creative Tension
The source of energy for change as a learning process is creative tension, the simple gap that is generated by having a vision of where people truly want to go and being honest about where we currently are at.

This core principle integrates several key insights into the essential work of leaders at all levels and in all situations. As noted above, vision is one of the oldest ideas associated with leadership. For example, in the Judeo-Christian tradition, we have the familiar statement, “Where there is no vision, the people parish.” Similar statements can be found in most of the world’s spiritual and cultivation traditions. But so, too, is the importance of seeing the truth a cornerstone of leadership traditions, seeing reality as accurately as
we can and working relentlessly to uncover distortions and blindspots. The principle of creative tension connects these two leadership imperatives and reminds us that by themselves “visions do nothing.” In the worst case, they represent lofty sentiments disconnected from action and foster more cynicism than commitment. But, so, too, does seeing reality by itself generate little energy for change. We have all seen the “analysis paralysis” of endless studies and reports with no clear strategy or commitment for change. It is only when both are present that the force of aspiration is connected to the clarity of understanding of the present situation, both what is and the forces shaping what is.

Creative tension integrates both building vision and understanding current reality in a continual dynamic process whereby people harness and focus their capacities for creating the future. It also reminds us that building vision, in the end, is a very pragmatic undertaking, a vehicle for helping shift reality in the direction of our aspirations. This is often forgotten by people who obsess about getting the vision right and forget that, “It’s not what the vision is, it’s what the vision does.”

This principle has been understood by gifted leaders for a very long time. As Martin Luther King wrote in his famous Letter from the Birmingham Jail, “Just as Socrates felt that it was necessary to create a tension in the mind, so that individuals could rise from the bond of myth and half truths… so must we… create the kind of tension in society that will help men rise from the dark depths of prejudice and racism.”

Dr. King’s leadership work is a powerful reminder of a life dedicated to creating vision and telling the truth about current reality. We all know King for his ‘dream,’ of freedom and racial equality. But if you study his actual leadership strategies, you see a relentless commitment to, in his words, “dramatize the current situation.” Adapting ideas from Gandhi’s civil disobedience strategies, King and his colleagues took advantage of the advent of mass media to make visible to all the hardships of African Americans. He did so in ways that made it difficult for people to avoid seeing emotionally people’s plight, and gradually in a mere few years helped establish a broad based moral awareness that things needed to change.

Today in education we face a similar reality. The gap between the haves and have-nots regarding educational opportunity in this country is an aspect of our collective reality that many would prefer not to face. For several decades, it has become increasingly likely that a young African American boy will end up in prison than in any form of tertiary education, and the number of blacks currently incarcerated (about 1 million) represents over 40% of prison inmates, while young black women are the fastest growing segment of prison populations. With about 5% of the world’s population, America has over 25%

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of the world’s prison inmates. It is not possible to sustain a democracy without excellence in education for all students,” says former Girl Scouts of America CEO Frances Hesselbein. But the reality that many would rather not face also includes the extraordinary stresses on students who are privileged and their teachers as well, as educators cope with unprecedented public scrutiny and criticism. In our opinion, both are long-term consequences of an educational system that fails to engage many students in their own development and has suffered countless low-leverage change strategies focused in superficial quick fixes based on pointing fingers rather than fostering shared commitment around deeper systemic changes.

Simply seeing these problems without a compelling vision of where we want to go will not generate much change. In truth, aspects of this vision exist, already present in the inspiring work of many educators at all levels and in all parts of our public schools. In the section that follows we will see this in concrete terms, as we explore how healthy vibrant leadership ecologies develop to realize the sort of 21st century education that the new Common Core could encourage.


As we started at the outset, leadership is much too important to leave to a handful of people, and the idea that the leader is the “person at top,” like a district- or state superintendent, is dangerously simplistic. No one person can influence enough of the different facets of a complex system. Plus, “the leaders are those at the top” attitude sends a powerful signal that those not at the top are not leaders, which discourages the initiative, daring, and courage to collaborate needed from many people in many positions. When school culture develops around continually enhancing distributed leadership, space is also created for leadership from principals, teachers, students, parents, and the community as a whole.

What does it look and feel like as leaders at all levels start to work together for systemic change like that needed for implementing the new Common Core? And, how do they grow the needed leadership skills, knowledge, and awareness in the midst of the practical challenges in today’s schools?

In addressing these questions, we start with “school leaders,” teachers, principals and local administrators. Since so much of the key changes for any innovation in education turns on what happens in the “classroom” and school, we focus on school leaders first and the processes whereby they grow and develop to create systemic change. We will then turn to the “system leaders” like superintendents and school boards, and last to the “network leaders” or community leaders who cross boundaries to spread innovative ideas and energy for change, whether they come from the larger communities like engaged parents or from within which schools themselves.

4.1 School Leaders: innovation at the front lines

Whether it is in business, education or other types of settings, we have always found “front-line leadership” pivotal in energizing and grounding change efforts. In one sense, the importance of front line leadership for innovation is tautological, though still easily overlooked. By ‘front line’ we mean people who work closely to where value is generated: those who design and produce the products and services that connect an enterprise directly with those who it serves. If, innovation is, as Peter Drucker put it, “The process whereby enterprises create new sources of value,” it follows that innovation is not possible without effective leadership from those directly involved in that value-generating process. In schools, this obviously starts with the teachers and extends to those who shape the local environment in which teachers operate, namely principals and school administrators. While their visibility often causes attention to be focused on executives like CEOs and Superintendents, we have never seen an exception to front line leadership being the ultimate determinant of the outcome of any serious change process.

As Mike Hanson, a high school science teacher at Tahoma for 15 years and a teacher for almost 18 years overall, put it, “I have seen a lot of unsuccessful change efforts. Engaging teacher leadership has always been critical. When new change ideas are not widely shared, initiatives have not been successful.” There is no reason to expect this to
be any less true for the new Common Core, which, if it means anything, will mean teachers innovating regarding what and how they teach.

The Core Work of School Leadership
In general, front line school leaders have three basic functions

- **Designing, developing, and implementing new ideas regarding what children learn and how, and continually assessing and improving upon these ideas**;
- **Creating local learning environments based on practices and processes that make innovation ongoing; and**
- **Identifying new guiding ideas and connecting them to operational realities**.

To succeed with the new Common Core will demand ongoing innovation in curriculum and instruction driven by new visions for student learning, including a focus on “higher order learning,” “integrative thinking skills,” “using evidence to support one's conclusions,” "the ability to demonstrate one's knowledge with models," and the facility “to apply traditional academic disciplines in solving complex, real-world problems.” This will require creating challenging learning environments that engage students in ways that recognize their diverse learning styles. It will require ongoing experimentation with new tools and methods and innovative instructional strategies. And it will require continual assessment of those tools and strategies in an environment that encourages risk taking and honest appraisal of what is working and how, as well as what is not.

None of this will happen without creating a school environment of trust, openness, willingness to experiment, and collaboration. Such a climate cannot be molded from central office. It can only be shaped by the qualities of the day-to-day interactions among teachers, students, and administrators as they address real problems as they arise. In our experience, developing school cultures as learning organizations requires new skills based on new practices. “Of all the changes I tried to lead as principal, helping teachers learn how to team was probably the most difficult,” said Mary Scheetz, referring to her experience as a middle-school principal. “There is so much more potential for collaborative solutions than normally gets realized given the professional isolation common to most schools.” As the principal, Scheetz personally led workshops on the tools and methods of reflective conversation and building shared visions.

Building local environments for continual learning also often involves structural changes, many of which must develop at the school level. Scheetz and her colleagues made sure collaboration became part of teachers’ daily lives by redesigning the school schedule so that each day all teachers had 45-60 minutes free to clinic and plan with one another.

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good example of the sort of “innovation in learning infrastructures.” The experience was formative for one of us (Benson), who served as Scheetz’s Assistant Principal:
“Collaboration only starts to make a difference when teachers have time to practice coordinating in real time. They need to know what Billy’s teacher found out in his first period class or how a new systems idea intended to integrate across civics and science is actually playing out for the kids. This is what actually helps them feel like a team.”

And this was over two decades ago; few would regard the overall climate within which schools operate as being more favorable for team building and collaboration today – all the more reason for structures and practices that make it real. “The pressures on teachers today are enormous and the conditions for taking risk and helping one another have rarely been less favorable,” says Maplewood-Richmond Heights’ Henke. “But these are the conditions we have and under which capacity for collaboration must be developed.”

While system leaders can help get people focused on important changes, those changes only become real as implemented by school leaders, and the process in the best school systems, like the best businesses, entails a continual give and take between executive- and local line management, between system leaders and school leaders. “We all absolutely depend on leadership from teachers and school administrators to bring about the changes that are needed,” says Don Martin, Superintendent of the Winston-Salem (North Carolina) school district. “Even when we have good ideas about teaching innovations from our district office, our understanding of the actual change process invariably depends on teachers and teacher leaders,” says Nancy Skerritt, Assistant Superintendent for Teaching and Learning in Tahoma for 21 years. “Ideas inevitably change as they are being implemented. They are the ones who make change real and inspire their colleagues with what is possible.”

Lastly, in the process, the front line is where new guiding ideas become real in the lives of children and teachers. Obviously, big ideas that can shape intentions for the future can emerge from anywhere, but them become compelling when they are grounded and people see their practical consequences. In education, this means seeing the impacts on kids - on how they think, learn and develop.

This will be especially true with the new Common Core standards, where new instructional strategies and practices aimed at higher order skills are already starting to overturn long-established educational beliefs. Specifically, most educators have been brought up with the idea that higher-order skills were only for those learners who had first mastered basic skills. This assumed linear progression from basic to higher-order has had many unfortunate side effects. First, it kept most kids and teachers focused on less engaging subjects as they worked their way through basic skills. Who does not recall the boredom of memorizing rules of grammar or multiplication tables? It fostered little

innovation and often locked teachers and students into old curriculum and traditional teacher-centric pedagogy and instructional strategies. Perhaps even more damaging has been the impact on underserved or low performing schools, where kids struggling to demonstrate basic skills are often forced to repeat lessons that failed to engage them the first time around, or to repeat a grade because they fell short on a standardized reading or math assessment.

As you will see below, today school leaders are showing that the opposite of the traditional progression is actually possible: by focusing on higher-order skills from the earliest ages, students can master basic skills faster and deeper. This includes so-called underserved and children who might otherwise struggle. As these results are extended, we may find that the ladder becomes replaced by a spiral: the presumed linear progression from basic- to higher-order may give way to a more complex process where age-appropriate higher-order skills braid with basic skills in a far richer and more engaging progression - for student and teacher alike. 31

Obviously, this will need research to further corroborate, but it illustrates the way that a radical idea can gain credibility through the work of leaders at the front line creating tangible evidence that what was assumed impossible may indeed be possible.

4.1.1 Developing Teacher Leaders
Building individual and collective capacity for sustaining innovation in schools takes much more than episodic in-service training. A coherent capacity building strategy will embrace all the three aspects of the strategic architecture laid out above: guiding ideas; theory, tools and methods, and learning infrastructures. In our experience, these typically become embedded in:

- Hands-on experiential workshops,
- On-site coaching, and especially
- Peer learning networks.

All three are needed, and are in fact cumulative in the sense that the first and second build toward the third, vibrant peer learning networks that can sustain innovation. While educators are familiar with jargon terms like ‘professional learning communities’ (PLCs), we find that the strategic importance of robust peer learning networks can easily be lost in an historically individualistic profession like teaching. Ironically, emphasizing innovation in the classroom can make matters worse, as it often leads to focusing on particular teachers as the innovators. For example, we see this in misguided programs that identify ‘master teachers.’ Not only does this discourage those not so identified, it obscures the larger collaborative effort needed to sustain and extend innovation, both in developing new tools and processes and in supporting one another in putting them into practice. We do not mean here to discourage the imagination and daring needed for innovation but simply to emphasize a healthy balance between individual initiative and

31 There is even preliminary evidence from systems thinking schools (see below) that suggest faster progress by ESL students given visual tools that allow them to express their understanding of complexity with less reliance on spoken or written English.
collaboration. When that balance is lost in favor of celebrating a few “hero teachers,” our experience is that the larger learning process can be compromised. Indeed, one of our biggest lessons from working over two decades in helping teacher leaders develop is that the greatest leverage for sustaining change lays in creating a culture among teachers and administrators who continually learn with and from one another.

In many of the illustrations below, we will refer to “systems thinking tools” in diverse K-12 contexts (see “Habits of a Systems Thinker” sidebar) because this has been a primary focus for the innovations in many of the schools where we have worked and studied. But the main ideas extend to any innovations that foster reflection, seeing interdependencies, critical thinking, and formative assessment.

Sidebar
Habits of Systems Thinker

32 www.watersfoundation.org
Story 1. Primary School Science  Samantha Sims teaches a multi-grade classroom (grades 3-5) at the Miles Exploratory Learning Center, a public school that has approximately 200 children, preschoolers to eighth graders, in Tucson. She is part of an extended regional network of teachers and schools that has been developing for over twenty years, both in the Tucson Unified Schools District (about 60,000 enrollment) and neighboring districts like Catalina Foothills (about 5,000 students), which includes the pioneering work cited above (Orange Grove) where the systems thinking work first started. At Miles, the students come in one of two ways: through the District’s autism or deaf/hard of hearing programs or via a student lottery. The waiting list for the lottery is long for seats that fill quickly and stay filled. A visit to Sims’ classroom quickly shows why the school is so popular among students.

In Sims’ “co-enrollment” multi-age (grades 3-5) classroom, sign language is used by teachers, interpreters, and students (those with and without hearing loss), and communication is tailored according to individual students’ needs along a spectrum from straight ASL (American Sign Language) to simultaneous ASL and verbal communication (Sim-Com) or Total (verbal) Communication (TC). Interestingly, it is a setting where incorporating the multi-sensory systems thinking habits and tools works well. “Thinking in terms of a system places emphasis on interconnectedness, leverage, and change over time,” says Sims. “The thinking habits and accompanying visual tools work with students as young as kindergarten to promote higher level thinking. The students justify their thinking when they ‘tell the story’ of the graphs and diagrams they create.” The three-year multiage model also helps because the longitudinal exposure creates conditions where “the older students improve over time in their ability to apply the habits and tools, spontaneously modeling for their younger peers and creating a integrated climate where thinking as a system is becoming more of a verb than a noun.”

