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Strapping Wings on a Caterpillar and Calling it a Butterfly: When Systemic Change is Not Systemic

To transform something is to change its fundamental external form or inner nature... In the world of nature, a caterpillar is transformed into a butterfly; its DNA remains unchanged, but its form and properties are fundamentally different. A butterfly is not a caterpillar with wings strapped on its back (Nevis, Lancourt & Vassallo, 1996, pp. 11-12).

I was reminded of a question I have addressed repeatedly since I started writing, teaching, and speaking about systemic change in school districts back in 1984: "When is systemic change not systemic"?

There are many often conflicting definitions of systemic change (these definitions are presented later in the article). The definitional uncertainty still baffles practitioners and policymakers today and I see this confusion appearing in publications on school improvement; for example,

- When I read articles about examples of systemic change and the articles are about high school reform;
- When I read articles about systemic change and they only focus on improving

student performance on achievement tests; and,

- When I read articles that claim that curriculum improvement, introducing new instructional technology, or creating a new management information system are examples of systemic change.

All of the above changes can be part of a systemic change initiative, but, by themselves, they are not examples of systemic change. These kinds of changes are analogous to strapping wings on a caterpillar and calling it a butterfly.

I believe that the "system" to be improved must be an intact school district. In fact, a school district is one of the few organizations in the world that is actually called a system (as in, "school system"). The school system is all the programs, buildings, activities, people, etc. that must be aligned and coordinated to deliver educational services to students. If you draw a circle around all those elements everything inside the circle is the system to be improved and everything outside the circle, including state departments of education, comprises the system's external environment; a principle that was provided by Fred and Merrelyn Emery,

early pioneers of the systems approach to improving organizations as systems (Emery & Purser, 1995).

Russell Ackoff (1981, 2001) is another early pioneer of systemic change in organizations. He tells us that it is pure folly to try to improve parts of a system (as in focusing improvement only on a school building or a level of schooling like high school reform). He says that not only won't the entire system improve by improving the parts, but it is likely that this piecemeal focus will actually cause the system's performance to deteriorate.¹

So, the answer my opening question, "When is systemic change not systemic"? is – "When it focuses on anything less than the whole-system

¹ However, a whole-system change effort can begin within a "part" of a system as long as that starting point is the first step in a whole-system change initiative. Determining which part to start with also requires the application of strict selection criteria; e.g., select a starting point that is powerful and resilient enough to fight off pressure from unchanged parts of the system to revert back to its pre-change status.



and when it is not transformational.”

What Systemic Transformational Change Means to Me

I'd like to share a few thoughts with you about what systemic transformational change means to me.

Systemic transformational change creates a substantially different organizational reality in a school system. Creating and sustaining that new reality is not an easy task because within each school district there are multiple realities encased in the mind-sets of the educators working in those districts; not to mention in the mind-sets of key external stakeholders who think they know what's best for a school system.

The existing multiple realities need to be blended into a shared reality of a desirable future for a school system. But it is insufficient simply to create a unified and shared vision of a desirable future. The literature on transformational change repeatedly reinforces the need for people in organizations to change the way they think and act (i.e., to change their paradigms or mind-sets) with regard to three change paths (which are describe in more detail later in this article):

- **Path 1**—improve their system's relationship with its external environment,
- **Path 2**—improve their system's core and supporting work processes, and

- **Path 3**—improve their system's internal social infrastructure (which includes organization culture, organization design, job descriptions, reward system, etc.).

The way that educators currently think and act along those three paths represents their current mind-sets or paradigms. If educators want to create and sustain systemic transformational change, then they need to shift the way they think and act with regard to how they relate to their environment (Path 1), how they do their work (Path 2), and the quality of their system's social infrastructure (Path 3). Thus, three paradigm shifts are required.

But there is a fourth paradigm shift that's required--there is a need for educators to change the way they think and act with regard to creating and sustaining change. Their dominant, controlling paradigm for change is what we call piecemeal; and it is extraordinarily resistant to change as can be seen in contemporary efforts to improve schooling in American school systems (e.g., as seen in common high school reform efforts and school-based management).

So, change leaders in education are faced with the challenge of helping educators shift from four existing paradigms to four new paradigms for creating and sustaining systemic transformational change along three change paths. The four paradigm shifts are:

- **Paradigm Shift 1:** shift from a reactive stance in response to the environment to a proactive stance (Path 1: improve the system's relationship with its external environment).
- **Paradigm Shift 2:** shift from the Industrial-Age paradigm of schooling to an Information-Age paradigm; and, include the supporting work processes in a school system within this shift (Path 2: improve the system's core and supporting work processes).
- **Paradigm Shift 3:** shift from a command and control organization design to a participatory organization design (Path 3: improve the system's internal social infrastructure; which requires changes to organization culture, communication practices, job descriptions, reward systems, and other elements of the social infrastructure).
- **Paradigm Shift 4:** shift from a piecemeal approach to change to a systemic transformational change approach (by moving along the three change paths to create unparalleled opportunities to improve student, faculty and staff, and whole-system learning that are substantially different than what is currently being done in the system).

