The Rural Education Dilemma

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Public education in America is facing tremendous challenges. Rising expectations that public education has been unable to meet — along with serious difficulty in obtaining sufficient funding levels — are causing growing concern among the thought leaders in education policy in our state and in the country. Public education faces a serious dilemma. It is facing rising expectations that require it to make every child a successful learner. But it's trapped using a model of schooling that was given its basic design in the 19th century.

These challenges are particularly difficult in the rural parts of our state and country where district enrollments — and the funding they generate — are often small and continue to decline. While all districts in our state and nation are experiencing serious pressure to improve, rural districts have the added issues of dealing with shrinking size and the realities of time and distance in serving students across a larger geographic area. These trends seem likely to continue into the future and bring along with them the need to further consolidate many of our smaller school districts.

This is almost certainly true if we insist on staying with our traditional design for school and schooling processes. The good news is that there is now the possibility, perhaps even the inevitability, of developing new school designs and different processes for learning. This paper will discuss the need for these new and different approaches, the hurdles we face in developing and implementing these innovations, what some of these schools might be like and some ideas about a strategy to get from where we are to where we need to be. While this paper is being written about these issues in a rural setting, the need for different designs for school and different schooling processes is not limited to rural schools but is needed across public education in all areas of our country.

I want to say at the outset that while I am going to make some frank statements about public education, I do so with a fondness

and respect for the public education enterprise. I started my working career as a science teacher in Wadena, MN, a small rural community. I was also a state-level union leader during my teaching years. I represented many small school districts during my six years in the Minnesota House of Representatives. During four of those years I was chairman of the Education Finance Committee, the committee that writes the funding legislation for all of the districts in the state. I also had the opportunity to serve as deputy commissioner for K-12 education for Minnesota. And I finished my formal career as Dean of the Graduate School of Education at Hamline University, overseeing the continuing development of many of our current teachers.

U.S. lacks serious program for K-12 innovation

While I have a lot of respect for public education and its contribution to our society, I do think we need to be honest about the learning challenges we face today and the need to make major changes in order to meet these challenges. The kinds of schools and schooling processes that served our country so well through most of the 20th century will not meet our new and escalating learning needs of the 21st century.

Our country lacks a serious program of innovation, of research and development, for its system of public education. The dominant notion today in our education policy is to simply carry forward the traditional and conventional notions of education, of performance and progress and of school design and schooling — making these if possible "more rigorous."

We know that our learning needs are escalating in this new century, but our current policies assume that we can get the learning we need from the schools we have. This "one bet" approach to achieving the much-needed improvements in public education is a serious risk. It is an unnecessary risk now that other approaches to learning are possible. There is no question that we need to continue to improve our current schools in every way feasible. But this country needs an expanded effort to create new and different schools — schools that are different in fundamental ways from the schools we used in the 20th century.

Challenges in fundamentally changing school/ing

It is important to point out that we have radically changed our expectations for our public education system in the past 15 years or so. Sometime in the early 1990s we started insisting that our schools help every student to become a successful learner. A lot of people are surprised to learn that we had never expected our public education system to do this before.

Paul Houston, the head of the national organization of school superintendents explains this change quite well. Paul says that through most of the 20th century the expectation of public education was to provide universal access to quality education. Many of the initiatives of the last century were to expand this access. In the early years of the century, high school opportunities were greatly expanded.

Then education was made mandatory up through age 15 in most states. In the last quarter of the century special education services for our children with handicapping conditions were required. Then in the last decade of the century we switched the expectation from universal access to universal achievement. The public generally doesn't understand how radical a change this is for public education. It is largely this change that has led to our reform efforts of the past decades.

Almost every serious educator agrees with these new and escalated expectations for learning. But it is important to recognize that the system has never done what is now being asked of it. The current system was in fact not designed with these expectations in mind. It is also important to point out that the system has never come close to realizing this new level of performance.