A visitor to Sims’ class will immediately notices features quite different from a traditional classroom, as we did to watch a session on the class’ terrarium projects. The students all sit at tables in groups of 4 or 6, a common feature of collaborative learning instruction. Sims rarely speaks for more than 5-7 minutes at a time. She summarizes key ideas and poses questions, and the students talk with one another at their tables to sort out their responses. Given that they are communicating in a combination of spoken words and signing, it is a fascinating process to watch. Then, she gathers the group together so they can share with one another what they have talked about at their tables. This cycle of questioning, conversation, and whole group sharing is repeated many times in a one-hour class session - again, with some aspects unique to this co-enrollment classroom. If one student might be standing and finding herself struggling for a response to one of Sims’ questions, you immediately notice signing from others who are sitting, helping the student ‘on the spot.’ Sims does not seem to mind this helping one another at all. “Students helping one another strengthens their bonds of cooperation. Plus, teaching is one of the best ways of learning. All the children us the systems thinking tools to continually exhibit their thinking, so I can keep track pretty easily of each child’s level of understanding.” (See section in Part 5 on Assessing for Learning.)
As do most educators in the network, Sims focuses on particular system thinking habits in connection with particular curriculum content. For example, she was using the book *Seven Blind Mice* to introduce key ideas related to scientific inquiry while introducing the systems habit of *seeing the big picture*, what she calls “forest thinking.” The book offers a modern version of the ancient Sufi tale about the blind men and the elephant, which Sims uses to introduce the basics of inferential reasoning. In the story, the mice have come upon a mysterious “something” (an elephant) and they have to figure out what it is. Being blind forces them to make data from their sensory awareness explicit in order to figure out what it means.

Sims begins by posting a ‘Spiral of Inference’ on the wall, a familiar diagram to the students (she has revised the ladder of inference as a feedback loop, to emphasize the reciprocal and ongoing nature of gathering data and making inferences based on that data - see figure below). She introduces forest thinking with a few personal examples: “Sometimes it’s important to microscope in really close to something, like when we use jewelers’ loupes or hand lenses to look at crystal structures. What else do we look at close up? Sometimes it’s useful to telescope out to get the big picture....” Here the students eagerly jump in to familiar territory and give examples, since they have focused in past sessions on *changing perspectives*, another systems thinking habit. “It’s like when we use Pointillism, when you zoom out, you can see the picture,” says one. Another student adds, “Like when you go back and get more data, more clues, so you can make a better inference.” Sims then shifts to the story of the blind mice.

“"We read about the blind mice in their habitat, and are with them when they discover the mysterious ‘Something.’" I read how the Red Mouse bravely gathers the first bit of data, and we place notes on the poster as the character moves through the Spiral of Inference loop.” Students’ hands go up as they identify data and elements of the mice’s conversation. “I pause—because here I want to make sure they can differentiate between evidence that is being gathered and inferences that are being made.” They then read about the Orange Mouse, and place more notes along the diagram. Sims pauses and encourages more discussion. Students are eager to share their observations. The mice’s inferences about being a “snake” (the elephant’s trunk) and cliff (the elephant’s forehead) lend themselves to rich questioning opportunities regarding the potential impacts that beliefs have on perception and action.
“I can see my students understand the benefits of the diagram as they use the spiral of inference to discuss the moral of the story, that none of us see the whole picture and it is easy to confuse one’s own inferences with reality,” says Sims. As this inquiry process unfolds, it spontaneously branches into related reflections. “I can connect this to getting past automatic thinking,” one student shares, and they all discuss how easy it is to simply make assumptions that we never check. One of the adults in the room uses the spiral of inference to explain where she gets stuck in her thinking. Then another student observes, “I noticed that the author matches each mouse’s color with the inference the mouse is imagining.” This leads to a lively discussion about experience being shaped by one’s prior perspective. “Seeing how quickly students move into very personal and deep reflections used to be a big surprise for me,” says Sims. “Now, I accept it as quite natural – but whenever it happens I treasure it; it is one of the most profound experiences in my teaching career.”

Sims concludes the session leaving the spiral of inference poster in the room and says they will have ample opportunity to refer to the systems thinking habit of surfacing and testing assumptions in the coming weeks. In private, she encourages a student who assumes her bag is “stolen” to gather more data - and the student soon discovers that a friend has moved it.

It is easy to see that Samantha Sims is a gifted teacher, but what is not evident to an observer is her own developmental process to become so, and how it has been inspired and supported by the larger systems thinking peer learning network. She has been integrating systems thinking into her classroom for almost seven years, and her proficiency today belies her relative uncertainty when she started. “I first read Seven Blind Mice with my students about six years ago. At that time, my confidence as a systems thinker was tentative, and because of this I tended to introduce tools like causal loop diagrams or behavior over time graphs (see Basic Systems Thinking Tools sidebar) without the associated thinking habit. I was probably guilty of the ‘activity trap’ of focusing on doing things with kids without a clear educational aim or strategy.”
While “tentative,” Sims was willing to try things in the classroom, knowing that there would be no formula or scripted curriculum, an indication of a teacher ready to move from stage 2 to stage 3 in our developmental framework. Indeed, her progression to enable more and more student autonomy and reflection, and to create a more spontaneous, less scripted and more learner-centered classroom illustrates many aspects of a generic developmental terrain for understanding and supporting teacher leadership.

For example, after attending an initial 4-day systems thinking workshop, Sims invited one of us into her classroom as a coach. A coach can have multiple roles and take different approaches depending on what works for the teacher. Sometimes the coaching role is formalized and explicit, whereas in other settings, teachers, especially those in stage 3 and 4 utilize coaches, utilize colleagues and even students as “thinking partners.” The following are various ways coaches help teachers reflect and refine their practice:

1. Observe teacher using new tools in the classroom;
2. Teach or co-teach demonstration lessons;
3. Assist in planning by talking through possibilities;
4. Debrief lesson outcomes using artifacts of student work, student comments and other observations; and
5. Help in any other way the teacher/learner wishes.

Some teachers, like Sims, are ready to jump immediately to using new tools directly, number one above. Others are more cautious and want to see what good performance looks like first. They tend to prefer seeing an expert in action or co-teaching (number two) before they move to solo trial teaching. Even for those ready to jump in, options are...
important. For example, many prefer feedback from the coach offline in debriefing sessions, when the teacher is not in ‘performance mode.’ But some teachers are comfortable interacting with the coach during the class by asking questions and receiving feedback in “real-time.”

When the coaching role moves away from just a visitor to real-time thinking and learning partner, it can be a big step for teacher and students alike. For a teacher, openness to real time feedback is an indication of stage 3 development, of operating beyond the ‘external locus of control’ of stage 2. A teacher concerned with how she or he looks in front of students and fellow teachers would be hesitant to do this, and pushing someone who is not ready to do so would violate the first principle of coaching, respecting each learner. Whether dealing with children or adults, we try to be guided by the dictum: “learners learn what learners are ready to learn.” That said, the willingness to display one’s ignorance and incompetence in public is a hallmark of an advanced learner, and the rewards in terms of shifting a classroom environment can be considerable as the coaching process naturally unfolds to involve both coaches and students.

In this way, coaching can move in a progression from “coach as outside visitor who observes and provides feedback” to coaching as fully integrated into a classroom where anyone can assume a coaching role as teachers pose questions to help refine instruction and maximize the quality of the learning environment. For example, during a lesson a teacher like Sims may pause and divert attention from the instruction to the coach and the students and ask, “How did you think that lesson went, should I have done anything differently to help you learn?” Or, in response to a student question, “I am not quite sure how to respond. Does anyone have any ideas that could help?” For students of teachers like Sims, seeing their teacher seek and receive feedback becomes a powerful signal that “we are all learners.” As this process unfolds, teaching and coaching start to blend in continuous cycles of what Donald Schoen, in his classic book The Reflective Practitioner, called “reflection in action.” This can be the doorway into stage 4 classroom, where distinctions between teacher and learner break down and increasingly everyone is drawn into a truly co-created learning environment.

The coaching relationship needed to enable such shifts is delicate, and we have found that being an expert teacher does not necessarily make one an effective coach. In fact, in many settings, we prefer the term “thinking partner” to “coach,” in order to emphasize the reciprocal learning involved, the variety of paths for development available, and that the teacher-learner needs to feel in control of the process. We have seen many settings where teachers are assigned a coach who then becomes more like an external assessor than a real coach. As we heard one teacher say with dread, “Oh no… today is the day I have my coach coming to my classroom, I better plan something good.” There is a thin line that separates helping and evaluating. Both naturally coexist. We all make judgments based on our interpretations of others’ behavior, especially in domains where we have some experience and where we have been asked to “help.” The real question is which is primary and which is secondary. An effective coach is able to “suspend” their judgments, to be candid with what they think works or does not and why — but always do
so in a way that their partner knows unequivocally that their primary aim is always to help them learn what they are seeking to learn.

In Sims’ case, for example, a lot of the coaching time was actually spent relaxing over coffee and just talking about instructional theory and practice. For her, it helped to be able to talk through how different teaching strategies would play out and to better understand the theory behind a strategy, which understanding, in turn, made it easier for her to let go in the classroom and test different ways of translating theory into practice. In other cases, we simply join a group of teachers for lunch or when they socialize after work. The best coaching often occurs in the most relaxed settings when people are naturally open to reflect and to help and be helped. Just like children learn best when they play, adults learn best when there is a blend of relaxation and aspiration to improve — but this principle of relaxation and learning gets lost when coaching is prescribed and no longer ‘learner-centered.”

In the context of effective coaching, we have found it very helpful to build explicit theories of instructional effectiveness with teachers and administrators, and that the systems thinking tools can help here. For example, the simple reinforcing loop that characterizes the interplay of student engagement, efficacy, and accomplishment is fundamental to all effective pedagogy and instructional design. Too often, the ineffective teacher focuses on accomplishment and fails to find keys to engage learners and build their sense of efficacy. (Figure 7)

**Figure 7
The Reinforcing Engagement-Efficacy Loop**

But this loop also depends on teacher efficacy employing instructional strategies that promote student efficacy. In turn, good teachers are very attuned to qualities of student engagement and to assessing student learning, and this can lead them to adjust their strategies in real time to be more effective. (the two additional reinforcing loops in Figure 8) These two loops are a defining feature of stage 3 teaching, where the teacher is more able to move away from her or his plan and adapt to what is happening with students in real time. Collaborative learning classroom designs like in Sims’ classroom give the teacher much more real time feedback on student understanding and more flexibility in adjusting accordingly. The frequent give and take with and among the students transforms assessment to being embedded in the learning process. For teachers like Sims, this means paying attention to students’ reasoning and explanations of what they
understand and how they communicate that understanding. Just making these three loops explicit can help teachers like Sims trying to sort out their strategies for promoting higher order skills.

**Figure 8**

Adaptation Loops in Instructional Strategies

“It took me time to realize that when I just focused on using new methods like the systems thinking tools it was a lot like focusing on an instructional plan to teach students,” says Sims. “I could maybe get some increase in student engagement. But when I used the tools as ways of getting at the underlying systems thinking habit and the focus was on student learning not the script I had planned, I paid much more attention to where the students themselves were at. That is when I saw a step change in understanding and (student) efficacy.”

As Sims and her adult and student coaches continued to reflect on her theory of practice, she became more and more able to listen to students and adjust based on this. For example, one student recalled a formative incident: “She (Sims) was walking by my desk as I was working on the first part of a writing assignment. At first she jumped to the conclusion that I was not on task and that I was working on something else, but then she asked me about what I was working on. This was just like the Spiral of Inference, because she needed to get more data so that she could make an accurate inference. The spiral of inference diagram helped her see the data and adjust the inference she made about what I was doing. After thinking about it, I think she discovered a bit more of her own automatic reactions to things.”

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33 A major advantage in terms of assessment of instructional methods like the systems thinking tools is that they enable students to make their reasoning explicit visually, thereby providing teachers rich real time information on student thinking; if teachers are sufficiently skillful and aware, they can then continually adapt their strategies far more effectively than if they have to wait for episodic results from tests – see Part 6 below for examples.
Of course each teacher’s journey is unique and to better understand how workshops, coaching, and peer networks together support their developmental processes in diverse school settings, a few more examples will help.

**Case 2: Middle School Language Arts.** Kim Gimblett is also part of the Tucson network, a middle school language arts teacher. As a 7th grade teacher, “I was told for a long time that I was teaching down to my middle schoolers, so I was fearful of stepping up to 8th grade. I knew my job was getting higher levels of thinking in the classroom, but it was not easy for me.” Starting four years ago, she too attended a hands-on four-day Systems Thinking methods introductory workshop and then began to work with an instructional coach from the network. Soon she was making steps to introduce the systems thinking habits of mind and visual tools in particular aspects of her curriculum. But it was not easy.

Gimblett was concerned about using the tools correctly. She was clearly just starting to move from a level 1 to a level 2 teacher. In the workshop, we told her, as we often do for level 1-2 learners, “Try not to worry about how you apply this in your classroom; just relax and be open to focusing on your own learning and how you understand and apply this kind of thinking to your own life.” Still, after the introductory workshop, like many teachers, when she started to work with a coach, she was searching for a prescriptive plan to take the tools into her class. She asked, “Where are the lesson plans?” For example, “Do you have lesson plans for *The Outsiders* or *The Diary of Anne Frank*?” (two books she was planning on using with her students).

As she experimented with some initial steps that first year, all her students’ chairs remained in neat rows. When she asked her students questions that required them to talk with one another they would lean over to toward an adjacent row. The formal orderly structure was an important part of what made her comfortable enough to experiment, and her coach did not ask her to change it.

Throughout the year she talked with her coach about the tension between a need to maintain classroom control and the feeling of risk when the learning environment changed to students moving about the room, small group conversations, and different students working on different aspects of learning. She became aware that it “gets scary when students aren’t all working on the same thing at the same time. You have to let go your sense of authority and control.” Her candid reflections on these issues illustrate a level 2 teacher beginning to explore the transition to the more learner-centered level 3.