The first challenge in any effort to stimulate and support four paradigm shifts is to con-



vince educators that these shifts are needed. Telling them that they are needed will not be enough. They have heard these kinds of calls for change before. They must be provided with compelling data that not only point out the need for change, but also shine a bright flood light on the opportunities that systemic transformational change provides. "Need data" push people toward change. "Opportunity data" draw people toward change. Both kinds of data are critical for motivating people to make their mind-sets malleable and therefore capable of changing.

THE NEED FOR SYSTEMIC TRANSFORMATION

Piecemeal change to improve schooling is an approach that at its worst does more harm than good and at its best is limited to creating pockets of "good" within school districts. When it comes to improving schooling, however, creating pockets of good in a district isn't good enough. To create excellence within school districts, we must change the paradigm from one developed for the Industrial-Age that is standardized, time-based, and sorting-focused to one that is more appropriate for the evolving Information-Age that is customized, attainment-based, and learning-focused (Reigeluth, 1994). Furthermore, whole school districts need to be transformed, because transforming a single school (or program) makes it incompatible with its school district, leading to its inevitable conversion back to the Industrial-Age paradigm as the un-

changed parts of the system pressure the changed part to revert back to its pre-change status. Only with district-wide transformation that creates a paradigm change can unparalleled improvements in student, faculty and staff, and whole-system learning be created and sustained. Shifting to a totally new paradigm is known as systemic transformational change.

THE TRADITIONAL APPROACH TO SCHOOL IMPROVEMENT

Ever since John Goodlad proclaimed in 1984 in *A Place Called School* that the school building was the appropriate unit of change for improving schooling, that approach—improve one-school-at-a-time—has dominated efforts to improve schooling in America. So, why, after applying that philosophy over all these years has so little changed? It is because that approach, while important and still needed, is inherently insufficient because it disregards the nature of school districts as intact, organic systems governed by powerful principles of complex adaptive systems (e.g., Dooley, 2004; Olson & Eoyang, 2001). It is insufficient because it is a piecemeal approach that fails to improve entire school systems.

The efforts of educators to improve schooling over the past 20+ years can also be captured in a simple metaphor that goes like this:

Rolling across America is a long train called "The School Improvement Express." The

triple societal engines of standards, assessment, and accountability are pulling it. The lead engine goes by the name "The No Child Left Behind Engine That Could." The rolling stock is composed of school systems and a myriad of contemporary school improvement models, processes, and desirable outcomes. The train has once again come to a stop at a broad and deep abyss that goes by the name "The Canyon of Low Performance." On the far side of the abyss lays the "Land of High Performance." The riders on the train want to go there. In fact, they have wanted to go there for years but have failed to make the crossing, and so they keep returning here to the edge of the abyss to stare across with longing in their hearts wondering how they will ever traverse it.

Standing at the edge of this great abyss, some educators see a threat, while others see an opportunity. Some see an impossible crossing, while others see just another puzzle to be solved. Meanwhile, the pressure in the three great "engines" for setting standards, assessing student learning, and holding educators accountable for results continues to build and shows no sign of dissipating. The "engineers" have their hands on the brakes but they can feel the pressure of the engine trying to edge the train forward, which feels like having one foot on the brake of a car



while stepping on the gas with the other foot.

Even though the train has rolled across a lot of ground and although its passengers have done good things along the way, there they stand one more time looking out over the abyss wondering how in the world they will get to the other side. Some of those standing at the edge say, "Impossible, can't be done." Others say, "We've been here before and failed then."

Still others stand there and theorize about the complexity of crossing such a canyon. "It's so hard to define the boundaries of the canyon. Just what is a system, what does it mean, is it this or is it that? We need this, this, this, and that or we'll never cross," they suggest, but then they take no action to do what is needed. Still others, looking backward at the long train say, "What's behind us is the future. What we have done in the past is what we should continue to do."

Despite a strong desire to create high performing school systems educators have been unable to do what's needed to create those kinds of systems because of the inherent deficiencies of the one school, one program-at-a-time approach to improvement. Given this insufficiency of the traditional approach to school improvement there is a clarion call to scale-up school improvement to the level of the whole-system (e.g., Supovitz, 2006; the Stupski Foundation

at www.stupski.org; and the Harvard Graduate School of Education in collaboration with the Harvard Business School's created a joint venture called the Public Education Leadership Project (PELP) (at <http://www.hbs.edu/pelp/knowledge/>).

