Schools in a Changing World

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Major barriers to successful planning are fear of change, ignorance, uncertainty about the future, and lack of imagination.

—John Maxwell, leadership expert

Men will not believe what does not fit in with their plans or suit their prearrangements.

—Barbara Tuchman, historian

Public schools are our nation's most vital piece of infrastructure—as important as any bridge, road, electrical grid, or subway line to making our economy and our nation work and thrive.

—Randi Weingarten, President
American Federation of Teachers

IN THIS CHAPTER

"No man is an island, entire of itself, every man is a piece of the continent, a part of the main" (Donne, 1623, ¶ 2). John Donne's classic wisdom is intended to help us remember that no one is a self-contained entity. It is also true for organizations: No organization is an island, entire of itself. Every organization is embedded in, and in relationship with, its external environment. For organizations to be healthy in today's world, it is imperative that leaders account for the context in which their organization operates.

In this chapter, we will highlight some of the dynamic changes that are occurring in the larger external environment that will impact your school organization. Our point is not to create a comprehensive, all-inclusive list that you and your organization can use to check off the ones for which

you can account. The purpose in sharing some observations about world trends is to disturb your comfort level, just a bit. The idea is to make you curious about the possibilities that could come from dynamic changes in the world, which could impact the learning of students in your school. We believe that leaders are more likely to create the synergy to foster innovations once they are open to moving into the dissonance that surrounds them, trusting that something new and better is part of the journey that lies ahead of them.

Rather than list the things you need to do to be successful in the future, more important, we hope to instill in you the mind-set that change is an opportunity for reframing and reordering, for being adaptive and becoming in sync with the dynamics of the world where your students will live and work. In fact, being a bit unsettled is the only way to start the process where old ideas are released so that new ones can form. "It is when we 'have to get out of the potholes of life' that we change" (Maxwell, 2003, p. 50). This type of change brings opportunity for enlightenment, learning, responding to challenges, and creating new meaning. The relevance of that meaning is something that develops from deep within you and the unique interactions you have with of the people in your organization.

THE NEED FOR IMPROVEMENT

Education has always been, and always will be, future oriented. Whether Stone Age youth learning to hunt from elders or today's first grader learning to read— from ancient times to today— the purpose of education is to prepare students for the future by teaching the knowledge, skills, and attributes necessary for leading a successful life. The benefit is the betterment of the individual as well as the preservation of society— that is why schools exist. Societies expect a lot from their schools, as they should. "Our community vibrancy, personal quality of life, economic viability, and business competitiveness depend on a well-prepared citizenry and workforce. Public education provides the bedrock from which our nation and individual prosperity rise together" (Partnership for 21st Century Skills, 2002, p. 2).

Providing the bedrock for prosperity was a lot easier for schools when societies reflected universal values, when graduating students settled down and worked in the region, and when the overall pace of change was measured in years, not months or days. Being the bedrock of the nation is a lot tougher when societal norms are shifting, trends have global influence, and technology accelerates change to a constant whir. The pace of advancement today means that the responses to change that schools are dealing with are no longer about large-scale responses phased in and

implemented over years but about continuous adjustment and timely adaptation to shifts in the external environment.

In the early 1990s, Bob worked in a school district that spent a year carefully planning a new technology curriculum. Then, they turned to diligently implementing it, but as Bob humorously recalls, "We had a tough time implementing it because, as we did, this thing called the Internet kept getting in the way." This is just one example of how significant shifts in the external environment that influence the relevance of teaching and learning can, and do, happen at a different speed than a school organization's response speed.

Societal Shifts

Being responsive to societal shifts is not only a concern for the American system of education, but also it is a widespread concern of systems around the world. Economic development has become the common denominator across global societies. Economic growth depends on societies composed of large numbers of well-educated and trained people. So it is natural for people to turn to their education systems for a well-educated workforce. Yet what it means to be well educated and well trained is a moving target, as new technologies influence business and industry before responses can be developed to the previous trend.

China, India, and countries all throughout Asia are experiencing rapid expansions of their economies. In these countries, schools are expected to produce large numbers of highly trained, educated, and motivated workers capable of working in fields that drive economic expansion, such as engineering and science. The educational systems of these countries have been retooled over the last 50 years to feed the needs of societies rising from third-world status to world economic leaders.