It is probably fair to say that the system today serves only about 60% of our students reasonably well. In other words, about 40% of the students are not successful learners in the current schools of America. Approximately 30% percent of our students never complete high school and there is a sizable number that stay in school but are clearly not successful learners. This percentage varies from district to district and from state to state, and the specific percentage is not the point, but it is obvious that huge numbers of our students do not do very well with our current approaches to schooling.

We have been making a massive effort to improve our schools over at least the last 25 years and almost nobody is satisfied with the progress we have made. Almost all of this effort has been directed at trying to improve the schools we have on the assumption that we can get the kind of learning we now need by improving the schools we have.

Considering our record over this past quarter century of reform effort, we now need to accept that we have not just a performance problem but also a design problem. We need now to undertake a major effort at creating many schools that are different in fundamental ways from the schools we used during the 20th century.

A second reason for improving our schools has recently been in the news and educational policy discussions. This new set of issues

has to do with the growing concerns about America's ability to compete in the increasingly global economy. Much of this concern is directed at the so-called STEM areas — science-technology-engineering & mathematics.

With other countries that are much larger than ours — mainly India & China — now making major strides in developing graduates that have degrees in these areas, there is growing concern about how we attract larger numbers of our students to these fields and also how we increase the creativity of those who do graduate in these fields.

While the 40% problem focuses us on how to help those who have never done well in our schools, this set of concerns points us to the other end of the learner spectrum and raises concerns about what we do to sustain our traditional leadership position as a major innovator of new technology products and services in the global economy.

Third, there seems to be good reason to question whether the traditional model of school and schooling will be sustainable economically. We need to be realistic about current trends. While there is very little formal research about this issue, we do know that labor-intensive organizations have inherent inflation rates that run significantly above our usual measure of inflation, the Consumer Price Index. This creates spending patterns that are difficult for our elected officials to fund. Those closest to the operating system are conscious of the difficulty of raising revenues enough to maintain the existing program.

Given the demographic trends in our country and their projected economic impact, the risk is that programs will be reduced while at the same time taxes rise, so that both educators and policymakers will be caught in an unending annual cycle of doing less for more. It is unclear whether even strenuous efforts to secure "adequate" financing can keep up.

We need to ask ourselves whether a continuing reduction in program levels is tolerable and whether even the present rate of revenue increase can be sustained. And we need to ask whether, even if additional revenues could be found, whether they would be applied in ways that improve the effectiveness of what teachers and students do together.

Though ways do exist to arrange the learning exercise to use resources more productively — and which we could introduce into the improvement strategy if we wished — there is currently no serious productivity agenda visible for K-12 — and almost no serious discussion about its absence.

This issue of sustainability is, of course, even more challenging in our

rural areas where we continue to see widespread decreases in enrollment. It is because of all of these reasons and more that we need a serious effort in this country to create new and different approaches to schooling. But first we need to understand the realities we face in this effort to change our approach to schooling.

Old notions of schooling suppress innovation

Despite this need to think and act differently, new forms of school and schooling find themselves blocked at almost every turn. Partly this is simple resistance to change, reinforced by the influence of the interests invested in the status quo. But very largely it is because of the power of the old notions.

It is important to understand that this resistance to changing schooling comes not just from those involved in our public education system. It involves most of us in the broader society. We can all support the need to make our schools better but we want that to happen without making our schools different. All of us have experienced school and we carry in our heads a picture of what school is.

In this picture, school is a place. And it's not a separate, autonomous organization making its own decisions, but part of a larger organization. Decisions are made outside the school, for it. Teachers are employees of that larger organization. In the school, teachers have neither the authority nor the responsibility for the learning. The school is run by a principal who is both its administrator and its professional (instructional) leader. The teachers work for the principal.