Finally, toward the end of the year, she decided to do a role-play simulation, the “bean game,” that required students arranged in “family groups” of six to eight around tables where they could lay out the artifacts of the simulation. The simulation engages students in understanding the classic “tragedy of the commons” dynamic, where each family

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34 As a matter of course, when we are making inferences about particular individuals we will use the term ‘level’ rather than ‘stage.’ This is because it is not feasible to distinguish stages from states based on the limited data in these cases. When we use the term ‘stage’ it is because we are referring to generic features of development as opposed to inferences about specific people.
strives to gather and consume enough resources (represented by beans) to help their family but ends up depleting all the resources (the beans) and everyone suffering. \footnote{Hardin, G. “The Tragedy of the Commons,” *Science*, December 1968.} Although she was unsure how the lesson would go, Gimblett invited her coach to come and observe and asked her to film it.

Oftentimes, lessons that encourage student thinking, like the Bean Game, are unpredictable. Teachers who rely on knowing what to expect in terms of student behaviors and responses to lessons can struggle with engaging students in an exercise like this aimed critical and creative thinking. Such teachers will sometimes say, “But what if they say something I didn’t expect, or what if I do not know how to respond to what they say or do?” For example, when students are engaged in simulation-type lessons, they often develop strategies that are not expected; thinking creatively can generate a wide variety of outcomes. But it is just this type of thinking that encourages a creative, thoughtful approach to seeking high leverage solutions to complex problems.

As that first year went on, Gimblett also experimented with writing assignments where students had latitude to pick their own topic, unlike in previous years where there was little student choice. This signaled a shift to greater student voice and consequently engagement. By the end of the year, one student in her two-year class observed, “Mrs. Gimblett is a different kind of teacher this year. Compared to last year, she is so much more open to student opinions, what interests us and what we need to learn to be successful in this world.” This comment touched her and encouraged her on her path.

Today, the journey continues. “I now look at all elements of my curriculum as fitting within the systems thinking habits framework. It has become an integrating thread that all my kids know. My kids are systems thinking learners.” Visiting her class near the end of the following year, over a year ago, a group of us listened as the students shared their work on their culminating project: taking any subject of their choosing that was controversial and exploring different points of view about that topic. Some picked abortion. Some picked the death penalty. Not surprising, almost half had picked the hotly debated new Arizona law SB 1070, which broadened the liberty of law enforcement officers to be able to ask people for proof of citizenship. Gimblett framed the assignment as a practice with the systems habit changing perspectives.

As our group listened to Gimblett’s students share about their particular investigations, a common theme started to emerge. One after another said something to the effect, “When I picked this subject, I had a strong view of what was right. But after my reading and research, I began to see that it was less black and white than it had previously appeared to me.” Some concluded by stating their present position on the issue. Others summarized by saying they were no longer quite sure what their position now was. All reflected that the whole process had impacted them and how they are likely to approach controversial subjects in the future. One of the members of our visitor group, clearly moved by the students presentations, commented, “I can hardly think of something more important in this polarized country today. If only people everywhere could simply learn to truly listen
to those who see things differently, I would have much more hope for our democracy. This sort of exercise is really Citizenship 101 for these young people.”

Gimblett’s story also points to the power of the Tucson systems thinking peer network. Ever since she got started, she has shared her successes, challenges, and future plans with her school-based colleagues and with others throughout the local network. Every month, she gets together with at least twenty other teachers from some dozen schools. This includes K-12 teachers and principals, University and community-based educators, and local experts that have helped her and her students engage in learning that extends beyond her classroom. “It is hard for me to imagine that I would have progressed so far as a classroom teacher integrating systems thinking without being part of our peer network,” says Gimblett.

### 4.1.2 Developing Building Leaders

Principals and building administrators obviously play a critical role in shaping the overall environment within which teachers build their leadership skills for innovation in the classroom. But they also sit at the interface with the larger management hierarchy of districts and the local community. So, their developmental journey is inevitably intertwined with that of teachers and system leaders, and needs to be understood in that context. As Mary Scheetz, puts it, looking back at building shared leadership for almost three decades - as a teacher, principal, coach and mentor to both as well as superintendents, and now as an Assistant Superintendent for Curriculum and Instruction for the Ritenour District in St Louis - “Teacher leaders, school leaders, district leaders – they are all intertwined; they do not exist in isolation and you do not build one type of leadership separate from the others.”

As a medium size (6300 students) urban district with every school serving a student population with 70-95% free and reduced lunch, Ritenour had typical standardized achievement challenges when Scheetz was recruited in 2007 by Superintendent Cheryl Compton. On the Annual Performance Report (APR), the standard used for school accreditation, the district had earned 8 points, which placed them in a probationary status. Today, the district current has 12 APR points and is striving for 14, which will earn them accreditation with distinction. Scheetz also encountered cultural attitudes typical in a district striving to improve. “People said, ‘We are good at process. What we are not so good at is translating that into action and results.’” This was not new in her experience. “You get leaders, both in central office and in buildings, who often have one of two orientations: ‘We’ve got to have good dialogue’ or ‘We know what is needed, we just have to do it.’ Often these two views polarize and a lot of my work is getting people to see that both are right; you need to get good at both opening up and at focusing in on where you think there is real leverage. Maintaining a balance of dialogue and decision-making is an ongoing process that requires continuous analysis and determination of what is most needed.”

For example, a recent coaching process was with a principal and assistant principal in a school where the staff who were accustomed to praise for their efforts without much
evidence of productivity. The first challenge for the administrative team was “How to get people to face reality without blowing them out of the water,” said Scheetz. They had taken some steps by forming a PLC (professional learning communities), but they had not yet gotten to the real changes needed.

Coaching administrators proceeds based on the same first principle discussed above when coaching teachers: it starts when people ask for help and then proceeds based on what will work best for each person. For example, “When the Principal (mentioned above) said, ‘We really are confused about what to do next, let’s talk,’ I really felt like it was an honor that they would trust me like that.” And, the leadership skill-building process revolves around the same three modalities of intervention discussed before for teachers: introductory trainings, on-site coaching, and gradually developing peer-learning networks. For Scheetz, this parallel between how to develop administrative leaders and how to develop teacher leaders is important because, “We want to model with them (the administrators) what we want them to do with the teachers. It is all about building a healthy administrative team capable of both visionary thinking and honest communication about current reality.” This commitment to generating and holding creative tension creates the context for looking more objectively at present performance, especially in settings where that ability is weak.

In our experience, educators often fall victim to a subtle cultural norm that, ‘Good colleagues don't challenge each others' thinking,’ perhaps subtly trying to compensate internally for the criticism they often receive externally. The antidote to avoiding current reality is not simply forcing people to ‘face the truth’ – but developing, as Maryanski of Tahoma put it, the capacity “to have real conversations,” learning together how to examine and inquire into current performance without pointing fingers.

“Administrators often have commendable goals,” says Scheetz, “but no one really talks with one another. You may have to go through several rounds of communication and collaboration to build the trust necessary to enable open and honest communication.” Her approach builds on over two decades of practice with the “core leadership capabilities” discussed above (Section 2.4): building shared vision and strategy, transforming the quality of conversation, and fostering systems thinking. “Nothing has really changed fundamentally to what I learned about these basic tools when I was a principal back in Orange Grove.” She knows that engaging busy administrators demands high quality hands-on introductory and intermediate trainings that are both personally meaningful and practical (see Appendix). But she is quick to add that, “The key is how people are supported while they learn how to hold themselves accountable for effective implementation. People need to know that unless you are able to effect instructional practice, then nothing else matters much.”

Considering the basic functions of effective front line leadership, if teacher leaders are crucial for designing and implementing innovative practices in the classroom, principals and administrative leadership are crucial for shaping the school climate for ongoing innovation. Tahoma’s Maryanski and Hanson talked about this in terms of building “shared leadership.” This may start with formal programs like “professional learning
communities,” but, using Henke’s terms, it is really about “culture” not just “program.”

“Years ago we started talking about PLCs,” says Hanson, “but the shift started to occur when we got leadership from teachers in the PLCs.” Others we have spoken with referred to “leadership density,” when enough the teachers, administrators, parents and community members – and students – start to think and act as if they were responsible for how the schools functioned and for what it achieved. For Scheetz, it comes down to administrators shaping school climates where people get better and better at “holding one another accountable” for effective innovation in practice.

She goes on to emphasize three aspects in developing leadership for a school as a whole versus teacher leadership only: (1) the primary ‘peer learning network’ is the school’s leadership team of administrators and teachers, (2) focus on improved data-based management processes that support innovation in classroom and student learning, and (3) building a school environment that is “culturally responsive.” As mentioned above, developing the school leadership team starts with initial trainings that create a space for open inquiry into core issues and continues with the on-site coaching. Improving management processes means more emphasis on use of data in decision-making and ‘fidelity of implementation,’ “if we say it we will do it,” says Scheetz. But shaping a school climate for innovation goes beyond management and instructional innovation to creating a setting that is in tune with the reality of the students.

“Since student leadership is such an important part of shaping a school climate,” says Scheetz, “we really need to be open to appreciate the world these students come from, whether it is their music and art or their communities.” In Ritenour, the later eventually came to mean serious conversations about the “undiscussable” subject of race. In a school system with about equal white and African American enrollment, and another 15% Hispanic, and where “minorities” comprise the largest share of most school populations, “It was a problem that the vast majority of administrators and teachers were not trained in culturally responsive pedagogy.” For a year, the monthly evening professional development meetings of district and building leadership teams focused on ‘courageous conversations about race.’36 “We went through all the stages you would expect (in these sessions): politeness, pseudo-community, and gradually got down to real conversations about beliefs and practices. We had a lot of people who had been in this system for a long time and had deep beliefs about kids’ abilities.” Again, this process built on the foundation of building capacity to have productive conversations that move beyond blame and defensiveness. “This is all about being honest without hurting people’s feelings. It is always easy to externalize the problems to statistics and people’s circumstances beyond your control. But we tried to keep the focus on team learning: how we needed to work together and hold each other accountable in practice.” The past two years, this work has continued to evolve through workshops and coaching related to cultural responsiveness and equity for all students and staff.

Creating a culturally responsive school environment is not just about seeing gaps between the faculty’s world and that of the kids; it is about closing those gaps. “One of the

36 Singleton. G and C. Linton, Courageous Conversations about Race, Corwin Press, 2006
exciting things that has come out of this work is the development of a number of teacher leaders who are models and coaches for others.” Students and parents also have been invited to participate in school and district strategic planning groups: the Strategic Planning Advisory involves nearly 200 students, staff, parents, and community members and has demographic composition that mirrors the demographics of the schools. In addition, student leadership groups have evolved through the use of the tools and concepts of systems thinking: “Kids also get very excited about wrestling with the complex problems that come from their own life context.”

Scheetz characterizes her work with administrative leaders as working in “multiple lanes:” working with all the principals as a network, with school teams, and wrestling with “what do we do with this principal.” To succeed, she has refined her abilities in gauging personal readiness and developmental needs in the context of each school situation.

“We had this one new principal who was highly motivated but dealing with overwhelming challenges. She had only two years as an assistant principal and an inexperienced assistant principal. She was in a school designated as “in improvement” according to NCLB standards and working with a staff that had adopted many defense mechanisms to cope with being characterized as “failing.” As Scheetz got to know the principal, she started to see that some of her difficulties were clearly developmental. “She needed to be more analytic rather than taking a reactive, concrete sequential approach: step 1, step 2,… As a new administrator, she also very much needed approval. She thought she would lead by being ‘the answer person.’” But, she was also open to learning: “She really cared about the kids and wanted to make a difference.”

She found a basic systems thinking tool that helped this level 2 principal start to operate more at level 3, the “fixes that fail” archetype discussed above (Section 2.4.3). “People were really digging in their heals to many of her leadership moves, but she had difficulty seeing how her actions were setting off these responses. Her habitual instinct was to push harder. She had to learn to slow down and really think more.” For this young principal, the shift to being more autonomous and connected was not just about developing her empathetic skills but analytic skills to see the “unintended side effects” of her actions. As she developed this ability, she began to adjust her approaches naturally. “She would consciously take time to analyze, check the perceptions of others, weigh the pros and cons of options, and become more deliberative in her decision making.”

Today, four years later, “People cannot believe the school is the same place.” Academic results have improved significantly. The Annual Yearly Progress (AYP) trajectory is the most positive in the district with significant improvements in every year. The 2011 results included increases that met AYP standards for all seven subgroups in mathematics and in three of seven subgroups in communication arts. But even more than that the “attitude and climate of the school is very different - people work together in ways that never happened in the past.” One thing that many notice is that, “the principal has shifted how she talks. It went from ‘I’ to ‘we.’” This surface change in behavior came from a deeper shift. “It was hard for her to leave her Level 2 need for approval, but she
began to understand how it was holding back the school.” Scheetz cites an example when the shift was evident. The school was getting recognized for its academic improvements and the young principal said, “It would be better if they (the teachers) get the credit.” This shift in orientation to the whole has been “her greatest accelerator,” says Scheetz. “It is no longer about ‘me.’”

As work principals and school leadership teams progressed, Scheetz and Compton continually assessed if the right people were in the right places to keep the whole district moving forward. “You cannot have level 1 and 2 people leading level 2 principals aspiring to be level 3 and 4. We have about 50 district administrators and how they operate affects so many things.” Following the dictum that everyone must be engaged in learning and development, “it became easier to see who was willing and/or able and who was not. We had level 1 people hiding behind a level 2 façade, saying, ‘I’m just taking care of my people.’ You do this as compassionately as possible, but these are changes that have to made on behalf of the children.” Of the 50 administrators who were there when Scheetz arrived 5 years ago, four remain today. The changes have occurred partly through natural attrition and partly through helping people move on.

How this is done matters. It is one thing to come in and fire teachers and administrators in failing schools, but this simplistic “fix” can have many unintended side effects. One principal we interviewed in a ‘turn around school,’ where all the faculty and administrators had been fired, expressed it poignantly: “There are ghosts in the building. What people do not realize is that you do not fire the students. Most of these kids come from tough backgrounds without a lot of effective support to succeed in school. When they see all their teachers and administrators fired, what do you think it does to their sense of possibility and efficacy? Plus, with kids struggling to develop their sense of responsibility, it is easy to blame teachers for their difficulties. Now they have evidence for it.”