Some districts are now engaging in whole-system change, although not all of those efforts are aiming to create transformational change (please see the five definitions of systemic change in the next section of this article to see why this is the case). But the kind of whole-system change they are engaging in is still failing to produce and sustain desired results. Instead, a process called systemic transformational change is required to create and sustain breakthrough improvements throughout an entire school system. This approach to whole-system change is a trestle that can carry the "school improvement express" across the "canyon" to the "land of high performance."

SYSTEMIC CHANGE IN SCHOOL DISTRICTS

In the field of organization improvement the alternative to piecemeal change is systemic change. But there are several definitions of systemic change, not all of which are truly systemic. The differences are explained below.

Systemic Change

Systemic change has a mysterious sound to it. Some people have a hard time getting their minds around the idea, and

they cannot envision a school district as a system. All they see is a collection of unconnected individual schools and programs. Some people catch a glimpse of a district as a system, but cannot hold onto the image. Still others define a school system as a classroom inside a school inside a cluster of schools inside a district inside a community inside a state inside a region inside the country inside the world inside the universe. This mental model is often referred to as a "nested system" (e.g., Bronfenbrenner, 1977, 1979). Although theoretically correct, it is notably useless for informing the practice of school district improvement. How can anyone improve a system that complex? Instead, the "system to be improved" is everything inside what is commonly called a school system and everything outside that system is its external environment (see Emery & Purser, 1995 for more guidance about defining the system to be improved).

There are several different definitions of "systemic change" used in the school improvement literature. This definitional confusion was identified by Squire and Reigeluth (2000). Reigeluth and Duffy (2006) commented on these different definitions. They are:

Statewide policy systemic change. Systemic change used in this context creates statewide changes in tests, curricular guidelines, teacher-certification requirements, textbook adoptions, funding policies, and so forth that are coordinated to support one

another (Smith & O'Day, 1990). This meaning is how policy makers typically think of systemic change.

Districtwide systemic change.

From this perspective, systemic change produces changes in curriculum or programs instituted throughout a school district. This meaning is how P-12 educators typically think of systemic change.

Schoolwide systemic change.

People holding this view of systemic change focus on what happens inside individual school buildings. Systemic change in this context is any change or program instituted throughout a school. This meaning is how educators participating in groups such as the Coalition of Essential Schools typically think of systemic change.

Ecological systemic change.

From this point of view, systemic change is based upon a clear understanding of interrelationships and interdependencies within the system of interest and between the system of interest and its external "systemic environment." Change leaders subscribing to this view recognize that significant change in one part of their system requires changes in other parts of that system. Of necessity, this meaning of systemic change subsumes all the other three meanings, and it is how "systems thinkers" view systemic change (see e.g., Ackoff, 1981; Banathy, 1996; Checkland, 1984; Emery & Purser, 1996; Senge, 1990).

The first three definitions apply principles of systemic change, but they are not systemic. The fourth definition is an example of systemic change, but it does not create transformational change. Thus, the one definition of systemic change not included in Squire and Reigeluth's original compendium of definitions is the one for systemic transformational change. This special instance of systemic change is described next.

SYSTEMIC TRANSFORMATIONAL CHANGE

Throughout this article the term "systemic transformational change" has been repeated. Over the past decade the notion of systemic transformational change has emerged as a methodology that is needed to improve all kinds of organizations; e.g., consider the following excerpts from an article by Amy Zegart in *The Washington Post* on Sunday, July 08, 2007, about the failures of the intelligence system in the United States to prevent the ghastly September 11, 2001 attack. She said that the FBI and the CIA missed 23 potential opportunities to disrupt the September 11th attack. She identified the causes of this failure as:

1. Agency cultures that led officials to resist new ideas, technologies and missions;
2. Promotion incentives that rewarded the wrong things; and

3. Structural weaknesses that hampered those agencies and prevented them from working as a unified team. (p. B5)

With regard to the structural deficiencies of the FBI, she said, "Individuals were not the problem. The FBI was. The bureau's highly decentralized structure...meant that what should have been a nationwide effort was instead the focus of a few people.... (p. B5)

It doesn't require a very big stretch of our ability to recognize similar patterns of behavior to see how what Zegart says about the failures of the U.S. intelligence system also applies to school systems; for example, the struggles of many U.S. school systems have root causes anchored in:

1. School system cultures that lead faculty and administrators to resist new ideas, technologies and missions;
2. Incentives that reward the wrong things; and,
3. Structural weaknesses such as over-decentralization (as in school-based management where each school essentially is its own system) and piecemeal approaches to change that hamper a school system from working as a coherent, unified system.

School districts, like the U.S. intelligence system, can also benefit from systemic transformational change. But, systemic transformational change



in education requires educators in school systems to break free of their controlling mind-set or paradigm for educating students so they can create and sustain a substantially different paradigm for delivering education services to students.