In high school, knowledge is divided into subjects, subjects are organized into courses and courses are organized as classes. In a class there will be perhaps 20 to 30 students all moving through the material at the same pace, with students moving from teacher to teacher from hour to hour, a teacher seeing perhaps 150 students a day. "Batch processing." In metropolitan areas the schools can have from 1,000 to 5,000 students, in three or four grades, defined mainly by age.

Learning is seen as something that adults do to young people. It is quite common to hear people talk about schools "delivering education." Adults decide what students should know. The idea is to cover the material of the subject. Mostly teachers talk and students listen — or at least they're supposed to listen. The idea is to impart knowledge. And, of course, we assume that tests will measure how well students retain knowledge — at least long enough to do well on the tests. Both school and student success is defined as producing

high scores on tests.

There is great resistance to changing this traditional model of schooling. The old notions have a powerful hold on the public and on the media, as well as on the formal organization of districts and schools. The public carries in its head a picture of school as a classroom with kids in seats, a teacher in front talking or writing on the board. (Look at the way most articles and book-covers about school are still illustrated!) The effort is to make this model better without it becoming different. People become uncomfortable when they do not see "real school."

Finally, there is the power of nostalgia, the romantic affection for the schools we all remember. Most of those most influential in the education policy discussion are people who themselves did well in conventional school. Our children also probably did well using this model. And most of the people we know did well.

So, we are bound to feel that traditional school must be OK. If it doesn't work for some kids perhaps there is something wrong with them. So even those concerned about or critical of contemporary high school have difficulty imagining an alternative. Some of those most emphatic about high school being "obsolete" propose simply that it become "harder."

All this deference to the traditional model suppresses the effort to do school and schooling differently. New schools are judged by the standards of the old. Is this "real school"? Do the students cover the material? Are the teachers trained in their subjects? Do the children spend the required time in their seats? How high are the scores on tests? By these standards it is difficult to support the creation of new schools that depart from the givens of "real school," that are innovative, that think in terms of learning and of individual students.

The new and different models, in other words, might accomplish something new and different. But they are likely to be judged by the old standard. Some new schools might be making better progress with student learning. But "progress" is not the measure. The measure is the pass-rate, the test-scores in absolute terms.

Old notions also dominate the discussion about how change and improvement occur. The conventional notion is that because only "improvement" is required, the country can get the better schools it needs by changing the schools it has. The assumption is that the problems of the future can be addressed with the organizations and the processes of the past, only done better.

Recent research in our private sector shows that fundamental change, the kind of change we think is necessary, usually comes

from new organizations. But there is great resistance in our society to creating new and different schools that compete with our traditional schools for students and resources. The conventional prescription is to increase "professional development" for teachers, to develop better principals and to give them greater authority, for the state to provide "adequate" financing, and to insist that schools do "what works."

A disinterest in innovation is visible even in some of those involved with "school reform." Chartering was not a school-level innovation. It was an innovation at the system level, opening the way for groups of teachers and parents to start and operate new public schools.

Part of the intent for this system innovation was to encourage the creation of different models of school and schooling. But many, perhaps even most of the new schools created in this new sector are fairly conventional schools. Some intelligent and influential people like the ability to run schools outside the district structures but have no interest whatever in fundamentally changing what goes on inside the schools. Others, intimidated by the prevailing orthodoxy, are trying hard to make sure all chartered schools are "quality" by the standards of conventional schools.

Conventional thinking — again, even in the reform community — dismisses the importance of operators trying new approaches. Even when single cases of significant innovation appear, they are little noticed: Researchers, looking for trends and aggregates, are not impressed by particular variations even though these might represent the breakthrough we are looking for and need.

This is a serious shortcoming of our current approach to research. After the Wright brothers' successful flight our current approach to research would still have reported that the preponderance of evidence shows that most heavier-than-air craft cannot fly.

Compelling Realities Demand New Models

Several of today's realities converge to require and to enable new and very different models of school and schooling.