By contrast, the administrative turnover at Ritenour was a by-product of creating a culture that was committed to individual and collective development in service of accountability for student learning, and then seeing who was ready for the changes needed. “It is important to not just blame people or to come in and demand that they change,” says Scheetz. “People were behaving as they were for a reason. For example, they had operated in a system where administrators asked for input but they rarely used it. As we developed and implemented new processes and structures, you have to wait and watch to see who can grow into making these effective.” This requires, in Scheetz words, “Patience combined with urgency… We have to remember that the kids don't have three years. Hopefully we can make progress and help these kids.”

That said, as others have emphasized, the delays in developing cultures of shared leadership can be many years, and the commitment required must be relentless. As Scheetz says, “I am passionate about coaching people along their own developmental path, regardless of where they start from.” But, she adds, “You can’t coach people who are not coachable. We were looking for level 3 administrators and need people committed to growing into that way of being. At some point you have to make the call if people are
not ready for the journey. People need to see that, if we are not doing a good job, it hurts the children. Everyone must understand that it is always about the students.”

Though demanding, the journey at Ritenour has also been rewarding. The improvement in student achievement over the past five years has been as much as any comparable system in the state and greater than almost all with similar demographics and family economic mobility. Several of the individual schools in the Ritenour systems are designated as “in improvement,” and average scores for every grade level tested have increased by more than 10%. As important to Scheetz, the culture of “working together for the benefit of the students is very strong,” and she characterizes her present administrative team as “the best I have ever seen.”

Especially noteworthy for the promise of the new Common Core standards, are Scheetz’ reflections on prospects for students from high poverty backgrounds: “Given the life history of many of our kids, they may not have the vocabulary or experience that often puts students in top 10% on standardized tests, but I am convinced they have the potential to get there, and they can be in the top 10% in 21st century skills - if they get a real opportunity to mature as people and to develop their abilities to think, communicate, and work together. Many of our students previously imagined themselves with limited options after high school. Now they think of going to universities, even top universities.” Last year, at a large annual regional educators’ conference on systems thinking that Ritenour now hosts, several teachers asked Scheetz, ‘‘Where did you get those college students who are helping and co-teaching?’’ When I said that those are our students, they were pretty surprised. I have become accustomed to people being surprised because I have come to conclude that we all tend to underestimate what kids like ours can do - once they begin to believe in one another, and once they begin to demand it of one another.”

4.2 System Leaders: Using the hierarchy to shape an environment for learning and innovation

It is easy to both overstate and to understate the importance of effective system leadership. As stated above, when we adopt the view that ‘it all starts from the top,’ we overstate system leaders’ importance by assuming that their leadership alone is what really matters. On the other hand, system leaders like superintendents and board members who are not themselves committed to change send another powerful signal that, ‘This really does not matter very much.’ Fortunately, there is a vast territory between being the ‘hero leader’ who makes it all happen and being an emotionally disengaged bystander. Good system leaders find their own authentic path through this territory.

When we asked Mike Maryanski of Tahoma, “What would you tell superintendents seeking to implement the new Common Core?” he responded, “People in positions of authority have to be clear what they want. Some superintendents will not embrace this (lead proactively for the new Common Core standards) because it is not aligned with their vision for their system, so it is viewed as another top-down mandate as opposed to an opportunity to focus more tightly on learning.” He went on to note that he hears many
say things like, “My system is too big.” “I don't mean to criticize because there are many different realities people must deal with, but beliefs like this are really the consequence of not being engaged in the hard work needed to align your belief system. Getting at the underling belief system is huge.”

In a school system, there are naturally many agendas and any change process can get bogged down in internal politics. “Many school systems are mired down— they don't seem to see the importance of the sorts of changes we are talking about here (of building alignment for ongoing systemic change). Why is it so hard for people to see this?”

Aligning the complex stakeholder environment of a school system around basic innovations in instruction and management revolves around three broad areas:37

The Core Work of System Leadership

- **Influencing the overall environment for innovation:** clarifying aims and building alignment among all key stakeholders, cultivating leadership at all levels, and building a system-wide learning culture;

- **Encouraging, inspiring and mentoring:** they are role models for the behaviors needed to lead difficult change and stewards of a larger common purpose in which they continually work to engage others; and

- **Dealing with structural impediments to innovation such as policy, processes, and systems and supporting continual learning and innovation in these areas.**

Clarifying and Building Alignment around Aims and Guiding Ideas. Influencing the **environment for innovation** starts with building alignment around clear and inspiring aims. Perhaps the greatest damage done by the standardized testing movement has been to shift the burden away from working to build consensus around aims and compelling guiding ideas. Improvement in test scores has become the de facto aim of school systems.

Unfortunately, school systems are not the only organizations that lose their way and opt for de facto aims rather than a clear purpose or mission. The best thinkers in management like Peter Drucker and W. Edwards Deming considered a clear mission the cornerstone of building successful enterprises and often criticized corporations who think their purpose is profit or meeting investors’ expectations for financial return. As Drucker used to say, “Profit for a company is like oxygen for a person. If you do not have enough of it you are out of the game. But it is poor substitute for a genuine sense of purpose and mission.” Deming, used to berate corporate executives for lacking “constancy of purpose” and especially for substituting what is easily measured for what matters. “Less than 3% of what matters can be measured,” he was fond of saying, an especially interesting comment for someone trained as a statistician. “You can be sure that managers who focus only on what can be measured are wasting most of their time.”

37 Senge, et al., *op. cit.* (1999)
Our opinion is that, if anything, constancy of purpose is even more challenging in public education than it is in multi-national corporations. Building clarity and alignment around aims is never-ending work and must be done with sensitivity to the complex stakeholder environment for schools. This means developing aims that have genuine meaning for those who must work ultimately together for their accomplishment: teachers, administrators, students, parents, and even local business- and community leaders. Having goals that engender nods of heads is different from genuinely shared aspirations that people to which people are genuinely committed. This means taking account of a history where schools were not expected to innovate. And, it must recognize the culture of minimal compliance to externally imposed goals like test score performance that prevails in many school systems. This is why, as we have written elsewhere, effective system leaders must possess “a combination of resolute leadership and empathy… They demonstrate persistence with flexibility but never stray from the core purpose.”

For example, Tahoma’s aims for 21st Century Education (Section 2.2), developed long before many even used that term, arose from a two-year process of study and stakeholder dialogue. “We did a study of workplace skills in 1988 that identified many of the core ideas that ended up in our aims,” says Board member Mary Jane Glaser. “But it was through a series of gatherings with high school students, parents, local business people and other community leaders that the final set of ideas coalesced and started to really have some credibility.”

Guiding ideas only matter if they are used. As we said above, “It’s not what the vision is, it’s what the vision does.” This means anchoring them in the assessment process. It means regularly revisiting and refreshing them, as Tahoma did five years ago and is doing again today as they work on a new cycle of “systematizing our process of assessment around the aims.” It means ongoing work with parents to make the aims meaningful, especially for new parents. “It can be hard to build commitment to big ideas like this when all parents want is for the kids to get in to the U of W (the University of Washington),” says Glaser. “Sometimes, we just tell skeptical parents that this is ‘value added to all the normal stuff that schools do.’ Everyone is focused on getting kids into college. We often point out to parents the failure rates in college and try to help them understand that this helps kids through college.”

Lastly, building alignment among diverse stakeholders will ultimately come down to finding ways to engage those who have been entrenched in opposition, to one another and to school management. For example, with the guiding idea of “shared leadership,” Tahoma began ten years ago to shift how their collective bargaining process worked. “It’s not that anyone openly disagreed with our aims, but the level of trust was low and that influenced our ability to work together,” says Maryanski. Eventually, they developed a consensus decision-making model in the form of a matrix that identified decisions that needed to be made and how the respective decision-making process would work: consensus, consult, advise. “Decision charting” of this sort, an established organization development tool in business but not widely used in schools, is a simple way to make

38 Fullan, Motion Leadership, op cit., p. 23.
decision processes more transparent. “It took time and practice, but the tone of our interactions with union leaders started to shift,” says Maryanski. “Consensus decisions take a long time and eventually everyone realized we had to limit this to a few decisions where it was necessary, but gradually we started to build a foundation of trust and better listening.” Glaser and the board have also embraced this collaborative approach, including engaging in similar leadership training. Each school in the system now has its own version of the decision-making model. “When people know they have influence on their work, they become engaged,” says high school teacher Hanson.

Looking back, Maryanski observes, “We have used the collective bargaining processes to focus on the idea that decisions that affect the whole school must be decided by the whole staff not just the principal.” Today, he meets with the teacher leadership groups on a monthly basis to discuss concerns and resolve issues. This was at first threatening to some principals, but they have adjusted to being part of a more open process. Maryanski sees this as part of getting at the “underlying belief system” that kept teachers locked in views that they had no influence.

**Building Leadership broadly.** Actually Maryanski’s first response to our question about advice for superintendents committed to the new Common Core was, “What opportunities do you look for to build teacher leaders? Because there is little chance of success if you do not have effective leadership from teachers.”

Because they focus on the total environment for innovation within the school system, effective system leaders must work to cultivate leadership capacity broadly, especially teacher- and building leaders but also diverse community leaders, including students. Growing teacher leaders is widely espoused but it is often more rhetoric than reality. As we have shown above, it becomes real when there are widely used developmental tools and established learning infrastructures that center on effective coaching and embedded management process that build leadership capacity (such as Tahoma’s Teacher Leadership Institutes and Maplewood’s Curriculum Action Teams) and create space and time to nurture rich peer learning networks. On the other hand, still often overlooked is investment in cultivating student leadership. But, where it is taken seriously, it can have significant impact.

“A key focus of all our efforts at change has been developing student leaders,” says Joyce Bisso, superintendent of Hewlett-Woodmere district, a high performing suburban district in New York. “It is easy to overlook the key role they can play, but for us it has been pivotal in not only influencing the internal school climate but how the school relates to the larger community.” Bisso and her predecessor, Les Omotani, have hosted a series of voluntary Youth Leadership Forums for middle and high school students, building on his previous experience in West Des Moines, Iowa. At these bi-monthly gatherings, students and faculty work jointly in building the core leadership skills of the “three-legged stool” presented above (Section 2.4) and then apply these through a series of student-designed and led initiatives from eliminating disposable bags in their community to using the “systems thinking iceberg” to look at the structures and mental models driving cyber bullying.
“After many years of internalizing systems thinking, I can’t think any other way now,” says Bisso. “But we know that schools, especially high school, is fragmented. In many ways, the students are the connectors and boundary crossers – so teaching them system thinking and giving them space to apply it in practice has been an effective strategy for influencing the schools.” Today, like in many of the sites we have interviewed, visible leadership by students is a cornerstone of creating a more open and innovative cultures; “People are often surprised to see the students leading the Forums and serving on key advisory committees,” added Bisso. “But who can do a better job?”

Building on the model set by Omotani and Bisso, students are now key leaders in all gatherings of the SoL Education Partnership, the network of school systems with which several of us are involved. At last summer’s first annual meeting, “Camp Snowball” in Tucson, students comprised 20% of the 300 participants from twenty school systems and six countries. More surprisingly to some, students co-lead some of the workshops and plenary sessions. “Some of the participants (mostly teachers) in our Level 1 Systems Thinking workshop were not prepared to see students co-leading the workshop,” says Sheri Marlin of the Waters Foundation in Tucson. “I was sort of shocked when I walked in to the workshop and saw that it was co-lead by a high school student,” commented one teacher. “But, as I started to reflect on why, I realized how fitting this was given our aims in being there – to be leaders in bringing about real innovation in how schools work. School has traditionally been an institution designed by adults and run by adults. Perhaps some of the real changes coming will be letting go of some of this unilateral control and recognizing that the learning we aspire to must be co-created by adults and students working together. This is especially true if our goal is preparing students for a future that in many ways they know as much, or more, about as we do.”

Building a Learning-Oriented Culture that Supports Systemic Change. Seeing students as co-leaders of innovation illustrates the deep shifts in the traditional culture of schools that we believe will be needed to sustain systemic change. But system leaders often struggle with such change given the pressures for short-term performance and the political cross currents they face. “Why don’t more superintendents see their job as creating a foundation for systemic change? asks Tahoma’s Maryanski’s. From our experience there are three particular reasons that need to be understood and addressed.

First, it may simply not align with their own personal vision and specifically their vision of their work as a system leader. “Too many superintendents think their job is ‘running the school system’ and they translate that into a set of management tasks. They just miss their role as leaders who need to have a vision that they are truly committed to and helping build shared leadership around that vision,” says Bisso.

Second, they feel isolated. Most work in systems where fear and distrust is more the norm, and they do not have partners to sustain the hard work of building new cultural norms. “Our system has been buffeted by pretty strong political cross currents,” says Don Martin of Winston-Salem. “It has been very important to have members of my board with whom I can work together to set a focus on long term changes we can all get
behind. “It is pretty easy to get lost in the politics of Boards of large urban systems (about 53,000 students) like ours,” says Board Member Elisabeth Motsinger. “Superintendents like Don need partners to take on changes that will never make everyone happy, partners who will push one another in the pursuit of deep learning, Diane Ravitch says, ‘To develop the full humanity of every child.’ In this, we can also push the whole board, especially when it comes to facing politically charged issues that people have ignored for a long time, like race.”

Learning with and from other systems can also redress the isolation of Superintendents and Boards. “The new Common Core could allow us to partner in ways that we have not been able to in the past,” says Motsinger, “including (external) partnerships with players who have aspirations that can help lift us, like Tahoma, Maplewood-Richmond Heights, and Rittenour.”

Third, they simply do not know how to do this sort of “adaptive work,” as Ron Heifitz calls it.39 They lack confidence with tools and strategies for shifting culture. Not surprisingly, leaders like Maryanksi start right off with applying tools like the Ladder of Inference for, as he says, “having real conversations. “ Tools are not only important practically. They enable leaders to de-mystify the processes of deep change and develop in them and their colleagues confidence that they can move forward. Even as they know there is no formula, they also know that there are tangible ways to build momentum.