In Europe and the United States, schools are expected to produce students with the skills that complement an already highly trained workforce. Business and industry expect workers to enter their organizations without having to be retrained or reeducated with foundational skills. Additionally, schools in these countries were designed with a close link to broad-based societal needs for a well-educated citizenry. One of the difficulties for these systems is that they reached prominence in the Industrial Age and were designed to meet the societal needs of that time.

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The American system of education was developed as a jewel of the Industrial Age. What was required of workers for most of the 1900s is far

different from what is required of workers today. The American system of education was forged on compliance and designed to produce students capable of doing routine work. Then, workers who did what they were told to do were valuable. Today, employers value workers who anticipate needs and make decisions that allow the company to stand out from the crowd while pleasing the customer—people who see new possibilities and act on those for the betterment of the company. The link of societal well-being and schools is inescapable. When things are stable in society, schools are expected to support that stability. And when there are troubles in society, or shifts in norms, schools are relied on to fix things and make adjustments.

Throughout the world, schools are under intense pressure to improve performance and adjust their curriculum in response to shifting demands. Today, societies around the globe are modernizing and transforming—and education is seen as the foundation of progress. It has always been this way, yet today societies are more interconnected and the pace of change is greatly accelerated, putting a great deal of pressure on educational systems to not only keep pace with change but also to lead the way.

The American System of Education

In the United States, school reform with the goal of improving student achievement is a top concern in every school district and in every school building, and for a good reason. As we move into a future where knowledge and its application is the driving force in the world, it is vital that we ensure that all children are well educated. Improving our schools to ensure that all students are successful is an imperative faced by every educator, parent, community member, and civic leader as well as by the students themselves.

For many years, the American system of education was among the best in the world at providing the bedrock for societal prosperity. From varied backgrounds, the American system produced a well-prepared citizenry and a strong workforce. Over the last 50 years, the American citizenry has become more diverse and the expectations of the workforce have changed as society has moved from the Industrial Age through the Information Age and into the Conceptual Age (Pink, 2005). Changes with which the American system of education has struggled to keep pace.

That struggle has created an ongoing national dialogue about the effectiveness of America's schools. The dialogue began in earnest when President Reagan's National Commission on Excellence in Education published its report, *A Nation at Risk* in 1983. Since then, there has been an ever-increasing perception that public schools are failing—failing to educate students and prepare them for success in the world of work.

The shock waves of that report left educators scrambling—to this day—to improve the education system. Responses to the claims of failing schools led to the effective schools movement of the 1980s, the standards-based education reform movement of the 1990s and The No Child Left Behind Act (NCLB) of 2001. A quarter century of reform movements and initiatives have improved the nation's schools to some extent, yet they have not erased the perception that they are not adequately preparing students for the future.

In the United States, every educator feels the pressure of accountability to improve a system whose ability to prepare students for the future has been challenged. The comments of former United States Secretary of Education Margaret Spellings (2008) reflect the world most American educators live in: "Test scores are up. The achievement gap is narrowing. According to the Nation's Report Card, since 2000, more kids are learning reading and math. In math especially, we're making great progress. And the children once left behind are making some of the greatest gains" (Spellings, 2008). Hope for a brighter future rises in educators when they consider data such as this. Yet the former Secretary also points out that while improvements are being made there is still much cause for concern:

> Half the black and Hispanic kids who walk into a school do not walk out with a diploma. . . . Scores on the SAT and ACT are flat. Only 42 percent are really ready for college work. . . . In 1975, America was number one in college completion rates. In 2005, we were number 10. And the world continues to pass us by. (Spellings, lines 35–36, 97–98, 66–68)

As the national debate about the effectiveness of schools rages on, statistics can be generated that support a case for failing schools, and they can also be generated to support a case that the education system is getting better. Numbers aside, the bottom line is that every educator is aware of a pervasive belief that the American system is not meeting the learning needs of many students. There is a sense that too many students are not being adequately educated: thus the 2001 federal legislation to *leave no child behind*. Additionally, even for those who are not left behind, businesses complain that high school and college graduates do not possess the skills and dispositions necessary for success in the workforce. It is no surprise that improvement and accountability dominate our educational agendas.