The controlling paradigm for most of America's school systems is based on an old Industrial-Age approach to teaching children; that is, sort them into grades and classes, provide group instruction, and then move the groups of students through a sequential instructional program often ranging in length from pre-Kindergarten through 12th grade. Within this time-based and sorting-focused system students are required to move on to the next topic based on the calendar, regardless of whether they have learned it or not. This creates learning deficits that make it even more difficult for the students to learn future material and it makes it challenging for some students to satisfy state standards for their learning.

The design of the Industrial-Age instructional paradigm leaves children behind. We will never succeed at "leaving no child behind" until we change the paradigm to one in which the students only move on to the next topic when they have mastered the present one, and when they are allowed to move on to the next topic as soon as they have mastered the present one. This competing paradigm is well-suited to our society's emerging Information-Age but it is rarely found in public

school districts in the United States. Even though rarely found in public school systems, it has been advocated since the early 1900s by progressive education reformers (see Elmore, 2004). This alternative paradigm goes by the name "learner-centered education." Shifting an entire school system from the Industrial-Age paradigm to the Information-Age paradigm for educating students is an example of systemic transformational change.

THREE PATHS TO SYSTEMIC TRANSFORMATIONAL CHANGE

Earlier, three change paths that must be followed simultaneously to create and sustain systemic transformational change were identified. In this section, additional details about those three paths are offered.

Over the past 50 years a lot has been learned about how to improve entire systems (e.g., Ackoff, 1981; Banathy, 1996; King & Frick, 1999; Pasmore, 1988; Pava, 1983a, 1983b; Reigeluth, 1994). One of the core principles of whole-system transformation that emerges from this literature is that three sets of key organizational variables must be improved simultaneously (e.g., see Ackoff, 2001; Duffy, 2003; Duffy, Rogerson & Blick, 2000; Pasmore, 1988). I characterize these three sets of variables as change paths. Each of these change paths is explored briefly below.

Path 1: Improve a District's Relationship with Its External Environment

A school district is an open system. An open system is one that interacts with its environment by exchanging a valued product or service in return for needed resources. If change leaders want their district to become a high performing school system they need to have a positive and supporting relationship with stakeholders in their district's external environment. But they cannot wait until they transform their district to start working on these relationships. They need positive and supporting relationships shortly before they begin making important changes within their district. So, they have to improve their district's relationships with key external stakeholders as they prepare their school system to begin its transformation journey.

Path 2: Improve a District's Core and Supporting Work Processes

Core work is the most important work of any organization. In school districts, the core work is a sequenced instructional program (e.g., often a preK-12th grade instructional program) conjoined with classroom teaching and learning (Duffy, 2002; Duffy, 2003).

Core work is maintained and enriched by supporting work. In school districts, supporting work roles include instructional technologists, administrators, supervisors, education specialists, librarians, cafeteria workers, janitors, bus driv-



ers, and others. Supporting work is important to the success of a school district, but it is not the most important work. Classroom teaching and learning is the most important work and it must be elevated to that status if a school system wants to increase its overall effectiveness. Further, many believe that teaching and learning must shift from traditional classroom teaching to “learner-centered education” which could include some of the following characteristics:

- Personalized, self-directed learning
- Project and problem-based activities
- Flexible blocks of study and activity times
- Multi-disciplinary curricula with team teaching
- Teachers as mentors and facilitators
- Technologies used as essential resources for teaching and learning
- Performance-based assessment of student learning with mastery as the goal

Changes in classroom teaching and learning as suggested above require systematic planning for curriculum development, teaching and learning methods, and evaluations of student learning, and measuring program success. This component of transformational change is based on attention to the elements of the instructional design process.

When trying to improve a school system, both the core and supporting work processes must be improved. Further, the entire work process (e.g., preK-12th grade) must be examined and improved, not just parts of it (e.g., not just the middle school, not just the language arts curriculum, or not just the high school). One of the reasons the entire work process must be improved is because of a systems improvement principle expressed as “upstream errors flow downstream” (Pasmore, 1988).

The “upstream errors flow downstream” principle reflects the fact that mistakes made early in a work process flow downstream, are compounded, and create more problems later on in the process; for example, consider a comment made by a high school principal when he first heard a description of this principle. He said, “Yes, I understand. And, I see that happening in our district. Our middle school program is being ‘dumbed-down’ and those students are entering our high school program unprepared for our more rigorous curriculum. And, there is nothing we can do about it.” Upstream errors always flow downstream.

Improving student learning as suggested above is the primary goal of improving the core and supporting work processes of a school district. But focusing only on improving student learning is a piecemeal approach to improvement. A teacher’s knowledge and literacy is probably one of

the more important factors influencing student learning (e.g., see Sanders & Rivers, 1996). So, taking steps to improve teacher learning must also be part of any school district’s transformation efforts.