Lastly, building a learning-oriented culture places a high premium on the quality of relationships, on trust, openness and willingness to be vulnerable with one another. System leaders sit at the nexus of a complex web of relationships, between central office and schools, among schools, and with key external stakeholders. “Leadership is key but relationships are even more important,” says Tahoma Board Member Glaser. “Mike and Nancy (Skerrit, the Assistant Superintendent) know that without alignment with the Board the changes needed by the demands of the new Common Core would not be possible.” But the relationships between system leaders and school leaders are equally crucial. “When you build trust with the unions and among the teachers, you lay a foundation for people working together,” adds Glaser. “It can be scary for teachers to be observed and coached in their own practice.” All this takes time, but trust and openness can be pivotal when demands are high and resources are strained.

Ultimately, the relationships that need to be nurtured for the larger scale systemic change needed will be those that integrate vertically within school systems and horizontally across systems. Focusing on intra- and inter-system learning means reversing the fragmentation that almost always dominates change efforts, individuals attempting to incorporate good strategies but not connecting beyond their own area of direct influence.

For example, a five-year whole system “Literacy for Learning” change process in Hawaii has brought together schools and school systems (called “complexes” in the Hawaiian system that reaches across eight islands) and the state DOE in an extended web of

39 Heifitz, Ron, Leadership Without Easy Answers, Ma: Harvard Univ. Press, 1994
collaborations with one common aim, to significantly improve learning for all students through literacy. The “Literacy for Learning” plan became a foundation for decision-making, communication and capacity building, and ownership increased through its co-development at the state, district and school level. A “Literacy Leaders Team” with members from each complex and the state level immersed itself in intensive capacity building to deepen understanding of literacy and share capacity-building practices across schools and systems. Eventually 75 school leadership teams participated in capacity building sessions based on learning modules designed to increase the precision in instructional strategies across all grades and content areas.

To ensure sustainability, the State level Curriculum & Student Services department was restructured to realign roles and resources to support the implementation of Literacy for Learning, complex Superintendents made the work of the Literacy Leaders a priority, and in-school literacy coaches were expanded to all schools. The guiding principles of Literacy for Learning were embedded in the state’s Strategic Plan 2011-2018. With the emphasis on growth not blame, a collaborative work culture is starting to emerge, as the capacity building connects educators from different schools and districts and slowly transforms the relationship of the state to the schools. Early results are modest but positive, and in recognition of these efforts Hawaii was awarded a federal Race to the Top grant in 2012 to maintain the Literacy and Leadership focus as a key component of state strategy.

**Being a Role Model.** Systems leaders need to always remember two inescapable truisms about their role: (1) the higher up the formal hierarchy you rise, and the more visible your actions become, and 2) credibility is always about actions not words - as the old dictum goes, “I cannot hear your words, your actions speak too loudly.”

For example, in the Hawaii case described above, the role of Complex Superintendents and state official as a leadership team of learners modeling collaboration across systems was pivotal in establishing a model of everyone working together.

For system leaders, this ultimately comes down to your own personal commitment to learning and the vulnerability this implies. For example, after he was first exposed to the reflective conversation tools four years ago, Tahoma’s Maryanski initiated personal training for Tahoma staff: “If you are serious, you need to teach people in your system.” In addition to the ladder of inference and balancing advocacy and inquiry, he introduced the Tahoma staff to the “left-hand column,” a way to map difficult conversations in terms of what is said and what people are thinking and do not say. The Tahoma staff now call these “public and private conversations,” and have found the distinction important. “If you can’t get ‘public-private’ conversations into the room, you will never make much headway on people’s qualms and deeper beliefs,” says Maryanksi. Having the

superintendent lead the training put himself in the circle. “People need to see that I too am working to develop better conversational skills. This is for everyone. None of us are masters, certainly not me.” Ever since, the staff have used an outside consultant “who works with us to break down our group think,” to assure that there is plenty of disagreement, including with the Superintendent.

When superintendents teach tools for enhancing reflection and openness, and see themselves as learners along with everyone else, it goes well beyond the normal speeches and motivational entreaties from the top. As important, it shows that being a role model does not mean being a paragon of all that is right. Exactly the opposite. As we have often seen, when those in positions of hierarchical authority can ‘show up’ as fellow learners, it turns the hierarchy of power on its ear. Those who do this well understand that the symbolic power of management hierarchies often reaches well beyond the formal decision-making power. As one CEO expressed it many years ago, “When you can be genuinely vulnerable with the people who formally work for you, it can amazing how much they will step forward, because they know that their leadership is needed too.”

The shift from a primary concern with controlling to the primacy of learning has deep resonances in school – because it parallels the same deep shift that is possible in the dynamics of authority in the classroom. When teachers like Sam Sims and Kim Gimblet show up as fellow learners, students become engaged in new ways. The same happens when system leaders become visible learners and enable those around them to discover more of their own responsibility and engagement.

The third critical function of system leaders is dealing with structural blocks – matters of policy, formal process and roles that often they are the only ones with the authority to address.

“There are structural reasons that can make it difficult for people to share in leading change,” says Maryanski. “People need to have a position from which they can have some influence.” For example, each grade in the Tahoma system has a leadership team comprised of teachers picked by their peers that deals with curriculum. Similarly, Tahoma’s Teacher Leader Institutes have made “a big statement” says teacher Mike Hanson concerning Tahoma’s vision of shared leadership. “It was clear that not enough could be done by four administrators in a building with 80 + teachers,” says Maryanski. Similarly, Maplewood-Richmond Heights has CATs Curriculum Action Teams composed of all of the instructors in a specific area of study (for example, math) plus an administrator that meet monthly and a Teaching and Leading Council made up of the CAT team leaders and administrators as well as parents. The goals is that “Teachers have a lot of say in what they are being asked to teach,” says Superintendent Henke.

System leaders also have a unique role in articulating guiding policies in line with the innovations they seek to foster. “Superintendents have to go before the Board of Education and provide policy for changes we care about,” says Bisso. For example, Hewlett-Woodmere’s Board expanded its Shared Vision, Mission and Core Values in 2010 to include the concepts of the Partnership for 21st Century Skills: the “4 C’s” of
critical thinking, creativity, collaboration and communication.\textsuperscript{42} “The policy approved by the Board of Education,” says Bisso, “is the guiding force behind curriculum, instruction, assessment and professional development. It is the keystone in our thinking about learning and provides the conceptual framework for classroom practice.” As important, to establish personal commitment behind this policy, Bisso and her colleagues have engaged Board members in the Youth Leadership Forums and a series of community “world cafés, a widely used organizational learning method for larger scale reflective conversation, co-facilitated by the student leaders from the Forums.\textsuperscript{43} Through all this, “21st century skills for our students have real meaning to our Board because they see them in action,” adds Bisso.

System Leaders who embrace the new Common Core Standards can find that it provides a powerful vehicle for dealing with important structural changes. As Maryanski puts it, “Given it will be here for the long term, the new Common Core could be the vehicle that will result in adaptive structures that sustain change over time, like we have been talking about around decision making and capacity building.” Of course, for system leaders focused more on maintaining the status quo, this may seem a long way off. But leaders like Henke, Scheetz, Bisso, Maryanski, Glaser, Martin and Motsinger are showing how it can be an ally for deeper changes. As Maryanski says, “People better embrace it because it will not be going away.”

While dealing with structural blocks is important, it is also important to keep in mind that this has the greatest impact in concert with the two other basic functions of system leaders – shaping a learning culture around compelling aims and being a role model. The system leaders who attend to all three have far and away the greatest influence in our experience. To just solve structural problems without contributing the other two leadership functions is like dealing with mechanics and missing the source of energy that animates learning and change. Mechanics matter. Structural blocks can be real bottlenecks. But reducing blockages will not create energy by itself. You must also attend to how energy and commitment are being generated, which is why your engagement as a culture builder, mentor, and role model for your own learning matters. When combined, these three core functions of systems leaders create conditions that allow the leadership from the system as a whole to flourish. As we have said elsewhere, “Change-savvy leaders always know that you can’t directly make people change. But you can create a system where positive change is virtually inevitable.”\textsuperscript{44}

\textbf{4.2.1 Developing System Leaders}

Though the basic developmental dynamics are the same for all people, ironically development is easy to neglect the higher people rise in organizational hierarchies. While system leaders do professional development, often they are more likely to attend

\begin{itemize}
\item Partnership for 21st Century Skills, \textit{op cit}
\item Brown, J and D. Issacs, \textit{The World Café}, San Francisco: Berrett-Koehler, 2005; \url{http://www.theworldcafe.com}
\item Fullan, \textit{Motion Leadership}, \textit{ibid.} p. 62.
\end{itemize}
conferences than engage in serious personal skill building. Even more importantly, the critical role played by on-site coaching and strong peer networks for teachers and principals can be absent altogether. This is especially unfortunate for those who rise to senior system leadership positions like superintendents from being teachers and principals and then find themselves with no prior experience or serious mentoring for executive management. “We can all get stuck in the mindset that we don't have the time or we no longer need real development. The former can be a result of time spent on issues like dealing with the media, problematic staff members, and budget cuts that frequently engulf superintendents, and the later is just not true – professional development never ends – for professionals,” says Winston-Salem’s Martin, named Superintendent of the Year in North Carolina in 2011.

Our experience is that the Core Leadership Capabilities for building learning cultures presented above (section 2.4) are no different than those for teacher leaders and school building leaders. But the context for system leaders means that these basic leadership capabilities need to be refined for the challenges of creating shared purpose and strategy, developing reflective conversation, and systems thinking within complex multi-stakeholder environments. Also, since so much of the work of system leaders occurs in the context of their boards and leadership teams, these groups is where the most important coaching and development is needed.

From the standpoint of our developmental framework, struggling system leaders, like their counterpart building leaders, are usually groping with level 3 problems from level 2 strategies. They struggle with the idiosyncratic features of problems they have not faced before and stumble applying familiar solutions. For example, one struggling superintendent persisted for years trying to coerce a combative board member to change her view about instructional innovation versus focusing on test performance. Eventually they became locked in a ritualized dance of perpetual adversaries. “Before she opened her mouth, I knew what she was going to say, and I suspect she knew me just as well.” As happens in such situations, the other board members gradually adopted their supporting roles in the drama, either as immobilized by-standers or as ineffectual placaters. “The stakes are high in these settings, so you would think we would find better learning strategies,” says Winston-Salem’s Motsinger. “But sadly that often just does not happen.”

Again, Maryanski is direct in his criticism of the status quo of stuck system leadership: “If we do not take the time to invest in using the tools that can help in examining our behaviors, none of the other things we try to do will make much difference.”

By contrast, good system leaders usually are looking for help in stabilizing level 3 skills and shifting from level 3 to level 4 strategies when appropriate. “I have had this ladder of inference problem with one of our leaders that I tried to get rid of for years,” says Maryanski. “I was seeing him doing things that were simply not taking place. I finally asked another team member, ‘Can you see this?’ and named the particular thing I saw. He said he could not and helped me see the way I was interpreting things incorrectly - what I ‘saw’ was really my projection based on limited facts and understanding. If we had not practiced already for several years with the ladder of inference I do not see how
this ever would have been resolved.” Not only does this story illustrate one person working hard to make their own perceptions of another fair and accurate, it also illustrates the collective intelligence of the team. When Maryanski was able to ask another team member for help, he was showing that “together we know far more than any of us individually.” This movement between empathetic and collective understanding is the hallmark of great teams.

The infrastructures needed to support system leaders’ learning match those for other leaders: experiential skill-building workshops, team coaches, plus strong peer networks. Although executive coaching has become more accepted in the corporate world, it is still relatively unusual in schools. This is not likely to change soon given financial realities that make it hard for those at the top to justify such spending, however useful it could be. This will make peer networks for system leaders even more important. But effective peer learning for system leaders, while desirable, can be difficult to establish on a sufficiently regular basis. This can make peer coaching “for the boss” far too infrequent except for system leaders who know how to create meaningful reciprocal coaching relationships.

While Ritenour’s Scheetz has been coach to hundreds of teachers and building leaders, she has also found that some of the best coaching relationships become two-way streets. “There was one principal that I had been helping for over a year, when she noticed that I was struggling with my own efforts with two of her peers in another building,” she says. “I thought I could see what the two needed and was trying to mediate their conflict, but the (first) principal had a different view. She thought I was a little too eager to step in. ‘Give them some time,’ she said. It turned out she was right and what they learned from sorting out their conflict themselves was probably more valuable than if I had intervened. My impatience and concern for the kids was getting the best of me. As I talked with the principal who helped me, it reminded me that my job is really all about others growing not my helping them. It was an important lesson for me.” Scheetz added that this sort of two-way coaching has happened quite a few times and she has come to see it “as the highest form of compliment as a coach – that we have built the sort of relationship where we can really help each other. It is a shame when system leaders feel that they are too senior and cannot ask others for help. This work is very challenging, and we all need help. If I am not learning, I am a pretty poor model for others.”

4.3 Community Leaders & Network Leadership: making the stakeholder environment an asset for innovation

Schools are part of larger communities, and a critical and easily overlooked facet of building a healthy leadership ecology for systemic change is the diverse leaders who operate beyond the four walls of the school. These are the boundary crossers. They are the engaged parents who connect school-based innovations with community resources and needs. They are service providers who connect educators from diverse schools. They are engaged business leaders who offer their guidance in understanding and managing innovation. They are educators focused on early childhood. They work with kids in out-
of-school programs and, increasingly, offer innovative elements of in-school offerings. And, they are the ultimate boundary crossers in school, the students themselves, the one actor in the system who sees best how all of it is working: school, playground, community, and home life.

In businesses, we have found that effective “network leadership” is vital for how successful innovations spread, and thereby for achieving larger scales of change. Innovators, especially those at the front lines, are focused on their own work. They are passionate about new ideas and getting them into practice in their own organizational context. Executive leaders, by contrast, care a lot about the spread of new innovations but are often far removed from the places were it is happening. Network leaders are the weavers without whom many important ideas would stay confined to isolated domains. We often call them the “invisible leaders” because they cannot be reliably located on the organization chart. They can be HR professionals and internal consultants, engineers, and sales people. Sometimes they are even executives. The key is the function they play in learning on a larger scale, not their formal position. But because they are not assigned this job, it is easy to miss them and the critical role they play.

