Preparing for an Uncertain Future

We can’t predict the future, but we must be ready for it. How is this possible? Ms. Lefkowits and Ms. Miller explain a method that helps policy makers and educators to identify the forces and trends affecting education today and to project how they might conceivably play out in the future.

BY LAURA LEFKOWITS AND KIRSTEN MILLER

In 1898, Charles Duell, commissioner of the U.S. Patents Office, is reported to have said, “Everything that can be invented, has been invented.” In 1943, Thomas Watson, chairman of IBM, predicted that there was a world market for “about five computers.” And in 1977, Ken Olsen, president of Digital Equipment Corp., authoritatively stated that “there is no reason for any individual to have a computer in their home.” These men, all experts in their fields, based their statements on their past experiences and the realities of the time. Had they stopped to consider the myriad of factors that could be expected to affect the pace and scope of change in the future, their predictions would probably have been very different indeed.

But what are the global, demographic, economic, technological, political, and generational trends that will shape the world in which we and our children will live and work a decade or two from now? What are the chances that some combination of these trends will converge in ways that create a future that is fundamentally different from our past experiences and current realities? What might be the effect of these trends on America’s education system? And how should leaders anticipate and prepare their organizations for a future shaped by the potential convergence of these trends?

As policy makers, district and school administrators, and other educators look to the future of education in their states and across the nation, these are just a few of the questions they will need to consider. But simply considering these questions is not enough. Policy makers and educators must also develop action plans that prepare them to respond to likely future scenarios.

A frank evaluation of our current system of schooling readily reveals its weaknesses when faced with the goal of bringing all students to proficiency on challenging standards. As states struggle with implementing the No Child Left Behind (NCLB) Act, questions about the very nature of schooling have emerged. Is the length of the school day adequate? Should public schooling begin at age 3 or younger? For some children or for all? Are our systems for preparing and developing teachers and principals sufficient to provide the numbers of high-quality school professionals we will need? And what is the most essential set of knowledge and skills students will need in order to thrive in the future?

BY LAURA LEFKOWITS AND KIRSTEN MILLER

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We will not be able to know with certainty the answers to any of the preceding questions, but by asking, “What if?” in a disciplined way, we might better imagine the possibilities of tomorrow so that we can take actions today that will position us for success in the future.

Here we provide an overview of McREL’s own application of this exercise and offer information on ways in which policy makers and educators might begin thinking about the future of education in their states as well as nationally. What we present here is based on McREL’s more comprehensive work, *The Future of Schooling: Educating America in 2014*, which is available online at www.mcrel.org.

**McREL’S JOURNEY TOWARD THE FUTURE**

In 2003, McREL rarely considered the implications of an aging American work force and the associated stresses it could place on public and private resources for research and development in education. We had only a limited understanding of the impact of rapid advancements in information and digital technology and of the challenges inherent in the goal of leaving no child behind in our increasingly competitive global economy. Yet one thing was clear: the world was changing rapidly, and the 10 years from 2004 to 2014 just might be unlike any experienced in recent history.

So we began collecting data on work-force and student demographics, the costs of entitlement programs and health care for seniors, emerging technologies and their likely impact on schooling and learning, generational characteristics, economics, globalization, energy consumption, school choice, and the implementation of NCLB. The more data we collected, analyzed, and synthesized, the more apparent it became that we must begin to plan now for an uncertain future.

Thus we embarked on a deliberate journey into the future. McREL’s senior management and program staff engaged in a rigorous process of learning about and archiving key insights about the implications of various trends for government and politics, work and the workplace, home and lifestyles, and schooling and learning. Our board of directors, made up of state and national education, policy, and business leaders, joined our deliberations and critiqued the staff’s work. We developed expertise in the process of writing and using scenarios, and, ultimately, we envisioned not one possible future, but 16 possible futures, written as scenarios for education in the year 2014. Each of these will provide guidance as we chart our organizational course in the years ahead.

**WHAT ARE SCENARIOS?**

Scenarios are stories that take into account key drivers of change and how those drivers might interact with one another to create alternative futures. These stories are not predictions of the future; rather, they are plausible future realities that can guide organizations as they make strategic decisions in the present.

For many years now, business leaders the world over have benefited from engaging in the process of writing scenarios. They use them to develop responses to potential future conditions in order to gain a competitive edge in an uncertain market. Education leaders, we believe, can benefit from this process as well, as they seek to sustain their contribution to helping all students succeed in a changing world.

**EXPLORATION**

Writing scenarios about the future of education requires “re-perceiving” the future and trying to imagine all aspects of the way the world might be, not just those factors that relate specifically to education. Indeed, the political environment, the economy, globalization, technological innovations, and social values will all contribute to the way the future of education unfolds.

Thus at McREL we began our exploration of the future by inviting six nationally known experts from a wide array of disciplines to share with us their knowledge about the key drivers of change and their anticipated impacts on major social institutions. The data gathered from these experts were documented and are continually incorporated into our discussions about what the world might be like 10, 20, or 50 years from now.

- Glen Hiemstra, founder of Futurist.Com, launched our exploration into the future by talking about the potential for radical anti-aging techniques, genetic therapies, nano-
technology, and changes in the nature of work and retirement.