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ARE OUR SCHOOLS BROKEN?

The underlying mind-set of the national improvement agenda appears that our schools are broken and in need of repair. It is easy to fall into a mind-set that sees it this way. Seeing it as broken and needing to be fixed means that one views the system of education as if it were a machine.

A Mechanistic Mind-Set

As a society that gained prominence in the Industrial Age, it is only natural to think of the systems around us in mechanistic terms. With a mechanistic mind-set, the common approach to fix something is to replace a faulty part to get the system up and running again. In institutions and organizations, this translates into replacing policies and practices with new ones. Often, these changes come from outside legislation or the top of the organization in the form of mandates that define improvement initiatives. The belief is that by setting performance expectations and regulations that hold schools accountable to those expectations, the system of education will be brought back under control. It is widely believed that then—and only then—the system will produce expected outcomes.

Although there are benefits to improvement initiatives derived from this mind-set, there are also downsides. At the top of the downsides list is the way leaders are acculturated to deal with change. The idea is to get back on track as quickly as possible. Leaders are expected to take corrective measures to fix what is broken or not up to standard. Improvement comes from measured performance and feedback that regulates the outputs of the system to achieve effectiveness. To assess effectiveness, it is necessary to measure performance over time. In doing so, improvement tends to become incremental—occurring in measured steps. In this mind-set, the tendency is for people to seek solutions from current understanding and to focus on the present—taking their view away from the future.

Many educational leaders feel an additional pressure. When they consider the world the students are moving into and how rapidly it is changing, they feel pressure not only to improve their systems but also to make them more relevant. They inherently understand that the Industrial Age assets of compliance and conformity are not good matches for the Conceptual Age.

In the Conceptual Age, successful workers will be those who understand and interpret "the connections between diverse and seemingly separate disciplines" (Pink, 2005, p. 130). As Pink says, they must, "become adept at analogy—at seeing one thing in terms of another" (p. 130). In short, these leaders understand that future success means developing different kinds of attributes in students than is currently achieved. This often causes leaders to feel

trapped; they feel pressure to improve this year's test scores and work diligently to do so. Yet they also feel they should be preparing students for the future—to do this they need to expand the view of what and how kids are learning.

A Living System Mind-Set

With a focus narrowly fixed on this year's test performance, it is difficult for leaders to shift their organization's attention to what is occurring on the horizon. The intense pressure of accountability to improvement makes it easy to see why so many leaders stick to addressing immediate concerns and avoid broader attempts to help their systems adjust to the context of a changing future. Doing so involves lifting heads up from the present to consider what the future may bring. Often the future seems too distant to matter, as if it were a mirage on the horizon. To shift focus from the present may take attention away from increasing this year's scores—a risky thing to do for leaders who are intent on analyzing performance and fixing the parts.

As consultants, we find that the leaders we work with are looking for ways to help their systems adapt to changes in the environment, but they just do not know how to break free of the mind-set of incremental improvement. We believe that many educational leaders across the country feel the same—they have a deep desire to lead beyond improving this year's test scores and are looking for new ways of thinking about the leadership needed to get them started. We hope to speak to and nurture these leaders through this book—the ones who feel that improving is not enough, that changing in response to the future is also important.

A quote from Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner (2000) has greatly influenced our work with school leaders, and we offer it here: "Schools are not 'broken' and in need of fixing. They are a social institution under stress that needs to evolve" (p. 51–52). Machines are something we fix, and our improvements make them better. Living systems make adjustments and adapt to the changes around them to survive. So what would it look like if the national agenda for schools could be aimed toward seeing them as living systems, with the challenge to help them advance in response to a changing world, as opposed to fixing them to make them better?

Take a Moment

Is your school district tinkering to make the current learning system better and/or is it seeking to redefine the relevance of learning and making changes based on a richer understanding of future needs? How are discussions about the future handled in your school district?