Twenty years of work in business on “knowledge management” has revealed a basic fact: knowledge spreads most effectively through networks of collaboration where people help each other. All the technology like “knowledge management systems” and “lessons learned data bases,” cannot substitute for the natural human connections that develop among people who share common aspirations and care enough to help one another. Indeed, it is exactly when these conditions exist that the technology-enabled collaboration has the greatest impact.45

Anne Murray Allen was the director of IT and Strategy for the one of the largest divisions of Hewlett Packard for a decade, the Ink Supply Organization ISO, responsible for HP’s sophisticated ink jet printer technology. In the last three years of her career, she was called to the corporate headquarters to head the Portal Team responsible for the HPs intranet platform - in order to extend her pioneering work on connecting technology with “networks of collaboration, work that had made the ISO one of the HP’s most profitable divisions. “What we had learned,” says Allen, “was that there are profound differences between networks of collaboration and networks of ambition.” HP found that the former are characterized by “how they build trust and excitement; how knowledge is shared freely and openly; how they feel generative, ‘even magical;’ and the ‘emergence of well being’ over time: no one wants to leave.” By contrast, in networks of ambition, there is

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“power and competition within the network; knowledge is hoarded by a few; it feels guarded and ‘political,’ over time there is the emergence of separation and pain: people are happy to leave when the option is presented.”

She summarized her learning in two systems pictures of the self-reinforcing growth dynamics for both types of networks:

HP also learned that three conditions were essential to nurture networks of collaboration, which they also called ‘knowledge networks,’ a direct parallel to the “strategic architecture” above (Section 2.2):

- People engaged in common undertakings that they deeply cared about (guiding ideas - common purpose);
- Having the time and space to reflect together (learning infrastructure); and
• Mapping tools to ‘see the networks’ (tools and methods) – “as people understand and recognize their networks of collaboration, we found that they got stronger,” says Allen.\(^{46}\)

In our opinion, an important difference between business and education today has been the serious efforts in the corporate world over the last twenty years to understand the nature of knowledge and learning in practical work settings. Work like Allen’s illustrates a sophisticated emerging understanding of knowledge as both an individual and social phenomenon - \textit{the knowledge is in the network} – and what it takes to manage and lead in light of this.

Realizing systemic change in education will demand similar understanding of collective knowledge building and capacity building, which in many ways should come naturally in schools. As we said at the outset, compared to a business, a school is a more complex, embedded system and its effectiveness has always been shaped by many interactions with its surrounding systems (Figure 6). All teachers know that what they can accomplish with their students depends critically on the support the students receive or fail to receive in their homes and communities. Aligning the capabilities, passions, and functions of effective community or network leaders with the new Common Core standards represents a largely unexplored but potentially high leverage strategy.

\textbf{The Core Work of Community and Network Leadership}

- \textbf{Connecting innovators to create networks of collaboration both inside and outside the school and school system, which diffuse innovation and foster change on a larger scale.}
- \textbf{Enabling innovations in curriculum and learning processes for students that are realized beyond the school}
- \textbf{Extending time and space by foster innovations in critical aspects of the larger system that affect what schools can accomplish – for example, early learning}

\textbf{Connecting Innovators}. Above (Section 4.1.1), we stressed why robust peer learning networks among teachers are so important to sustain the capacity building and ongoing innovation in instructional design (curriculum, instruction and assessment) needed for success with the new Common Core standards. The same is true for building leaders like principals and for system leaders who shape the climate for continual organizational learning. As we have said elsewhere, “implementers need to learn from other implementers, especially those in similar circumstances who are further down the line.”\(^{47}\) How these peer networks are developed is too important to leave to chance and those who do it well contribute a key leadership role.

In this day it is common to look to web-enabled strategies to keep people connected and working together, but in our experience counting on a website or common social media is

\(^{47}\) Fullan, \textit{Motion Leadership. Ibid.}, p. 28)
not a coherent strategy. How many of us have been to meetings where everyone is invited to the website to continue the work of the meeting but few ever make it? The simple fact is that web-enabled professional networks are strongest if they help teams and peer networks that are already working together. This is why we emphasized above innovations in management processes that bring teachers into working teams. But the networks needed must expand beyond school buildings. How does this occur most readily?

“All revolutions start in kitchens,” as legendary community organizer Ceasar Chevez used to put it. In our experience, the scale of gatherings whereby people build productive knowledge networks range from informal get-togethers of a half dozen to many hundred. Regardless of the size, things that make a difference include

- Common language,
- Diversity in terms of spanning roles and settings, and
- Effective design that fosters engagement, reflection, deep listening, and quality conversation.

Common language like the habits of a systems thinker enables deep conversations on instructional strategy, just as common language around the “three-legged stool” of core leadership capacities allows people to talk about building shared vision and fostering productive conversations around tough subjects. When the language is based on practical tools it also keeps conversations anchored in reflections on action strategies, whether as teachers, principals or superintendents. Nothing is more enervating than having conversations among busy people hijacked by complaining about things people cannot influence. Last, when the tools encourage reflection, they lead to deeper conversations about real learning and buttress against the other trap of open conversations: people who only advocate and do not inquire.

Diverse groups will challenge people’s ways of thinking and build broader networks. We used to organize meetings that were all math and science teachers or all middle school professionals, but we have found over time that mixing levels and subject areas can lead to rich conversations that transcend particular contexts. Whenever possible, we include students in the gatherings as equal participants. The deep assumptions that shape school cultures and limit teachers to traditional practices are common across contexts. Sometimes, these become especially clear when looking at someone else’s struggles and innovations in a very different setting. For example, we have seen middle school math teachers inspired by what is being accomplished in preK-2 schools. As one commented, “When I saw how they were creating a space for young children to reflect, I realized how natural this was if teachers really work together to create the safety and listening needed – and it became clear that this is exactly what we do when we really engage our middle-schoolors.”

Lastly, it is important to not waste people’s time. Our experience is that educators today are hungry for cross-school learning, and when people come together it is imperative that they feel like they are engaged in productive exchanges that would not happen otherwise.

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It still amazes us that so many meetings of educators still are organized around “talking head” presentations and passive listeners (much like a traditional classroom) versus spaces for deeper conversation. Similarly, very few involve students as meaningful contributors, thereby also missing the opportunity to challenge assumptions and norms. Even large gatherings of several hundred can be designed using tools like The World Café (*op cit*) with people at small tables, focused on conversations that matter to them. Much of the art in nurturing effective peer networks centers on how meetings are designed, and most that work use tools like those discussed above for reflective conversation that ensure that
- People feel heard
- People feel that they hear others and are able to take in ideas and experiences that stretch them (why diversity matters)
- Conversations are grounded in real work: for example, we often ask teachers to bring examples of students’ work to focus peer clinics on instructional strategies
- There is an appropriate balance between open space to explore emerging ideas and issues and the degree of convergence needed.

This latter consideration is situational: there are times when plans need to be formulated and others where open-ended exploration is what is most needed. Stressed and busy educators often especially need the later, so long as it is balanced, as Mary Scheetz emphasized above, with good management processes within the school (Section 4.1.2). Sometimes the most productive conversations are the most emergent and unplanned, but this depends on those involved being truly committed to action. Good facilitators make practical applications visible through people’s personal stories and examples, thereby reinforcing the norm for action. Reflecting on the monthly evening working sessions where teachers from some dozen schools in Tucson and community colleagues share work and discuss common developmental challenges, Kim Gimblett comments, “What has most struck me about our network meetings is how useful they are. The stories and cases we focus on invariably give me ideas I take home and apply.”

The organizers of cross-school learning networks can be service providers, the peer network members themselves, or system leaders and internal staff. In Tucson, the systems thinking peer network was instigated by service providers (The Waters Foundation for Systems Thinking) and a group of teachers and administrators, but overtime, teachers and administrators have taken on organizing opportunities for networking and sharing. In Tahoma, Maple-Richmond Heights, and Ritenour, cross-school networks are part of system-wide management processes. Knowing the importance of continuity in sustaining such collaboration leads to continual experimentation with ways to make it more robustly embedded in everyday ways of operating. “I have been working with our instructional coaches so that they also begin to view themselves also being community organizers,” says Winston-Salem’s Don Martin. “There are almost fifty of them and there is a lot of potential for them to connect developments and learning occurring in different schools.”

Lastly, robust networks of collaboration naturally grow and expand to cross more institutional boundaries as they foster new visions of important work to be done. In so doing, they also become an important developmental resource for teachers, especially
stage 3 teachers exploring the transition to stage 4 and beginning to focus on the larger social fields they and their students can influence. For example, Gimblett is now part of a network of teachers from her school district and the University of Arizona working with colleagues from the US National Forest service, 4H, and local National Parks on a major new initiative, The Children’s Forest, aimed at engaging K-12 students in outdoor activities and education, stewardship and understanding the effects of climate change. The new “Student Footprint Project,” a common project among many school systems within the national SoL Education Partnership, involves science teachers working with students to understand energy and material waste systems and how to do effective audits for their schools and local small businesses.

Enable educational innovations realized beyond the school. At its essence, the key idea that connects community leadership with educational innovation is to transcend school boundaries, to move beyond the walls of classrooms and 55-minute bell schedules and to support teachers and students in applying learned skills to issues that matter to them in enhancing the well being of their communities. As this happens, it reverses the deep fragmentation between school and community embedded in the Industrial Age School. It also opens schools to diverse partnerships that both re-connect them with their larger communities and extend their educational impact - something that will become more and more needed with declining budgets and growing resource constraints. Lastly, because the educational experiences created can engage students in meaningful complex problem solving in real-life contexts, they can potentially contribute in unique ways central to the aims of the new Common Core standards.

The Urban Ecology Center in Milwaukee works with the Milwaukee public schools to offer science-based outdoor learning programs for primary and secondary students. In its ten years of operation, it has expended to working now with half of the 80 schools in the MPS system, in the process creating a national model whose design is being studied by other cities including San Diego, Columbus, Syracuse, and Baltimore. 10,000 students participate in programs each year. The key to approach is two simple ideas: (1) nature is everywhere - city kids do not need to travel to the mountains to connect with ecological systems; and (2) it all starts by being more connected with here, the place where we live.

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49 This project is patterned after an established USFS Children’s Forest project in Alaska http://www.alaskageographic.org/category/165/chugach-childrens-forest
50 This project is modeled after The EDF (Environmental Defense Fund) “Climate Corps” program that trains college MBA students and places them on summer internships with large corporations, who have now saved hundreds of millions of dollars in energy costs (http://www.edfclimatecorps.org), and a high-school version, “DoRight Leadership Corps” that has operated for almost a decade in Brewster, New York (www.dorightenterprises.)
51 For example, see the new “cross-cutting concepts” in Science education emphasized by the National Science Teachers Association (Pratt, H., NSTA Readers Guide to “A Framework for K-12 Science Education: practices, Cross-cutting Concepts and Core Ideas) or http://www.nd.edu/~nismec/articles/framework-science%20standards.pdf
52 http://www.urbanecologycenter.org/
The Center grew from a community movement to restore Riverside Park, a historic park on the Milwaukee River originally created by Frederick Law Olmstead (legendary urban park designer responsible for Central Park in NY) that had deteriorated and become a haven for crime and homelessness. In 1986, a five year-old boy was murdered walking through the Park. By the early 1990s, neighborhood residents had organized a restoration process, which eventually resulted in the Riverside Nature Center, out of which the Urban Ecology Center was established. It offered its first Neighborhood Environmental Education Project (NEEP) in 2000, designed to engage students in a combination of environmental and social restoration where they live.

The basic educational model embeds environmental education within community restoration, summarized by the simple goals: close the academic achievement gap for inner city kids, reduce crime, improve health, heal the land, inspire and engage the community, and build ecological literacy. All restoration projects are done with students and community partners within a two-mile radius of a Center and involve students who live in this area. Each participating school signs up for a year, which includes 24 day-long NEEP classes, along with other programmatic offerings, like the after-school Young Scientists Club, which combines research, homework support and sporting activities.

In an urban environment where people often live in apartment buildings and school grounds covered in cement, the Center offers unique urban sanctuaries for neighborhood school children. For young children, the aim is to provide constant contact with nature early in life and an adult mentor (parent, teacher, friend) who demonstrates positive behavior toward the environment. For older children, active engagement in restoration activities give tangible experiences of being a positive force in making the community safer and more beautiful. In the programs, science content made real by “outdoor laboratories” are interwoven with physical activities, as students move between restoring a river ecosystem and rock climbing. Throughout, community engagement is a key: today over 2000 volunteers work in the Center programs with youth.

The overall aim is to reverse the vicious cycle of environmental and social deterioration and to restore neighborhoods and ecosystems and to involve students as active leaders in the process – has proven a powerful educational intervention. A recent survey showed that 100% of the school partners believed the program has boosted academic performance and over 90% of the teachers felt the learning experiences afforded the students would not have been available otherwise. As important for their vision, 51 acres has been directly restored through Center programs and hundreds of additional acres along the Milwaukee River Corridor have been preserved and are in restoration. Riverside Park is now used 365 days of the year and, with the continuous community presence, crime is down 90%. The Center for Disease Control recently cited UEC as one of twenty best practice national programs for kids active and reducing childhood obesity.

Programs like the Urban Ecology Center also illustrate a simple point that we have long found distinguishes truly innovative schools – reaching out to engage community

53 Today, the Center has two major facilities and is building a third.
members as part of their extended faculty. While the Urban Ecology Center represents a sophisticated, integrated model for doing this, other examples can be much simpler and well within the means of all schools.

In the Monte del SoL charter school in Santa Fe New Mexico, 10th graders can pick anything they want to learn from a community member and spend the year learning it, creating joint projects of mutual design. Their “mentorship” needs to engage them a minimum of two hours a week between September and May, but many spend considerably more time, and many extend their mentorship as elective courses in the 11th and 12th grades. Through the mentorships, students in recent years have directed plays, produced films, composed songs, designed furniture, built bicycles, written books, explored quantum mechanics, studied polymer chemistry, designed lasers, tended bee hives, designed clothes, trained assistance dogs, and broken horses. The entire school now has a bee-keeping program that grew from one student’s mentorship several years ago.