One: Learning and teaching are voluntary acts. We cannot force young people to learn well. Schooling will need to be rebuilt to motivate students, understanding that motivation is individual.

Nor can we make adults teach well: To command states to have only highly-qualified teachers will not cause such teachers to appear in the schools where they are needed. Everything we

do with financing and management and accountability will go for naught unless the teachers and the students are interested in and are committed to learning.

It is critical in any enterprise to motivate the workers on the job. In education the key workers are the students and the teachers. We should arrange schooling to elicit what Daniel Yankelovich calls "discretionary effort", that extra effort that workers can always make and would make if they were highly motivated to do so.

At the moment high school is arranged almost to suppress motivation. The rigidity of courses and classes blocks students from pursuing their individual interests and also from varying their pace of learning. The assignment of "professional issues" to management largely removes any sense of professional control, which discourages teachers' initiative and often impedes those teachers who do try something new and different.

This has consequences. We cannot take it for granted that we will have an adequate supply of quality teachers. Something in the current arrangement clearly makes teaching unattractive for far too many good people. Even some of the better-performing states lose half their new teachers in the first five years, and there are particular shortages in areas like math and science.

We also can't assume that, under present arrangements, students will be sufficiently motivated to learn. Lectures about the importance of studying hard are lost on many adolescents, who have almost no influence on the conditions under which they are asked to work harder and learn at higher levels.

Two: The information technologies have and still are transforming almost every aspect of our lives. These technologies radically changed rural life during the past 60 years. The telephone, radio, television and now the Internet have all leveled the distinctions between growing up in a rural setting compared to more urban settings.

As a youngster growing up on a dairy farm in Wadena County, I had almost no contact with the "outside" world except through the newspapers, an occasional movie and a local radio station that was available only when we had a battery for the radio. Communication with the "outside" world was very limited. My children and especially my grandchildren find it almost impossible to believe that my family heard about the end of WWII through word of mouth. Later, as a young science teacher in Wadena, I would turn off the lights in my classroom and try to simulate an eclipse of the moon using a basketball, a volleyball and a softball along with a strong

light to cast a shadow similar to an eclipse.

Today, information technologies continue to transform nearly every aspect of our lives. And, while our good teachers find ways to use many new products and services in their classrooms, these technologies have had relatively little impact on school design and our learning processes. It is astonishing that our society has allowed this to occur.

The potential for personalizing the learning processes using recent developments in digital electronics (and by the skills of young people with this technology) makes it possible to generate a model of school more likely to produce the motivation on which excellence depends. For a sense of the rate of change that is occurring in these technologies, consider this from the 2007 report of the Information Technology & Innovation Foundation:

- The computing power of a chip has doubled every 18 months for 40 years. Moore's Law continues to hold.
- The price of processing power has fallen steadily: $480 per MIP (million instructions per second) for the Intel 086 in 1978; $50 per MIP for the Intel 386 in 1985; $4 per MIP for the Pentium Pro in 1995; $2 per MIP for the Itanium 2 in 2003.
- The real price of servers fell about 30% *per year* between 1996 and 2001.
- Hard-drive storage capacity has doubled every 19 months and the cost of a stored megabyte of data has fallen 50% *per year*. So the cost of storing one megabyte of information fell dramatically. It was $5,257 in 1975, 17 cents in 1999, half a cent in 2002 and 1/10th of a cent in 2007.
- There are today about 100 million websites, all adding content and becoming more user-friendly all the time.

Traditional schooling was designed for an era in which students could not access information directly and had to be taught by adults who knew what the students did not. This era is ending. The new technologies imply a shift from the old paradigm of schooling as teachers instructing to a new paradigm of students learning, assisted by teachers.

We should expect these technologies to have implications and applications for schooling as profound as they have had for other areas of modern life, private and public. That's why it is astonishing that in the K-12 institution, and in our policy discussion about improvement, there is so little thinking about the potential of these technologies, so little interest in uses beyond supporting

administration and replacing the textbook, and so little inclination to see as an asset the capacity of young people with these technologies.