• Chris Dede, chair of Learning and Teaching at the Harvard Graduate School of Education, exposed us to the concept of “ubiquitous learning” made possible by a variety of breakthrough technologies.

• Noted educational demographer Harold Hodgkinson discussed with us his view of the impact of major demographic changes (aging, racial diversity, immigration) on our future lifestyles, workplaces, schools, and other public institutions.

• Neil Howe, historian, economist, demographer, and co-founder of LifeCourse Associates, discussed the characteristics and historical impact of different generations — and the different leadership styles we might expect as baby boomers retire and leave high-level positions to be filled by members of Generation X and the Millennial Generation.

• Jack Jennings, president and CEO of the Center on Education Policy in Washington, D.C., and a former subcommittee staff director and general counsel for the U.S. House of Representatives’ Committee on Education and Labor, provided a glimpse into the future of education policy and the No Child Left Behind Act in particular.

• Finally, we learned from Rodney Johnson, president of the Harry S. Dent Foundation, about the economic impacts of consumer behavior and the “Great Winter” forecast by the foundation.

These speakers provided the inspiration for us to begin a disciplined approach to discovering trends of the future in many different areas. Today, we routinely identify articles in the daily press and in professional journals and categorize them according to what they tell us about how different “drivers of change” are likely to affect our homes, work, government, or schools. This set of data yielded ideas to enrich the scenarios we wrote and enhance their plausibility. As we continue to build our knowledge base, we draw inferences from this information and incorporate those insights into our ongoing strategic planning. In addition, we are constantly reminded of the many ways in which forces that are beyond our control or are easily overlooked may influence the future of education.

CRITICAL UNCERTAINTIES AND PREDETERMINED ELEMENTS

Although uncertainty about the future abounds — from the price of oil to the rise of China as an industrial power — only some uncertainties are critical to consider when developing scenarios focused on a particular issue. For example, a manufacturing company, considering whether to invest capital in Asian markets, is likely to be quite concerned about China’s position in the international economy; a state government faced with rising costs of home heating subsidies for low-income renters may be more immediately concerned about the price of oil.

So although local and state education agencies may be equally concerned about the future of education, the factors that most influence each agency’s planning may be very different. That is, a state agency may be concerned about the future role of the federal government in education, while a school district may be more concerned about the changing nature of its student population and how best to serve a diverse enrollment. Good scenarios depend on the scenario writer’s ability to sort through the myriad forces that drive change and to select the forces most critical to the question at hand.

Not all aspects of the future are equally unpredictable. There are some forces, events, or conditions that we can “predict” will exist with a fair degree of certainty. We define those conditions as “predetermined” and, for the purpose of writing scenarios, assume that they are highly likely to occur. Including these predetermined elements helps to ground the scenarios in reality and increase their plausibility. For example, the demographic data we collected led us to conclude that lengthening lifespans, aging baby boomers, and increasing ethnic diversity are predetermined elements. Because we can reasonably expect these elements
to be present in the future, they should appear in each of our
scenarios. On the other hand, the impact of aging boomers
on the economy and attitudes toward rising immigrant pop-
ulations in our schools are uncertain and may play out in
varying ways across different scenarios.

DEVELOPING THE FRAMEWORK

Identifying critical uncertainties is the “hard work” of
scenario building. Ultimately, to create a scenario frame-
work, scenario builders must narrow their selection to just
two critical uncertainties. These form the x and y axes of
a Cartesian plane and yield four quadrants that represent
four possible scenarios for the future. Figure 1 is an exam-
ple of a scenario-building matrix in which the two areas
of uncertainty are “resources for education” and “govern-
ment influence on education.”

FIGURE 1.
Sample Scenario-Building Matrix

In addition to identifying the two most critical uncer-
tainties, scenario builders must define the end points of
each axis. For example, an important factor influencing the
future of education might be the extent to which resources
(both human and financial) are available for education. Al-
though it is uncertain whether educational resources will
be abundant or scarce, this issue is undoubtedly critical to
the future of schools. And so, for a variety of reasons, in
some scenarios we can imagine a future world in which re-
sources grow; in others, we can imagine a world in which
resources shrink.

For the second axis, we could imagine extremes of gov-
ernment influence on education such as “strong govern-
ment regulation” or “weak government regulation.” Will
government play a bigger role in determining what, where,
when, and how students learn, or not? Will there be more
regulation of education by governmental authorities, or will
the government step back and encourage the free market
to prevail? Clearly, the way in which government controls,
supports, or ignores education will make a difference in
the ways in which the education system functions.

There are a wide range of additional factors that could
be selected and combined with one another to form sce-
nario frameworks. For example:

- Technology development. Will technology advance rap-
  idly, offering a wide array of learning options for students
  and teachers, or will developments in technology slow or
even stagnate? The ends of this axis might be labeled “ac-
celerating” and “stagnating.”

- Social values. The question of what the public will
  value most a decade from now will certainly influence the
  future of schooling. There are many dimensions of social
  values that could have an impact on the future, and iden-
tifying the ends of this axis can be difficult. Some sugges-
tions include conservative/liberal, supportive of public edu-
cation/not supportive, or community-focused/individual-
focused.