TRENDS IN THE EXTERNAL ENVIRONMENT

To begin the process of helping school systems respond to a changing world, it is important to raise our heads from the important work of improving performance and look to the horizon. Possibilities there shape the context of educators' work—after all, it is where students are headed. To prepare students, educators need to account for the ideas and concepts that will influence their students' future. One way to do that is to look for trends so that leaders can uncover the patterns of change rather than seeing change as series of isolated events. In the following section, several themes will be discussed that represent trends that must be accounted for if school leaders are to help their systems operate synergistically with their environments to prepare students for future success.

- Access to information and the power of the individual
- Accelerating technological advancement
- The changing nature of work and global competition for jobs

Access to Information and the Power of the Individual

Information and power are closely linked. For centuries, those who had information used it to rule over those who did not. Long ago, only the elite had access to information and knowledge, and they kept it from those in lower classes to stand above them. Gutenberg and his printing press changed that, making information accessible to many who previously did not have it. Information has been moving faster and becoming accessible to more and more people ever since. From the telegraph to telecommunications, sharing information has accelerated change and bettered lives. So powerful is access to information that in the hands of the masses it can become the stuff of revolution. It even changes what revolution looks like. Limiting access to information and using propaganda allowed Soviet bloc countries to control their citizens—that is until technology advanced to the point where political barriers could not hold it back. People began to understand their world beyond propaganda and walls came down—figuratively and literally. Access to information changes the world.

That is where we are at today. Around the globe, information is power and access to that information has shifted who has the power. Because of the World Wide Web, the power belongs to the individual. This shift is so profound that the 2006 Time Magazine Person of the Year was—you (Grossman, 2007)! You—the individual connected with the power of many.

It's a story about community and collaboration on a scale never seen before. It's about the cosmic compendium of knowledge Wikipedia

and the million-channel people's network YouTube and the online metropolis MySpace. It's about the many wresting power from the few and helping one another for nothing and how that will not only change the world, but also change the way the world changes. (Grossman, 2007, p. 40)

A changing global landscape is being driven by access to unlimited information and the ability for the people to form communities of shared purpose where the cumulative effects of small contributions of many individuals can create a huge collective force. The individual is empowered as never before in world history.

The power of the individual represents the tip of the iceberg of other significant, related shifts. For instance, people are not as aligned to institutions as they were in the past. Today, people have a lot more choices in every aspect of their lives. In previous generations, governments and institutions possessed information that individuals did not, and people found comfort in yielding to the authority of an expert.

> Corporations and social institutions that do not respond to the new obligation to release power outward will find themselves rejected in the marketplace and the ballot box. As we move into the 21st century, and technology taps the awesome potential talent of the penumbra of nearly five billion previously disfranchised intelligences on the planet, the Paleolithic concept of single-issue, top-down leadership needs to be redefined. (Burke, 2002, pp. 192–193)

Long gone are the times when patients blindly trusted whatever their doctor told them, or when voters trusted their elected representatives to act altruistically with the people's best interests in mind, or when parents backed what the teacher said instead of defending their child's actions. In each of these examples, access to information was the key component; people trusted those who knew more than they did. The doctor had access to information that the patient did not, the elected officials had information that the average citizen did not, and the teacher had knowledge about teaching and learning that parents did not have.

We are living in a very different age—an age where access to information is in the hands of the individual. Those who have it are empowered to make informed decisions about their lives. Today, many patients will go to the doctor with an idea about what their condition may be. An online search has helped them arrive at an understanding of the possible causes and treatments for their malady.

Open-records laws and the power of the Internet have also empowered citizens. This is a world where the Internet, social networks, blogs, and

YouTube can exert inordinate influence in shaping politics, public opinion, and thinking.

Today, parents of school-age children, as do consumers everywhere, possess a richer sense of their importance than parents of a decade ago. They recognize that whether it be a retail store, bank, hotel, doctor, or school they are being offered a service and their position to that business is important. The consumer is king—and school parents are consumers. The power of the individual is having a profound effect on schools; it drives both the students in them and the parents who send their children there.