Further, while improving student and teacher learning are two important goals of improving core work in a school district, this is also a piecemeal approach to improving a school district because a school system is a knowledge-creating organization and it is, or should be, a learning organization. Professional knowledge must be created and embedded in a school district’s operational structures and organizational learning must occur if a school district wants to develop and maintain the capacity to provide children with a quality education. So, school system learning (i.e., organizational learning) must also be part of a district’s transformation strategy.

Path 3: Improve a District’s Internal “Social Infrastructure”

Improving core and supporting work processes to improve learning for students, faculty and staff, and the whole school system is an important goal but it is still a piecemeal approach to change. It is possible for a school district to have a fabulous curriculum with extraordinarily effective instructional technology supporting it but still have an internal social “infrastructure” (which includes organization culture, organization design, communication patterns, power and political dynamics, reward systems, and so on) that

is de-motivating, dissatisfying, and demoralizing for teachers. De-motivated, dissatisfied, and demoralized teachers cannot and will not use a fabulous curriculum in remarkable ways. De-motivated, dissatisfied, and demoralized support staff cannot and will not perform their duties in value-added ways. So, in addition to improving how the work of a district is done, transformation efforts must focus simultaneously on improving a district's internal social "infrastructure."

The social infrastructure of a school system needs to be redesigned at the same time the core and supporting work processes are redesigned because it is important to assure that the new social infrastructure and the new work processes complement each other. The best way to assure this complementarity is to make simultaneous improvements to both elements of a school system.

Hopefully, this three-path metaphor makes sense because the principle of simultaneous improvement along the three paths is absolutely essential for effective systemic transformational change (e.g., see Emery, 1977; Pasmore, 1988; Trist, Higgin, Murray, & Pollock, 1963). In the literature on systems improvement this principle is called joint optimization (Cummings & Worley, 2001, p. 353). This systemic transformational approach to educational change, while considerably more difficult than piecemeal change, is possible and is indeed being carried out successfully in all

kinds of organizations, including the Metropolitan School District of Decatur Township, Indiana.² Furthermore, I believe it is the only approach that can create and sustain breakthrough improvements in student learning in the Information-Age.

LEADING TRANSFORMATIONAL CHANGE REQUIRES LIVING WITH PARADOX

Systemic transformational change is a world colored by paradoxical dilemmas. The color of paradox is grey. It is covered in a diaphanous veil that must be lifted by the artful application of change leadership skills to expose, examine, and cope with the paradoxes beneath. As Richard Farson observed in Duffy (2006),

As people make their way up the management ladder, they deal less and less with problems and more and more with what the late philosopher Abraham Kaplan called predicaments—permanent, inescapable, complicated, paradoxical dilemmas. Problems can be solved, but predicaments can only be coped with (p. 180).

Some of the paradoxical dilemmas faced by change leaders are woven into a Gor-

dian Knot by the unavoidable interlacing of the four paradigm shifts shown in [Table 1](#).

Leading systemic transformational change is an exercise in solving paradoxical dilemmas and tolerating ambiguity. This kind of leadership demands change leaders who are masters of the art and science of transforming school systems. Mastering the art and science of transformation requires mastery of three sets of competencies:

- **Mastering Awareness:** becoming skillful in collecting, analyzing, interpreting and reporting need data (which push people toward change) and opportunity data (which draw people toward change).
- **Mastering Intention:** becoming skillful in creating and communicating a compelling and emotionally powerful vision of a desirable future for a school system.
- **Mastering Methodology:** becoming skillful in using a methodology especially designed to create and sustain systemic transformational change and the tools that are part of that methodology.

Another element of change leaders' efforts to transform themselves into masters of the art and science of transforming school systems is to develop and use a complex, but absolutely essential set of seven communication strategies (Nevis, Lancourt, & Vassallo, 1996). These are:

² You may visit their website at http://www.indiana.edu/~syschang/decatur/the_change_effort.html The change effort is being facilitated by Dr. Charles Reigeluth of Indiana University.

Table 1:
Four Required Paradigm Shifts and the Paradoxes Associated With Them

	While Industrial-Age approaches to school improvement..	Information-Age approaches to school improvement require..
		
Paradigm Shift 1 —focuses on Path 1: improve relationships with the external environment	...take a reactive stance in response to the external environment.	...a proactive response to the environment.
Paradigm Shift 2 —focuses on Path 2: improve core and supporting work processes.	...are within the Industrial-Age paradigm of schooling and, they frequently ignore the improvement of supporting work processes.	...teaching and learning to be guided by the needs of an Information-Age paradigm of instruction; and, require improvements to all supporting work processes.
Paradigm Shift 3 —focuses on Path 3: improve internal social infrastructure.	...rely on a command and control organization design to manage change.	...a participatory organization design that engages key stakeholders in the transformation process.
Paradigm Shift 4: focuses on learning and applying principles of systemic transformational change.	...are driven by piecemeal approaches to change that do not create substantial system-wide improvements and they unintentionally maintain the status quo.	...the use of a systemic transformational change approach that moves an entire school district along three change paths to create unparalleled opportunities to improve student, faculty and staff, and whole-system learning that are substantially different than what is currently being done in the system.