The students’ mentorship is incorporated into the academic curriculum (students are required to get a minimum of two high school credits through their mentorship) and each student reflects on their learning through a final portfolio of work that combines a written essay, a photographic or video/power point presentation and/or performance reflecting what they learned, how they learned it, and how it was different from classroom learning. This culminates during the two-day Mentorship Festival each May, where students showcase their work to their peers, parents, mentors and guests.

Over the years, the mentorship program has not only afforded powerful self-directed learning opportunities for the students, it has created a network of engaged parents and community members who feel that they are part of the school – because in a very real sense they are. As the school’s “Head Learner,” Tony Gerlicz puts it, “In many ways the mentorship program symbolizes much of what we stand for, to remind students that this is where we live and to use our local community as context and vehicle for their learning. Santa Fe is rich with many cultures and traditions and, like most everywhere, creating a genuine sense of community is much needed. We believe our students can be an active agent for making this happen, and that this can be an integral part of their education.”

Examples like the Urban Ecology Center and Monte del SoL’s mentorship program show that there is no limit to the types of innovations that can arise when educators transcend the traditional isolation of schools and their larger communities. The fragmentation of education from the larger community in which students live has had tragic and largely unrecognized side effects. For all of human history, it has been understood that raising our children is a primary function of community. As this function has been lost, the lives of adults and children have both suffered. Children lack a multiplicity of engaged adults concerned for their well-being. The most basic of all forms of education, apprenticeship to someone who has life skills you seek to develop has all but disappeared. The processes of education have become professionalized and in the process disconnected from living as learning. And, the whole educational enterprise has become far more fragile - for example, expecting educators alone to fill the void created by the breakdown of
traditional family and community structures has never been realistic, as teachers know all too well.

Examples like the Urban Ecology Center and Monte del SoL’s mentorship program are among many that are starting to re-knit school and community. As we do this, we will discover that all communities contain a wealth of educational resources, even the poorest. We will re-discover the benefits for adults as well as children of mentoring. We will find that engaged and empowered young people can be powerful agents for rebuilding families and communities, especially in poorer settings. Paradoxically, going backward is going forward. In an era where life-long, self-directed learning that contributes to self and others will be increasingly valued, re-integrating school and community can be one of the highest leverage strategies. So far, few educational leaders have thought deeply about how the new Common Core standards could both support and benefit from this re-integration, but more and more committed to systemic change will in the future.

Reaching beyond school to influence larger systems that affect what schools can accomplish – Early Learning. “If I was still a high school principal, I would pay attention a lot more to what is going on with three year-olds, because they will be my customer,” said Jim Hunt, four-time North Carolina Governor and founder of the Smart Start program, a widely-studied nonprofit, public-private partnership providing early child care, health care, and family support for children, birth through five years of age, in each of the state’s one hundred counties.

The importance of early learning hardly needs emphasis today. Whether from research on brain development, nutrition, family structures, or the effects of electronic media, an important consensus has developed over the past decades around the critical importance of development in the first years of life. This is one reason that many are waiting eagerly for new Common Core standards, still in development, for ‘early learning’ educators and providers, those people and institutions who work with children prior to their entry into formal schools. Recognizing their critical importance, many states already have their own early learning standards.

But the absence of common standards also points to a core problem, namely that the providers of early learning and care vary from government-funded programs like Head Start to a welter of private providers. Virtually all operate outside the formal management of public school systems. Quality standards are, not surprisingly, all over the map, with many employing large number of minimum wage and under-educated workers. Professional development is either nonexistent or minimal. In a nutshell, a large gap exists between the importance of early learning and the present institutional reality, which no serious perspective on systemic change in education can afford to overlook.

“If we do not pay attention to pre-K we will be stepping backward with the new Common Core,” says Naomi Karp, who has been involved in early learning for over three decades and was responsible for federally funded research on early learning professional development during the Clinton Administration. “The Achievement Gap does not appear at kindergarten but when many babies born into vulnerable families take their first breath.”
Because of the decentralized nature of early learning services, centralized solutions are likely to be low leverage and effective network leadership essential - which is what Karp, now director of Early Childhood Professional Development for the United Way of Tucson and Southern Arizona, and United Way Senior VP LaVonne Douville are attempting to do through United Way’s First Focus on Kids (FFK) Coalition, which involves community agencies, the University of Arizona’s College of Education and Pima Community College, and their new Professional Development Alliance, formed to address deeply entrenched systemic issues that limit early childhood professional development. “No one can solve these key problems alone,” says Karp. “We have evidence of change through our efforts, but right now it is minute compared to the scale of the problem. That does not deter us and we keep our eyes on the goal of building a culture of education so that all young children in Tucson will have high quality early education experiences and opportunities.”

Like their counterparts within school systems, the FFK Professional Development Alliance has focused on capacity building. “New Common Core standards for early learning can be so helpful, but we already have very good standards for 3- to 5-year olds in Arizona,” says Karp. “We need teachers who know how to use early learning standards to positively impact young children’s thinking and learning.” And, as we have seen above, the heart of their capacity building strategy centers on the synergies between effective hands-on workshops, coaching, and strong peer networks - all within a larger learning community that stretches from early learning providers to K-12 and university educators. “Early childhood professionals have suffered for a long time with drive-by training,” says Karp. “(The Alliance) is not doing training but focused, intentional long-term development.”

The Alliance includes deep work on how people think, site visits to leading innovators, and a whole track on systems thinking and many of the related leadership development tools described above – with college credit for participants. They have established eight peer “communities of practice” and built bridges to create smooth transitions between different academic programs, like community colleges’ 2-year early childhood degrees and four-year university degree programs. They have also worked to help launch a new non-traditional early learning master’s degree program at the University of Arizona’s College of Education. Their aim this year is to get 1,400 individuals into at least one of the planned seminars, conferences or college courses, with at least 250 targeted for intensive education and follow-up coaching. A recent interim evaluation, cited the Alliance for its “innovative” approach to addressing “systems change through an integrated set of communities of practice to improve… professional development for early childhood educators” and identified several distinctive elements of its approach, including:

- mental models as key to change

54 http://www.unitedwaytucson.org/education/first-focus-kids
relationships & trust are critical and a coaching perspective and skills can help build both
developmentally appropriate practice applies to adults as well as children
understanding systems through systems thinking tools and approaches can provide insight into change

Karp’s and Douville’s real aim is to shift the culture of early learning, both within the provider communities and the larger world. “It is critical that we start to build leadership skills among young people entering the field,” Karp says, and reverse a tradition where “the senior professionals are 50- to 60 year old white women and the front line professionals are minorities earning minimum wages.” As “outsiders” to the professional mainstream, Karp also is convinced that early learning providers can be innovators.

Marcia Cortina, a Head Start pre-school teacher and member of the Alliance’s “Creating Developmentally Appropriate Inclusive Settings” community of practice has developed a way to bring systems thinking skills to her 3 and 4 year-olds that has befuddled much more experienced and formally educated teachers. For example, her students use feedback loops to help them self-manage and control emotions. They draw pictures of loops with happy faces and angry faces, and identify which loops they are in as they work through peer relations and oscillating emotions. “My 3 and 4 year olds understand loops better than most adults. What I have learned is that young children are natural systems thinkers. They do not think of learning in school as a series of subjects like math, reading, or science. They dive into learning new things with curiosity and enthusiasm. There is something we do in schools that squashes that disposition for learning. I don’t think it has to be that way.”

In terms of our developmental framework, Marcia today operates consistently as a level 3-4 teacher, coming to view her work as influencing her classroom setting and her parents plus her school and the larger early childhood community. Along with about a dozen other pre-school teachers, daycare providers, and center directors, she has spearheaded a grass roots effort called “Shaping the Future” that aims to influence the quality of early learning and change the way the greater community views early childhood education. The group shares evidence of student learning, lessons, and strategies for dealing with children with special needs. They share ideas for working with and engaging parents in developmentally appropriate practice. They invite kindergarten teachers to their meetings to share strategies, talk about the Common Core and how to effectively transition from pre-school and home care to K-12 settings. And, they have written letters to legislators to emphasize the importance of support for early childhood education and services.

Others who never saw themselves as leaders are similarly stepping forward in both refining their practice and assuming larger responsibility – like Amber Jones and Toni Lopez, who recently sent an email encouraging the previously isolated members in “supporting one another” and “bridging the gap between the K-12 community and ECE (Early Childhood Education) and advocating legislatively.” Young leaders like Amber and Toni were not comfortable in the past taking initiative to grow coalitions with high visibility in the community, were “intimidated” by the older, more experienced early childhood experts, and “often felt put down” when sharing ideas in meetings or casual
conversations. This has now changed. Amber is now on the state board of the AZAEYC (Arizona Association for the Education of Young Children), and both are now seen widely as two of several key future leaders of early childhood in Southern Arizona.

A new collective and visible intent is forming, elegantly summarized recently by another member of this emerging leadership network: “People often see us as baby sitters. Even the term ‘day-care’ seems so disconnected with what we do and the important role we play. The success of children entering kindergarten is dependent on the quality of their home life and the quality of the time they spend away from their parents or guardians—meaning at our centers. We truly are shaping the future of our community’s children.”

We have often seen that significant systemic change comes from the periphery, from people and groups who are outside the mainstream in terms of power and established ways of doing things—front-line managers and workers, the poor, the women, the young people. The same may well prove true of the ‘under-educated’ early learning providers. They have inherent advantages that are hard to see when viewed from within the established power structures of school systems. They are more connected to their communities. Many come from the same ethnic groups as those they work with. Most care deeply about the young children with whom they work. They are mostly women and, perhaps most important, not overly influenced by received educational orthodoxy. And, the importance of their work is becoming increasingly recognized. When they are connected in effective peer networks and supported in their development, they could be a significant force for innovation in a uniquely high leverage point in the overall education system.

If, in fact, the new Common Core Standards succeed in shifting attention to higher order skills, there is great leverage in the lessons that will come from focusing more “upstream,” on the youngest learners. We have consistently found that when people see what young learners are capable of, like constructing their own system models of complex situations and spontaneously showing genuine compassion for one another and even those much older than themselves, they start to question deep assumptions about children’s abilities and about good teaching.

“School building leaders are so under the gun today,” observes Karp, “that it can be hard to get them to understand that learning is play and that play is learning, and that teachers crawling on the ground with the children in their classes is a good thing. It does not have to be all about books and cognition. When you visit the Bank Street Children’s School in New York (famous for developmentally appropriate learning), you are just amazed at the teachers’ ability to anticipate each child’s strengths and needs, and to then just be there with a hug. Social-emotional development and cognitive development are inextricably linked” – a lesson that the early learning professionals could help teach us all.
4.4. Summary: three Critical Types of Leadership and their Interdependencies

To summarize, building healthy leadership ecologies demands a focus on multiple types of leadership as equally crucial for systemic change:

**School Leaders (teachers and building administrators) are needed for**
- Creating and implementing innovations in curriculum, instruction and assessment;
- Developing schools as learning cultures, and
- Creating new and inspiring ideas based on showing what is possible in student learning.

**System Leaders (system administrators and board members) are needed for**
- Clarifying aims and building alignment among all key stakeholders,
- Role models of learning attitudes and behaviors and stewards of a larger common purpose;
- Creating policies, processes, and systems to support continual learning and innovation in these areas.

**Community and Network Leaders are needed for**
- Creating networks of collaboration
- Enabling innovations in curriculum and learning processes realized beyond the school
- Creating changes in larger systems outside the school that can affect what schools can accomplish

Lastly, these different types of leaders cannot succeed without one another.

**School leaders need**
- System leaders to understand and address larger systemic barriers,
- Network leaders to prevent isolation, to learn from peers, and to focus on critical aspects of the larger system beyond the four walls of the school.

**System leaders need**
- School leaders to move from concept to capability, and
- Network leaders to remain connected to their larger community and to critical innovations that will influence what the school system can achieve.

**Community and Network leaders need**
- School leaders to bridge between innovations outside and inside school, and
- System leaders to translate local insights into policy and design guidelines.
4.5 Reflections on Capacity Building

Collectively, we have been involved in organized capacity building processes – workshops, coaching, and supporting peer networks - for thousands of teachers, administrators and community leaders in diverse contexts. Through this experience we have come to a few guiding ideas:

- Everyone learns in their own ways and their uniqueness must be respected
- How people are invited into the process matters
- The real leverage lays in building larger learning communities

Many paths for many people. Adults, like students, learn in many different ways and it is just as important to offer them a variety of learning pathways, especially in helping people move from theory and concept to practice. One of the reasons good experiential workshops are useful as a starting point for many is that, if done well, they involve lots of hands-on practice and can allow different learners leeway to approach things in ways that suit their own style. (For a typical design for hands-on Systems Thinking Level 1 workshop, see Appendix B) Practice sessions where teachers get to try out new curriculum or instructional strategies among peers are can help as well. But workshops or practice session are still events isolated in time from people’s daily work, and the bridge from workshop to integration into the classroom, for example, can be daunting. Research shows that only a small percentage of tools introduced in teacher professional development find their way into daily application.\footnote{Showers, B., Joyce, B., and Bennett, B. (1987). “Synthesis of research on staff development: A framework for future study and a state-of-the-art analysis.” Educational Leadership, 45 (3), 77–87; or http://www.learningforward.org/news/jsd/sparks104.cfm} It is crucial that support structures be in place for this transition, and that they be tailored to support each person’s needs and learning style.

In particular, while there are many good programs today to develop good coaching skills, we can’t stress enough that real development unfolds or fails to do so based on the quality of relationship that gets built between coach and teacher. As we have shown above, helping teachers and administrators effectively required very different strategies. For example, when we are coaching teachers, we try to help them in whatever way they think is important. This might even simply involve tracking down available lesson plans or readings or helping make a connection with another teacher working on a similar task. The key is to demonstrate that the coach is really there to serve the person they are coaching and engage in a co-learning process – just as the basic shift to level 3 teaching centers on the teacher attending to the best of their abilities to the unique needs of each student.

How people are invited into capacity building processes matters. Often the whole capacity building process never goes very far because of missteps at the start. To the greatest extent possible, we always stress that capacity building opportunities are voluntary, especially when it involves deeper changes, such as in teaching strategy, skills, and especially personal development. While mandatory training for purely technical
skills may be non-problematic, when deeper developmental work becomes mandatory, it almost always backfires in our experience.