Today both students and parents expect, and in fact often require, that the system of education meet their needs. They both have little tolerance for participating in schools that expect them to fit the system. In the past, schools saw students as the ones that needed to adjust to the "way things are done around here." Today, parents show their disapproval of such schools by placing their children in other schools. Students show their disapproval by checking out educationally—just putting in their time. Either way, the individual is exercising control and the educational system loses some of its vitality each time that type of choice is made. This is an age where the power of decisions belongs to the individual, and institutions are expected to adjust to that.

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We are living in an age where technology and learning are inseparably linked. Additionally, students today are used to accessing information very differently than the adults in charge of schools. Prensky (2001) refers to the students who are in our schools today as digital *natives*. The teachers and administrators are digital *immigrants*. Technology is integrated into students' being; it is who they are—it is their language. For the rest of us, as immigrants, we are learning a "language" that we were not born with—it is a secondary way of thinking. The Internet, smartphones, text messaging, instant messaging, MP3 players, and digital images are as much a part of these students' lives as the air they breathe. This is how they communicate and stay connected with their networks of friends. This is how they learn. As digital natives, students today are demanding first-hand information about the world. They are getting it through blogs, wikis, searches, twitters, and direct communication with others around the globe. They are using and creating information through a variety of social networking sites and other vehicles such as YouTube. Students want direct contact with the world; they have little tolerance for sitting in a classroom with low levels of technology and having the world filtered and interpreted for them by a digital immigrant that does not understand how they learn.

TAKE A MOMENT

As you consider your district, what policies or practices are in place about students bringing technology into schools to assist learning? Do the policies see students' personal technology as a threat to learning or as an integral part of learning? Do these policies and practices support learning for digital natives?

Accelerating Technological Advancement

Steve Jobs (2006), cofounder of Apple, believes that "innovation distinguishes between a leader and a follower." Innovation in technology is redefining what it means to lead. As has been true throughout history, technology is the catalyst for the global changes we all experience on a daily basis. We know that the devices we use every day seem to morph into something else right before our eyes. Once we figure out a new technology, we wonder how we ever got along without it because it makes our lives easier. Yet the technology that will shape our future will do far more than make our lives easier. The technology on the horizon will change who we are. As profound as that may sound, perhaps more challenging is that the technology to change who we are will be in use before we collectively are able to determine the ethics of its use.

A tsunami is unnoticeable in the open ocean—a long, low wave whose power becomes clear only when it reaches shore and breaks. Technological revolutions travel with the same stealth. Spotting the wave while it's still crossing the ocean is tricky, which explains why so few of us are aware of the one that's approaching. (Kahn, 2006, p. 100)

The approaching wave that is changing everything is nanotechnology. It will make previous technological advances (even the computer revolution) seem small by comparison. *Nanotechnology is the ability to manipulate matter at the molecular and atomic level.* This ability to engineer molecular systems will affect every aspect of our lives. The first

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wave of nanotechnology influence is on us now and will grow to be an integral part of our being in the decades ahead. Right now, nanotechnology affects the manufacturing of polymers from computer chips to sunscreens

and will soon drive advances in pharmaceuticals, preventive health monitoring, and treatment of diseases.

In the next decade, nanotechnology will involve nanomanufacturing by using nanorobots and nanomachines on the scale of molecules. The result will be a manufacturing revolution.

> Nanotechnology matters because familiar materials begin to develop odd properties when they're nanosize. . . . Not all nanosize materials change properties . . . but the fact that some do is a boon. With them, scientists can engineer a cornucopia of exotic new materials, such as plastic that conducts electricity and coatings that prevent iron from rusting. (Kahn, 2006, p. 100–101)

The downside of nanotechnology is that it is developing far faster than our ability to wrestle with the ethics and implications of its advancing wave. The materials and manufacturing techniques used in nanotechnology are relatively inexpensive. The size of the particles involved means that they can easily pass through skin and tissue. Their toxicity is not known. Overall, there are likely to be environmental, economic, social, and military implications associated with the advancement of nanotechnology (Kahn, 2006). Yet as often happens with accelerated technological advancements, the enormous potential outweighs possible downsides. The potential of nanotechnology is so massive that it will change much about our world and how we live and learn.