- Choice of schools. The extent to which parents or stu-
dents can choose how, where, and when to receive educa-
tion, as well as the amount and variety of choices available
to them, has changed dramatically even within the last de-
cade. But there is significant controversy about this trend,
and various forces work to promote or hinder the notion
of “choice” in public education. Thus possible endpoints
for an axis representing schooling choices are many/few,
public/private, or customized/mass-produced.

- Control of learning. Who decides the curriculum, the
  instructional delivery method, and the time and place of
  learning? Today, we have an institutionally controlled sys-
  tem in which states and local districts determine the stan-
dards and the structures for ensuring that children have an
  opportunity to gain proficiency on them. But in an era of
  mass customization provided by technological advances,
  along with increasing diversity in the student population,
  will such a uniform system continue to prevail, or will there
  be more pressure to individualize and customize learning
to meet the unique needs and talents of students? An axis
  in which “control of learning” ranges from “institutionally
  controlled” to “learner-controlled” is a possible critical un-
certainty.

Once developed, the scenario framework yields four
quadrants, each of which defines a particular world of the
future. In Figure 1, the upper-left quadrant will become a
scenario in which the government has little or no control
over the provision of education, and resources for education
are abundant. Scenario writers must consider how such a
world could have developed. What caused the government
to lose control over education? Did the so-called revolt
against NCLB, begun with a variety of state legislative ac-
tions and lawsuits against the U.S. Department of Educa-

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tion in 2005, result in a wholesale rejection of government involvement in public education? Or did the private sector simply offer more effective or desirable alternatives to the public system, thereby causing a mass exodus of students from the public schools? Similarly, this is a world in which resources for education are abundant. How did that happen? What is the relationship between a reduction in government control and an increase in funding? Where did the money come from? The scenario must answer these and many other questions in order to paint a full picture of the possible world a decade from now.

**IMPLICATIONS AND OPTIONS**

Scenarios are written not only to engage and challenge; they are also intended to provide organizations with strategic guidance for addressing key issues. Considering the implications of each scenario and the options that states, schools, and districts have for responding to each future world is a critical part of the process. Thus, once an organization has created these future worlds, it must reflect on the meaning of these future worlds for itself. For example, a local school district might consider the implications of a world in which parents have access to publicly funded tuition vouchers and a plethora of high-quality, nonpublic choices. How should the district respond to (some would say compete with) such a scenario? What actions could the district take today to be ready to meet the challenges posed by that future? The answers to these and other questions will provide the foundation for a strategic plan focused on preparing the district for the future.

**TAKING THE NEXT STEPS**

How are you preparing yourself and your school district, state agency, or other educational institution for the future? Would scenario planning be a useful strategy for you to use?

The Global Business Network, which has codified the scenario-planning method and teaches it to organizational leaders around the world, recommends that you use it only to address a challenging problem surrounded by a high degree of uncertainty and then only if your organization is open to dialogue, to change, and to considering futures other than the “official future” that has guided the organization in the past. In addition, the organization’s leaders must support and actively participate in the initiative, and adequate resources must be allocated to support the effort over the long term. For organizations prepared to begin this process, McREL is available to help.

But even without developing and writing your own scenarios, there are a number of ways in which you can move your organization into the future in a thoughtful, creative, and deliberate manner. Some ideas include:

- Create your own “drivers-of-change” framework. Identify an archivist and routinely collect information about indicators of change. Then, periodically review the data and discuss implications.
- Create an opportunity for others in your state to brainstorm about drivers of change and discuss critical uncertainties from their point of view.
- Include discussions of critical uncertainties and possible scenarios on the agendas of regularly established gatherings of key stakeholder groups.
- Expand your views by exchanging ideas with “remarkable people” outside of education.

In general, preparing for the future requires the discipline to constantly ask the question, What if? What if the structures that form the foundation of American schools today — such as neighborhood schools governed by local school districts and state education agencies — were to change? What if NCLB and other accountability measures succeeded in bringing all children to proficiency by 2014? What if such efforts failed? What if technological advances in virtual learning made it unnecessary to bring students together in one physical space? What if a terrorist attack on a public school led to a dramatic increase in home schooling? What if the growing elderly population declined to support funding for public schools? What if the system were unable to attract and retain a sufficient supply of highly qualified teachers and administrators?

Throughout history, people have used stories to record the past and to shape the future. In sharing our story, as well as the stories we have written about the future (visit www.mcrel.org and click on “Spotlight”), we hope to challenge, inspire, and motivate educators to prepare for a changing world. Indeed, we believe that if we, as an education community, don’t act now to respond to the anticipated changes, the legacy we leave for future learners will be insufficient to help them meet the future with confidence.

At McREL, we believe that, for the benefit of every student, we must obtain the best possible outcomes from our current education system. Meanwhile, scenario building provides us with a platform for contemplating and preparing for the new systems of schooling to come. We hope the process can do the same for you.

The future will come. Will we be prepared to face it and survive and thrive? Or will we be unprepared and become obsolete and irrelevant? We choose to be prepared, and invite you to join us.