Second, we always emphasize that “this is for everyone,” not just for a special few. Often in schools capacity building opportunities for teachers, like coaching, are only for certain people. Sometimes this is driven by budget constraints, but sometimes it is also driven by performance assessment, either special opportunities for high achieving teachers or remedial help for poorer ones. Either way, making capacity building available selectively has problems. It can easily create insider and outsider groups. It can easily carry either a badge of accomplishment or a stigma of remediation. For example, as we pointed out above, we have found that labeling some as ‘master teachers’ is problematic, even though it may be well deserved. Co-workers in a school usually know who are the more effective teachers. Singling them out as more advanced does not serve the larger aim of building a culture of learning – for everyone.

We find that principals and others supporting the capacity building process often fail to see the signals they are sending by virtue of how the whole process is set up. When working with principals and administrative leaders, we focus on helping them create clear messages from the outset that capacity building is for everyone, and that it includes themselves. Our aim is always to reinforce a message that everyone is a learner. There are no masters, just people wrestling with different developmental steps. A good friend and mentor tells a story about her study of aikido. When struggling in her class with a new movement, she approached the teacher afterwards and asked, “Sensi, how long it had taken you to learn this movement?” He responded, “I have not learned it; I am just practicing.” This is the spirit of a real learning community – we are all just practicing.

The overall aim: building learning communities. Too often people see professional development for teachers as an isolated program and lose track of the larger aim, to transform schools into learning cultures. It is easy to become focused on programs, like training and coaching, and forget about culture. Building a learning-oriented culture in school will require attending to all three elements of the strategic architecture presented above (Section 2.2): compelling guiding ideas; theory, tools and methods; and learning infrastructures that make reflection collaboration and skill building part of the day to day routines of school life. You know you are on the right track when you see more and more examples of teachers at all levels helping one another and asking for help, talking publicly with one another about their practice and their challenges.

As the many examples above show, building leadership capacity is deeply personal and inherently collective. Both aspects must be embraced. There are many ways to define leadership, but one that we have always found most descriptive of the heart of the territory is “the collective capacity of a human community to shape its future.” So, for us, building leadership capacity and creating schools as learning cultures are two sides of the same coin.

Make no mistake. Building learning communities represents deep changes in traditional school culture. Recently Samantha Sims and Kim Gimblett of Tucson chatted about their
respective developmental journeys. Sims observed, “If you feel really confident, that
means you probably are not pushing yourself. In order to apply this knowledge with
kiddos, you will need to show your vulnerability, and that is the roadblock. We teachers
are the worst at that. ‘Failure is feedback.’ If we can start to practice that, it is the key to
advancing with kids. The wonderful thing is that kids are so forgiving.” 57

It is common today to hear political speeches about the need to improve the quality of
teachers in American schools. This is then often followed by advocacy for attracting
more talented teachers, or paying them better, or, as is common today, creating tougher
processes of assessing teacher effectiveness and getting incompetent teachers removed.
But what is often missed is the leverage of improving the developmental processes for
teachers and for the administrators who shape their working environment.

To be a leader at any level in a learning culture is to be in an ongoing developmental
process. Investing effectively in this developmental process is one of the highest
leverage changes we know of for realizing sustained innovation in schools. It improves
teacher quality and student achievement. It increases retention of teachers and
administrators truly committed to their craft. It makes clearer who is not committed to
their ongoing development and easier for them to step aside. It can transform the overall
school climate to make education a more and more attractive profession for talented
young people. And it helps shape a culture of managerial leadership that ensures all of the
above. Simplistic fixes to get rid of low performers and hire higher performers will
accomplish little without transforming the systems that shape how educators learn.

We firmly believe that this is not a romantic ideal. It is pragmatic and realistic – and
realizable! But it is also hard work, requiring patience and perseverance, both by those
directly involved and those who must support them.

57 www.communitycampsnowball.org; “Teachers Talk About Systems Thinking”
5. Challenges

Throughout the preceding sections we have talked about many challenges that leaders at all levels face in shepherding the ongoing systemic changes needed to succeed with the new Common Core standards. Here, we summarize some of the more critical ones and what we have learned about strategies for dealing effectively with them.

Developing effective strategies starts with a shared understanding of seeing systemic change as an ongoing learning process that intertwines two dynamics. First, there are “self-reinforcing growth processes” whereby small changes grow into larger ones, like innovations in teaching that accelerate student learning and encourage more innovation and more innovators. Second, there are “balancing processes” that work to maintain the status quo. The later typically manifest as challenges, difficulties that change leaders must recognize and deal with. Developing effective strategies for these challenges depends on understanding their systemic, as opposed to idiosyncratic (e.g., particular people or situations), causes. 58

From a systemic perspective, the challenges encountered in initiating and sustaining deep change are neither good nor bad; they are inevitable. They do not come from people who “resist change,” but from deeply entrenched habits of thought and action, many of which are what make an institution viable. Like the immune system of any organism, if these balancing processes can be understood, skillful change leaders can often address these challenges with elegance and minimal effort, while continuing to nurture the self-reinforcing processes of growth and change that foster ongoing innovation in instruction and assessment and deeper student learning.

1. The anxiety of systemic change. Helping teachers change their practice is never easy, any more than is helping principals and superintendents change how they manage. When we use the term “capacity building,” it can often mask the depth of the emotional and psychological challenges, as we have implied repeatedly above in emphasizing the personal character of systemic change. Two factors are paramount in helping people face these personal challenges.

First, being part of peer learning communities means knowing that “we are all in this together.” Behind the foreground of each person’s particular developmental and technical learning challenges sit shared challenges that arise from evolving beyond the teacher-centric, centrally controlled model of the Industrial Age School. When people discover that what is common in their challenges exceeds what is idiosyncratic, it gives them far greater confidence in taking bold steps. Second, people need to build confidence that real progress is possible. As even small steps are realized, people become more engaged in the improvements they are experiencing and gradually let go of fears that they do not have all the answers (no one does). Slowly, they realize that “journey is the destination” and that the only way to “implement change” is to implement change.

2. **Impatience for quick improvements in the face of changes that require long-term capacity building.** Balancing short-term needs and expectations with longer-term development goals constitutes a timeless challenge of leadership. Often, this natural tension becomes unmanageable because of two deeper problems.

First, key stakeholders are not sufficiently engaged. If people are not close enough to where change is occurring, they have little confidence in or direct understanding of the change process. For example, if you want to get you board members engaged in deeper changes make sure they spend time in innovative classrooms, seeing teachers engaging students in new ways. If they feel like partners in the process, they will generate their own enthusiasm and also start to appreciate more realistically the time frames needed for real change. All too often change leaders substitute convincing for engaging, believing that their task is to get ‘buy in’ to predetermined changes rather finding ways to get key stakeholders engaged. They then end up caught in unrealizable expectations imposed by the very people they have failed to engage.

Second, stakeholders who start to appreciate the change process can help establish clear interim goals that are on a pathway toward longer-term aims. This is always needed. “How do we know we are on track toward our longer-term aims?” Answering this question is never easy and usually benefits from multiple points of view.

3. **Assessing for Learning vs. Assessing for Punishing.** Closely related to the challenge of unrealizable expectations are counterproductive assessment and evaluation strategies. As we said in the Section 1, assessment must be viewed as a genuinely multi-stakeholder issue (“Assessing for Who and for What Purpose?”), and many of the problems in this domain have come from failing to understand this complexity. Put simply, there are at least three levels of assessment corresponding to three levels of leadership: teachers and students embedded in the core student-teacher learning process, principals and building leaders assessing the student-teacher learning process itself, and system and community leaders assessing the overall effectiveness of the school system. Confounding these three levels has led to low leverage assessment interventions, such as the whole system being driven by metrics like test scores, which are appropriate for external stakeholders but if overemphasized internally create an environment dominated by fear of failure rather than innovation and learning.

The first level of assessing involves students and teachers and is inherent the student-teacher learning process itself. When this process is healthy, students and teachers are continually assessing their own efficacy, as was shown in Figure 8 (p 47).59

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59 In that figure the student assessing is implicit in how the students judges their efficacy and accomplishment. The teacher’s assessing is explicit and shapes modification of instructional strategies.
Judging how well this process is functioning constitutes a meta-assessment, which is the primary domain of principals and building leaders and should be aimed at continual improvement of the student-teacher learning process itself (depicted by the three loops in Figure 8). At this level, the focus should be on innovations in curriculum and pedagogy that can strengthen these self-reinforcing loops. For example, as we have argued above, effective collaborative learning strategies can free teachers’ time to observe how each student is doing and make continual adjustments in instructional strategy. Likewise, tools that make more explicit how students are thinking, like the visual systems thinking tools (e.g., “causal loop diagrams” and “behavior over time graphs”), further enable teachers to assess student efficacy.

The third level of assessing concerns the school system as a whole, both individual school districts and the larger system. This is the primary domain of superintendents and system leaders like Board members and their external community stakeholders, but also of regional and state level leadership. Here is where the frequently unasked question about overall aims is crucial, as we discussed in Section 2.2 above, as are emerging issues in the larger system. To take one current example, there are growing concerns about the role of private businesses in not only selling products and services to school systems but in running the systems themselves. If parents, for example, in frustration demand private business takes over and improves school- and student performance, the fundamental mission of public education could easily be lost. There are few easier ways to improve ‘school performance” than to drive out low-performing students. This illustrates a key principle: we must see our children as a commons and seek ways to steward this commons wisely. Balancing legitimate stakeholder interests in school performance must be done in ways that strengthens the commons rather than weakening it.

At all these levels, those committed to genuine educational improvement must remember that it is far more likely that improvement will come from focusing on implementing tools, methods, and strategies that improve the basic learning processes within and across schools and school districts rather than just putting more pressure on teachers and school leaders. This is Page One of the process-and systems improvement philosophy. As W. Edwards Demings, famous Total Quality pioneer used to say, “If you set measurable targets and make people’s jobs depend on meeting the targets, they will find a way to succeed – and they will destroy the system in order to do it.” Real improvement only comes through improving the processes and systems that are the greatest determinants of sustained accomplishment. Honoring this principle is extraordinarily difficult in the complex stakeholder environment of public education, which is far more complex than that of a business. This is why we have stressed continually the importance of developing leadership at all levels, within the school administrative structure and beyond - there simply is no other way.
4. **What about those who are not ready for the journey?** Not everyone will be up for what is involved in a systemic change process. But how changes in personnel come about matters. In particular, as stated above, the fad of wholesale removal of teachers and administrators is a simplistic “fix” that can have many unintended side effects, like encouraging other schools do anything (including outright falsification of results) to not suffer the same fate. On the other hand, to make a clear commitment to compelling overarching aims and capacity building to realize them creates a powerful context to see who is ready. In such a case, turnover will become a *by-product* of building a culture committed to individual and collective development in service of accountability for student learning.

In one of the examples presented above (the Ritenour district in St Louis), serving a 70-95% free and reduced lunch student population, significantly enhanced student learning over the past five years, including on standard performance metrics. Of the 50 administrators who were there when the change process started, four remain today. The changes occurred partly through natural attrition and partly through helping people move on. As Mary Scheetz, the Assistant Superintendent put it, “It is important to not just blame people or to come in and demand that they change… People were behaving as they were for a reason. As you develop and implement new processes and structures, you have to wait and watch to see who can grow into making them effective.” She then added, “I am passionate about coaching people along their own developmental path, regardless of where they start from… But you can’t coach people who are not coachable. At some point… people need to see that, if we are not doing a good job, it hurts the children. Everyone must understand that it is always about the students.”

As we said at the outset, a genuine commitment to capacity building and development is essential to revitalizing the education profession. A corollary will be greater clarity as to who is ready and who is not. Helping the latter to move on is not easy, but doing it resolutely and compassionately is a hallmark of good management – in any profession!
Appendix

1. Artifacts from research sites

Maplewood-Richmond Heights model for building sustainable systems change capacity

- compelling educational vision
  - metaphors: studio, museum, expedition, apprenticeship
  - mission: leadership, scholarship, stewardship, citizenship

- The Culture
  - positive environment
    - view of teachers, administrators and students as co-creators of the school, healthy food and regular exercise, art, comfortable furnishings, clean spaces filled with color and light, outdoor interactive spaces, displays of outstanding student work, positive discipline

- continuous improvement
  - deprivatized practice including evals, student work analysis, ongoing data analysis, unit and lesson tuning, Curriculum Action Teams, and professional learning communities

- MRH Model for Sustained Improvement
  - curriculum covenant
    - UbD curriculum, web-based curr. management system, consistent monitoring

- The Program
  - personalized service
    - looping, home visits, RTI, technology integration, differentiated programming

  - instructional best practice
    - unit and lesson design, cooperative learning, reading and writing in content areas, technology to support critical and creative work

Revised: April 2012

2. Instructional artifacts

Outline for Systems Thinking Level 1
(from Waters Foundation – www.watersfoundation.org)

<table>
<thead>
<tr>
<th>Classroom and School Applications</th>
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<tbody>
<tr>
<td>Characteristics of Systems</td>
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<tr>
<td>Habits of a Systems Thinker</td>
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<tr>
<td>Concepts and Tools of Systems Thinking</td>
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<td>Applications of Systems Thinking</td>
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### Outline for Systems Thinking Level 2

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<th>Classroom Instruction and Culture</th>
<th>School Improvement and Culture</th>
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<td>Designing and Assessing Instructional Strategies</td>
<td>Designing and Assessing Leadership and Decision Making Strategies</td>
</tr>
<tr>
<td>Designing and Assessing Instructional Computer Modeling</td>
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### Outline for Introductory Education for Sustainability
(from the Cloud Institute - www.cloudinstitute.org)

Combines systems thinking, sustainable economics, and the science of sustainability to:

- increase awareness and knowledge of core concepts, knowledge, skills and attitudes that characterize education for sustainability
- show how economic prosperity can combine with restoring the health of the living systems upon which our lives depend?
- work together to identify school and community strengths and gaps, and to plan next steps

### 3. Contacts for all schools cited

**Gridley Middle School, Tucson:** Kim Gimblett (Kimberlyn.Gimblett@tusd1.org)

**Hewlett-Woodmere School District:** Joyce Bisso, superintendent (jbisso@hewlett-woodmere.net)

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