The U.S. government understands the importance of getting ahead in nanotechnology. Nearly one and one-half billion dollars was funded for nanotechnology in the 2009 budget (National Nanotechnology Initiative, 2009a) in hopes of positioning businesses and industries to take advantage of a market with exponential possibilities. The scope of nanotechnology's impact is so large that "The worldwide workforce necessary to support the field of nanotechnology is estimated at two million by 2015" (National Nanotechnology Initiative 2009b, ¶ 1).

Driving the development of nanotechnology will be applied mathematics and science. These fields will take on enormous importance in the emerging age of nanotechnology. Additionally, driving the future of this technology will be imagination. The ability to envision what does not yet exist; putting together previously unrelated ideas in new ways will be every bit as important as a strong math and science background. This means that developing students with a strong math and science foundation as well as abilities to think divergently will be very important not only to the individual student but also to the development of a resurgent global economy based in nanotechnology. What are the implications for creating divergent thinkers in a system designed in the Industrial Age when compliance and convergent thinking were valued?

Take a Moment

Technological advancement means that science, math, and imagination are the keys to the future. Are our students ready for that future? The potential impact of these future trends on our lives will be astounding. Every aspect of our lives will be affected—will your school be affected as well?

The Changing Nature of Work and Global Competition for Jobs

Access to information and accelerating technology has also shaped the work people are doing, how the work gets done, and who is doing the work. Thomas Friedman's (2005) bestseller *The World is Flat* documents the interrelationship of forces that have caused the global economic landscape to increasingly become a more level playing field where shift happens at light speed. Friedman outlines a number of separate events that combine to create a dynamic world environment where linked software, digital advancements, powerful networks, and inexpensive fiber-optic cable make ideas, instead of political power, the global economic dynamo. Friedman's work has brought a new awareness to trends around the globe and their potential to dramatically impact the American way of life.

At the heart of this awareness is how the nature of work is changing. The change in work is an outgrowth of events in the 1990s when favorable legislation and financial boom meant telecommunications companies laid hundreds of thousands of miles of glass cable around the globe. A large global fiber-optic network and the sell-off of telecommunications companies as the financial boom ended meant that digitized data could be sent anywhere around the world at very low costs. Friedman also points out that added to this were advances in the development of workflow software that make it possible for people to communicate with one another using very different software packages. All of this means that work in digital form can be sent anywhere in the world. Advances in technology mean that more work can be digitized now and the competition for who does that work has expanded.

Workers from India, China, and other Asian countries are on the rise, as they are reading your CAT scans, preparing your taxes, and doing investment research for your investment firm. This represents a mere scratching of the surface of the highly skilled work that is done at a lower cost than can be done by American workers. Anything that can be digitized can be sent around the world at very low cost via fiber-optic cable. This means that lots of routine work can be done by highly educated workers in foreign countries.

Accelerating the exodus of American work to workers in other countries is the wage difference between foreign and U.S. workers. For example, "Today, Indian engineers make $7,500 a year against $45,000 for an American engineer with the same qualifications. . . .Why would the world's employers pay us more than they have to pay the Indians to do their work" (National Center on Education and the Economy, 2007, p. xvii)? The impact is that our students are not just competing for jobs with their classmates; they are competing with highly educated people from all over the world. Davis and Stephenson (2006) place this dynamic in perspective:

> The increasing integration of global labor markets, however, is opening up vast new talent sources. The 33 million university-educated young professionals in developing countries is more than double the number in developed ones. For many companies and governments, global labor and talent strategies will become as important as global sourcing and manufacturing strategies. (p. 2)

It is important to point out that the vast numbers of university-educated people educated in the world's two largest education systems, India and China, does not mean that their systems compare to the United States system of education in percentages of university-educated people or in overall quality at the present time. Percentages aside, it is the sheer number of well-educated people and their strong desire for education as a means of creating a better life that should demand our attention.

> The high level of competition for entry into the Indian Institutes of Technology, the Indian Institutes of Management, and other top institutions is enough to spur millions of students to achieve at remarkably high levels, particularly in the areas of science and mathematics. (Cheney, Ruzzi, & Muralidharan, 2005, p. 1)

Imagine the potential shifts caused by 33 million highly motivated university-educated young professionals in countries that have not been a part of the 20th century's global economic and political elite. This is particularly significant when you consider that the standard of living in these countries means that individuals can create a good life working for wages well below those of workers in developed countries. Once one also understands that the work these workers can do is easily digitized and inexpensively sent overseas, then he or she can comprehend the advice that Friedman (2005) passes on to his children, "My parents used to say to me, 'Tom, finish your dinner—people in China and India are starving.' My advice to you is: 'Girls, finish your homework—people in China and India are starving for your jobs'" (p. 237).