1. **Persuasive communication:** Enabling people to envision a different future
2. **Participation:** Creating a shared reality through joint endeavor
3. **Expectancy:** using the power of self-fulfilling prophecy
4. **Role modeling:** Showing how it's done
5. **Structural rearrangement:** Shaping the work environment
6. **Extrinsic rewards:** Reinforcing transformative behaviors
7. **Coercion:** Using it legitimately

Mastering the art and science of transforming school systems also requires knowledge of and skill in applying eight principles that influence the success (or failure) of transformational change. These were identified by Kotter (1996). As listed in [Table 2](#), each factor contributes to the success of transformational change. The opposite of each factor contributes to the failure of transformational change.

CONCLUSION

Despite the paucity of real-life examples of systemic transformational change, it is being strongly advocated (e.g., see Burney, 2004; Houlihan & Houlihan, 2005; Simmons, 2006; Wright, 2004; the report by the *New Commission on the Skills of the American Workforce* titled "Tough Choices or Tough Times"; the *Educational Commission of the States'* report, "Bending without Breaking"; or the U.S. Department of Education's report, "Prisoners of Time").

Another example of advocacy for systemic transformational change is found in a new initiative launched by the Association for Educational Communications and Technology (AECT) called **FutureMinds: Transforming American School Systems**. The FutureMinds initiative has an inspiring and far-reaching change agenda. It aims to train teams of professionals in selected state departments of education to lead the creation and sustainment of transformational change in local school systems in their states. The ultimate goal of this transformational change initiative is to help school systems create and sustain transformational change along the three change paths described earlier and that

will result in the four paradigm shifts that were described earlier as,

- **Paradigm Shift 1:** shift from a reactive stance in response to the environment to a proactive stance.
- **Paradigm Shift 2:** shift from the Industrial-Age paradigm of schooling to an Information-Age paradigm; and, include the supporting work processes in a school system within this shift.
- **Paradigm Shift 3:** shift from a command and control organization design to a participatory organization design.
- **Paradigm Shift 4:** shift from a piecemeal approach to change to a systemic transformational change approach.

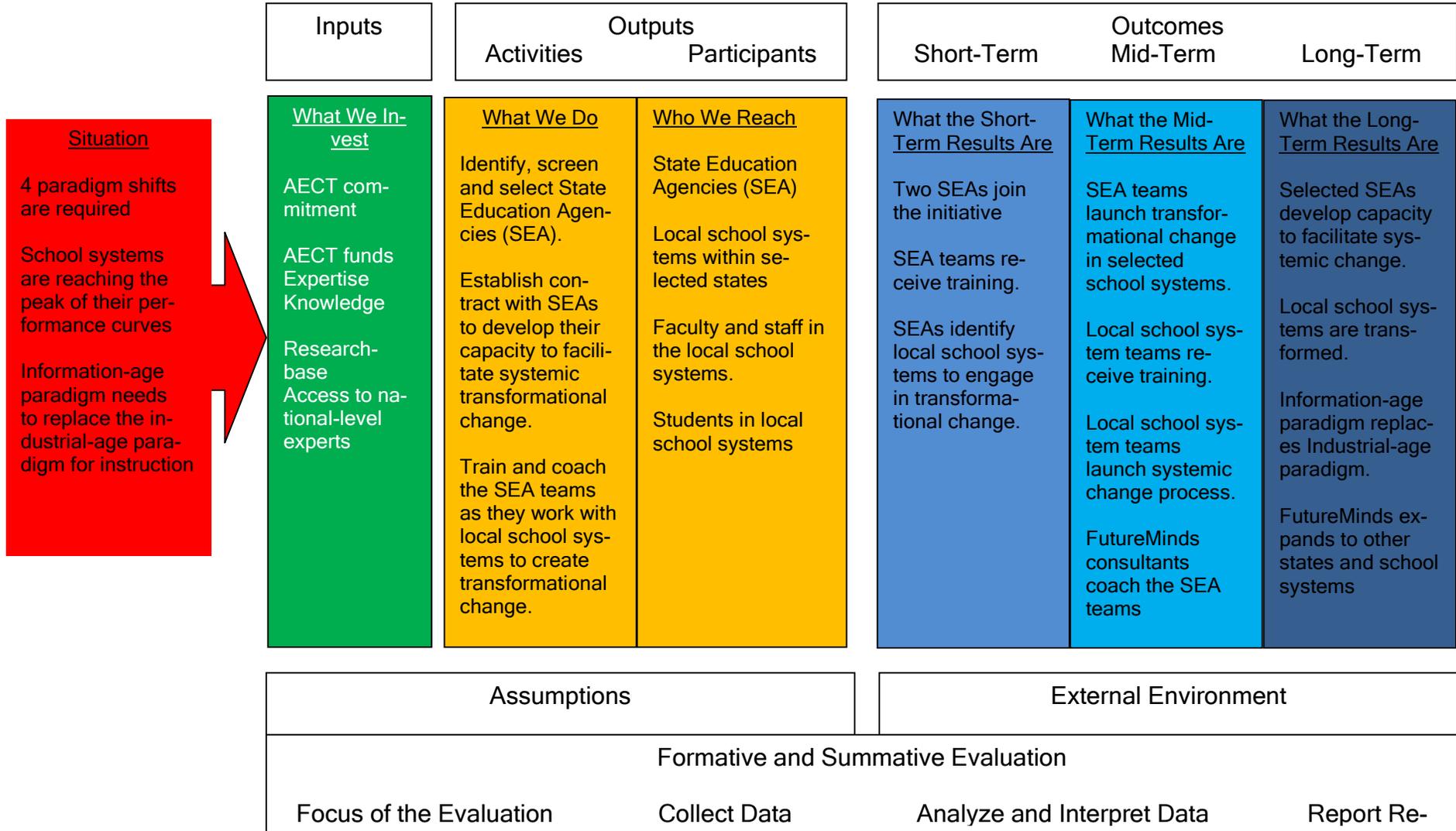
The logic model for the **FutureMinds** initiative is shown in [Figure 1](#). In that model, you will see some of the elements of the situation that led to the design of the initiative, some of the key outputs (activities and participants), and key outcomes (short-term, mid-term, and long-term results).