It's inevitable that these technologies will greatly change the way schooling is conducted in terms of the learning program. But they also make different kinds of school governance possible and probably necessary.

Three: As discussed earlier, the risk is real that the traditional model of school and schooling will not be sustainable economically. Those working every day in the existing system are conscious how hard it is to raise revenues even to maintain the existing program. Education depends on appropriations and on tax increases voted politically. As our population ages, public education will have to compete for resources against public programs financed as entitlements and against private programs that simply send their bill to the American economy for payment.

Four: The chartering laws in many states, including Minnesota, open the opportunity for more people to participate in the innovative process we envision. When systemic reform was first started in the early 1990s there was no thought that a new-schools sector might be available. So the strategy continued as an effort to improve existing schools.

But now the states' chartering laws provide a "new organizational space" open to innovation. Forty states have some kind of "open" sector. Most of these are gradually, steadily, improving. Some very interesting and potentially significant models are emerging in this "open" sector.

How Might School and Schooling Be Different?

The need and the potential for innovation will cause people to ask about the nature of the "different" possible models of school and schooling. We cannot know in advance what different models of school and schooling will appear as educators and others begin to innovate. We do know we will be talking about more than incremental changes in the traditional model.

We can sense the potential by contrasting the new paradigm with the old.

Some important innovations have appeared in the chartered-schools sector of public education even in the short time since these laws were enacted and despite the resistance to nontraditional models. There are innovations both in the organization of school and in the process of schooling.

The Past	The Future
Transform existing schools	Create new schools
Larger schools	Smaller schools
"Delivering education"	Students learning
Read books; listen to talk	Explore the Web
Time-bound/place-bound	Any time/any place
Technology as textbook	Technology for research
Groups, classes	Individualized
Time is fixed	Time is variable
Standardization	Customization
Cover material	Understand key ideas
Who and What	Why and How
Know things	Apply knowledge
Rigor	Relevance
Multiple-choice tests	Written/oral demonstrations
Testing for accountability	Testing for diagnosis
"Make 'em"	"Motivate 'em"
Instructors	Learning Advisers
Teachers serve administrators	Administrators serve teachers
Administrative management	Professional partnership
Adult interests dominate	Student interests dominate

Perhaps most conspicuous is a reduction in the size of school, especially high school. We now see economically and educationally successful secondary schools that operate at very small scale — between 120 and 180 students in grades 9-12 or even 7-12. Several such secondary schools operate in our state where the students do almost all of their learning around the projects they undertake. Project-based learning radically changes what both teachers and students do and also has major impact on the economics of these schools.

There is also the online or "virtual" school, a model now growing rapidly. And other innovations are less well known, partly because research has tended to ignore individual cases, preferring to generalize about aggregates and trends. But we can now see some of the elements that are beginning to change in several important ways:

- *Time* — A school does not have to be a place where kids come on a fixed schedule. Innovative schools are already testing flexible schedules.

- *Scope* — Some new schools are breaking the "K to 12" framework. We see some that bridge "age 3 to grade 3" with a continuous, coherent literacy program. And we see high school students now overlapping their junior and senior years with the first two years of college. Both of these developments need to be expanded.

- *Place* — School does not have to be a fixed place. There are interesting combinations of learning in school, at home, online and on projects out in the community. Some schooling might be work-based, with students earning both real money and real academic credit for what they do and what they learn.

- *Courses and classes* — Schooling can offer an alternative to studying subjects. Students might study civics and physics and art as integrated aspects of a real-life project rather than as separated, abstract disciplines. In some innovative schools the object might be to convey a dozen or so essential ideas of a field rather than to "cover the material" embodied in a full course in the traditional way.