TAKE A MOMENT

What do you notice about the changing nature of work around you—in your state? In your community? In your family? How ready are your students to move into a world where the raw material for work is ideas and asking questions that were not asked before?

TWO TRENDS: GETTING BETTER AND BECOMING DIFFERENT

These are only several trends of many. At this point, it is not essential to account for all trends in the external environment. Nor is it important to focus on responses to these trends right now. The important thing is to realize that trends change the context of the work educators do to prepare students for the future. A shifting external environment begs questions such as the following: When we consider what this trend means, is what we are doing now still relevant to preparing students for the future?

Preparing for the future is more challenging than ever before because the world is shifting and evolving new concepts at an incredible speed. Improvement is vitally important, but it alone is not sufficient for helping schools maintain relevance with the external environment.

Not only is it that external trends are changing what our students will need to know, do, and be in the future; what is just as important is how these changes are occurring—and how to keep pace with them. When information is available to everyone and not just an elite aspect of a society or organization, potential energy exists. When the potential energy of information meets imagination, new possibilities arise—often suddenly and unpredictably. This formula is present at a time around the world when more and more people have the ability to focus their time and energy beyond mere day-to-day survival—and when these people can be connected to like-minded others anywhere in the world, a cauldron of infinite possibilities emerges.

What happens is that new ideas create change outside of corporate or institutional channels. In the past, change generated in these channels dominated the world's progress. In these channels, change is planned, strategized, and carefully implemented. It is designed to be incremental and predictable. Although these techniques are still beneficial for managing change, organization leaders must understand that a lot of what is driving societies is change occurring through open access to information fed into self-organized networks that are connected on large scales around the world. These are people-to-people connections unfettered by institutions,

governments, or organizations. Change in this realm occurs in adaptive leaps, not incremental steps.

School leaders at all levels are caught in this gap. They are trained to respond to changes through planned strategies and incremental steps. And they are trying to apply these methods in a world driven by networks of people independent of institutions creating potential energy that leads to changes occurring suddenly and unpredictably.

The fundamental premise of this book is that educators face a national, perhaps even global, dilemma. Enormous pressure is placed on educators around the world to improve their systems. The dominant leadership technique is designing incremental improvement—precisely at the time when the world is changing in leaps. This changes the game and challenges schools to become different, not just better. The dilemma is that this type of change requires that leaders understand how to interpret trends and know how to leap—while their systems value incremental improvement. This kind of leadership, the ability to become different, is what we call innovative leadership. It comes from very different thinking than does incremental improvement. It is time that educational leaders looked beyond leading for incremental improvement to creating the conditions for innovative leaps—and that is what this book is committed to help you do.

Redecorating Versus Remodeling

A simple analogy that helps to clarify the difference between improvement and innovation is to think of the difference between redecorating and remodeling. When one redecorates, he or she may change the wall color, put down new carpet, add new furniture, bring in new accessories—but the underlying structure stays the same. When one remodels, things can be very messy for a while because the structure changes before the room can be decorated. The old structure is altered so that something not present before can become part of the home. In redecorating, the elements inside the room structure change; in remodeling, old structures are torn down so that new, better structures can take their place. Improvement is like redecorating; changes are made in the current structure of the system. Innovation is like remodeling; the old structure is altered so that a new one, which better meets the needs of the system, can take its place.

TAKE A MOMENT

What are the curricular and instructional emphases in your schools today? Are they preparing our students for the world they will inherit and need to shape? What, if any, curricular and instructional emphases need to be addressed so our students are capable of leading and prospering?

SUMMARY

Schools have always been future oriented. Their responsibility is to prepare students to lead productive lives through the acquisition of knowledge and by creating the context for how to use that knowledge productively. From the beginning of civilization right up to the present, the well-being of every society depends on the present generation preparing the next generation with the knowledge, skills, attributes, and values necessary to move society forward.