Finally, there is much evidence of a strong interest in the systemic transformational approach to improve

<p>Table 2: John Kotter’s Eight Factors Affecting the Success or Failure of Transformational Change</p>	
<p>Doing these things increases the probability of creating successful transformation</p>	<p>Doing these things decreases the probability of creating successful transformation</p>
<p>Develop a sense of urgency</p>	<p>Failure to develop a sense of urgency; as in, “Let’s take things slowly.”</p>
<p>Establish a guiding coalition</p>	<p>Failure to establish a guiding coalition; as in, “We can do this without help.”</p>
<p>Develop vision and strategy</p>	<p>Failure to develop vision and strategy; as in, “We don’t need a new vision—our old one is just fine.”</p>
<p>Communicate the vision</p>	<p>Failure to communicate the vision; as in, “Why do we have to talk about this, everyone knows what it is.”</p>
<p>Empower a broad base of people to take action</p>	<p>Failure to empower a broad base of people to take action; as in, “We don’t need those people to help us. All they’ll do is slow us down.”</p>
<p>Generate short term wins</p>	<p>Failure to generate short term wins; as in, “Let’s not worry about early success—let’s keep our eye on the long-term goal.”</p>
<p>Consolidate gains and produce more change</p>	<p>Failure to consolidate gains and produce more change; as in, “Wow, we did good. We don’t need to do any more and we don’t need to toot our own horns.”</p>
<p>Institutionalize new approaches in the culture</p>	<p>Failure to institutionalize new approaches in the culture; as in, “Well, we made all these changes. Now we can sit back and relax and not worry about making sure they are working properly.”</p>

Logic Model for the FutureMinds Initiative

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entire school systems. This interest is validated by people such as Joe Simpson, the Deputy State Superintendent of Education for Wyoming and former Deputy Director of the Council of Chief State School Officers who commented on his department's interest in systemic transformational change and then identified several other state departments of education that he thought were also interested in that approach to improving school systems. Many people, like Joe Simpson does, recognize that America's school systems need to be transformed—not tweaked, not improved one building or one program at a time—to become something fundamentally different than what they are today. **The caterpillar needs to transform into a butterfly; not have wings strapped to its chrysalis.**

REFERENCES

- Ackoff, R. L. (1981). *Creating the corporate future*. New York: John Wiley & Sons.
- Ackoff, R. L. (2001). A brief guide to interactive planning and idealized design. Retrieved on March 19, 2006 at <http://www.sociate.com/texts/ackoffGuidetoldealizedRedesign.pdf>.
- Banathy, B. H. (1996). *Designing social systems in a changing world*. New York: Plenum Press.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531.
- Bronfenbrenner, U. 1979. *The ecology of human development*. Cambridge, Mass. Harvard University Press.
- Burney, D. (2004, March). Craft knowledge: The road to transforming schools. *Phi Delta Kappan*, 85 (7), 526-531).
- Checkland, P. (1984). *Systems thinking, systems practice*. Chichester Sussex, New York: J. Wiley.
- Cummings, T. G. & Worley, C. G. (2001). *Organization development and change* (7th ed.). Cincinnati: South-Western College Publishing.
- Dooley, K. (2004). Complexity science models of organizational change. In S. Poole and A. Van De Ven (eds.) (pp. 354-373). *Handbook of organizational change and development*. Oxford: Oxford University Press.
- Duffy, F. M. (2002). *Step-Up-To-Excellence: An innovative approach to managing and rewarding performance in school systems*. Lanham, MD: Scarecrow Education.
- Duffy, F. M. (2003). *Courage, passion and vision: A guide to leading systemic school improvement*. Lanham, MD: Scarecrow Education and the American Association of School Administrators.
- Duffy, F. M., Rogerson, L. G., & Blick, C. (2000). *Redesigning America's schools: A systems approach to improvement*. Norwood, MA: Christopher-Gordon Publishers.
- Elmore, R. F. (2004). *School reform from the inside out: Policy, practice, and performance*. Cambridge, MA: Harvard University Press.
- Emery, F. E. (1977). *Two basic organization designs in futures we are in*. Leiden, Netherlands: Martius Nijhoff.
- Emery, M. & Purser, R. E. (1995). *The search conference: A comprehensive guide to theory and practice*. San Francisco: Jossey-Bass.
- Houlihan, G. T. & Houlihan, A. G. (2005). *School performance: How to meet AYP and achieve long-term success*. Rexford, NY: International Center

- for Leadership in Education.
- Kotter, J. P. (1996). *Leading change*. Boston: MA: Harvard Business School Press.
- National Education Commission on Time and Learning. (1994). *Prisoners of time: What we know and what we need to know*. Washington, DC: United States Department of Education.
- Nevis, E. C., Lancourt, J. & Vassallo, H. G. (1996). *Intentional revolutions: A seven point strategy for transforming organizations*. San Francisco: Jossey-Bass.
- New Commission on the Skills of the American Workforce. (2007). *Tough choices, tough times: The report of the new commission on the skills of the American workforce—Executive summary*. Washington, DC: National Center on Education and the Economy.
- Olson, E. E. & Eoyang, G. H. (2001). *Facilitating organization change: Lessons from complexity science*. San Francisco: Pfeiffer.
- Pasmore, W. A. (1988). *Designing effective organizations: The socio-technical systems perspective*. New York: Wiley & Sons.
- Pava, C. H. P. (1983a, spring). Designing managerial and professional work for high performance: A socio-technical approach. *National Productivity Review*, 126-135.
- Pava, C. H. P. (1983b). *Managing new office technology: An organizational strategy*. New York: The New Press.
- Reigeluth, C. (1994). Introduction: The imperative for systemic change. In C. Reigeluth & R. Garfinkle (Eds.), *Systemic change in education* (pp. 3-11). Englewood Cliffs, NJ: Educational Technology Publications.
- Reigeluth, C. M., & Duffy, F. M. (2006). Trends and issues in P-12 educational change. In R.A. Reiser & J.A. Dempsey (Eds.), *Trends and Issues in Instructional Design and Technology* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.
- Sanders, W. & Rivers, J. (1996, November). Research progress report: Cumulative and residual effects of teachers on future student academic achievement: Tennessee value-added assessment system. University of Tennessee Value-Added Research and Assessment Center. Retrieved on July 8, 2007 at http://www.cgp.upenn.edu/pdf/Sanders_Rivers-TVASS_teacher%20effects.pdf
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.
- Simmons, J. (2006). *Breaking through: Transforming urban school districts*. New York: Teachers College Press.
- Smith, M.S., & O'Day, J. (1991). Systemic school reform. In S. H. Fuhrman, & B. Malen (Eds.), (pp. 233-267). *The politics of curriculum and testing*. Politics of Education Association Yearbook, 1990 London: Taylor & Francis.
- Squire, K. D. & Reigeluth, C. M. (2000). The many faces of systemic change. *Educational Horizons*, 78(3), 145-154.
- Supovitz, J. A. (2006). *The case for district-based reform: Leading, building and sustaining school improvement*. Cambridge, MA: Harvard Education Press.
- Trist, E. L., Higgin, G. W., Murray, H., & Pollack, A.B. (1963). *Organizational choice*. London: Tavistock.

Wright, C. E. (2004). Making schools work: Creating service-oriented, performance-driven school systems. Retrieved on February 20, 2007 at [http://www.k12sems.com/images/Making%20Schools%20Work_SEMS%20WP%20\(Mar%202004\).pdf](http://www.k12sems.com/images/Making%20Schools%20Work_SEMS%20WP%20(Mar%202004).pdf).

Zegart, A. (2007, July 8). Our clueless intelligence system. *The Washington Post*, B1, B5.

Thank you for your interest in these Reports.

Francis M. Duffy



In the past, these reports often contained articles written by readers. If you would like to write an article for these reports on a topic related to whole-system change in school districts, please send a copy of it to me as an E-mail attachment to duffy@thefmduffygroup.com.

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