Presently, our global society is one where change is occurring at an ever-accelerating pace. We are faced with the reality that the pace will only be increasing as the future unfolds. The challenge for educators is that these changes are occurring in the environment that is external to schools, yet what happens there affects the relevance of what is taught in schools and how students learn. It is important for educators to look beyond the current capacity of their educational systems and scan the horizon for signs of what the future may bring. Accounting for the challenges of such futures is important new work for school leaders.

In this chapter, we presented several trends that will shape the future of schooling. It was not the intent to create a comprehensive, all-inclusive list for leaders to check off and feel secure that they have the bases covered. The idea is to disturb one's present level of comfort. Our target was to disturb the thought pattern that suggests that the future is an incremental derivative of the past. Many of our current leadership expectations ask leaders to measure present levels of performance and to design interventions to improve performance levels. Our belief is that such methods are good, yet they do not account for the fact that what works today may be irrelevant tomorrow. Being uncomfortable is the beginning of the process that opens individuals and organizations to meaningful change—change that is connected to adapting with the external environment.

Seeing discomfort as an ally is not something leaders have been trained to accept. Most leaders have not been taught how to lead in an environment where uncertainty is a catalyst for building greater organizational capacity. In fact, most have been taught to keep problems to a minimum, avoid confrontation whenever possible, and not air the district's "dirty laundry" for the public to see. Today's world requires leaders to create systems capable of adapting to changes in the external environment. Learning to lead in a dynamic environment has now become a crucial skill for educators. The first step of such leadership relies on opening up to the dynamics of the external environment.

Looking at Your Leadership

In this chapter, we have pointed to trends in the external environment and advocated that for schools to remain vital, their leaders need to create the conditions where their organizations can become different as well as better. To do this will require leaders to rethink some of the practices that form the foundation of their leadership. How ready are you to do so? In this book, our intent is to help you envision new possibilities for leadership so that schools can both get better and become different. On the following page is a quick self-assessment that highlights some of the concepts where shifts in thinking will need to occur. Mark on the line between the concepts where your leadership is now. You may also want to fill in this assessment for how you perceive the leadership of another person you are familiar with, as a means for thinking beyond your own experience to the leadership you observe in your environment. Consider this a snapshot of where you are now. We will revisit this and similar assessments later in the book so that you can watch for shifts in your thinking.
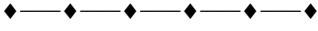

TEAM CONVERSATION STARTERS

Some of you may be reading this book as a team or study group. If so, you may want to create dialogue and discussion around the following questions:

- What sources do we use outside of our own organization to really understand what is driving the economy, politics, and viewpoints of our local community, our state, our nation, and our world? What other sources might we use? If you do not yet look outside your organization to understand these issues, how can you get started?
- What mind-sets, beliefs, needs, and influences are driving the status quo thinking in our organization? Who holds these mind-sets? What would the people in our organization consider innovative? What would really be innovative?
- Who do we need to bring around the table to begin the conversation about what direction our district/school needs to take to bring all of our students to success in the world they will inherit? (Note: It is too early to set up such a meeting now—but it is not too early to envision it.)
- What one question could create divergent thinking at such a meeting?

Self-Assessment

Schools in a Changing World

How do you prefer to create change in your work environment?	Incrementally ◆——◆——◆——◆——◆——◆	In leaps
How do you as a leader react to disturbances to the status quo?	Minimize them ◆——◆——◆——◆——◆——◆	Amplify them
What do you try to provide for your teams as they go about their work?	Structure ◆——◆——◆——◆——◆——◆	Freedom
What kind of instruction do you think will most improve student learning?	Standardized ◆——◆——◆——◆——◆——◆	Customized
What most helps people know what is important in your organization?	Directives ◆——◆——◆——◆——◆——◆	Relationships
How do you prefer information to move through your organization?	Controlled ◆——◆——◆——◆——◆——◆	Free flowing
What type of problem solving do you use when you analyze data?	Convergent ◆——◆——◆——◆——◆——◆	Divergent