- *Achievement and assessment* — Innovative schooling will likely challenge the old notion of success as the recall of factual material. The assumption today is that the economy needs, and business wants, traditional schooling made more rigorous. But this might not be so. It might be important to have also the schooling contemplated initially by systemic reform, that wanted young people to analyze problems critically, to think creatively, to communicate effectively and to work successfully with others. It is always good to test conventional wisdom, which tends to suppress innovation. If we had insisted in 1958 that all radios meet the prevailing standard — high-quality sound and well-made cabinetry — we might not have seen the transistor radio, which quickly and decisively demonstrated a different and important new quality: portability.

- *Pace* — Where work is individualized we might see schools that let students "test out" of subjects when they can demonstrate through some appropriate assessment that they know and can do what the standards say they should know and be able to do. They would not have to finish the course, perhaps not even have to take the course.

Many of these varying features will make it possible to customize the learning experience that our students have. There is solid research that students' learning styles vary in numerous significant ways and one of the serious shortcomings of our current model is the "one size fits all" feature. This approach was necessary back when our school system was designed, but it is no longer necessary.

Our traditional model of secondary school was actually designed around teaching. This was legitimate at a time when teachers carried in their heads and in the textbook the necessary information that the students needed to learn. The system has always assumed that a student couldn't learn the material unless he/she had taken a course taught by a qualified teacher. With the digital technologies of today, especially through the Internet, there are almost endless sources of information other than the teachers. This makes it possible to design schooling around learning rather than around teaching.

Organizing schooling around learning makes it possible to provide great variation in the learning experience. But it also makes it possible to greatly alter what teachers do. Teachers no longer need to stand in front of the class talking about information only they have. Teachers can move from being the source of the knowledge they want students to learn to being learning advisors for the students, helping them to acquire the knowledge from other sources.

It is this change that allows the flexibility that can lead to the customized learning discussed above. Students get to move at different rates. They can spend more time on areas that interest them, etc. The students need not be always present in a particular facility, "school." Moving the teacher from the talker at the front of the room also helps to change the relationship with the students. Moving the teacher to the "advisor" role opens up the opportunity for better, more personalized relationships between the student and the teacher.

This is particularly beneficial to the "at-risk" children, those in most need of strong relationships with adults. The flexibility also increases the opportunities for the highly motivated student who wants to move through the material faster or who wants to spend more effort going deeper into an area of special interest. Many variations on this are possible, but this outline greatly alters what both teachers and students do in the learning program. The digital technologies make this kind of change possible but they also provide opportunities to change the governance of education.

Our schools and school districts were organized at a time when most of the funding for the schools came from the property taxes paid by property owners in the district. This was also a time

when transportation required that the schools be designed for all of the children in the immediate area. This organizational approach necessarily led to what might be thought of as a vertical organization of schooling. All of the students in the district were limited to attending the schools created and operated by the district. It was largely these conditions that led to the "one size fits all" approach to schooling. These conditions have changed significantly in recent years.

Particularly in Minnesota, the bulk of the funding is now collected by the state government and then sent out to follow the students wherever they and their parents decide they will attend. Students are no longer required to attend the schools of the district where they live but can attend any district's schools or can attend chartered schools, and the money intended for their education will follow them. Chartered schools, for the most part, have no geographic boundaries but can attract students from a variety of districts.

These developments open up the opportunity for schools to be organized more flatly, in other words to reach across extended distances and design learning environments for certain kinds of learners rather than for all learners in a specific area. This is somewhat true of chartered schools in general, but it is particularly true of the online schools that are proliferating across our country.

New models of school and schooling

The online schools are probably among the more interesting examples of the use of the digital technologies for learning at the secondary level. It is estimated that across the country about 700,000 students did part of their learning from online schools during the 2005-2006 school year, and this number is growing rapidly. There are many online schools operating now in the United States. Several states have created state-owned and operated online schools. Most of these schools simply take the traditional courses and distribute them over the Internet. Most of the students take these courses not as their full-time educational experience but a course or two as supplements to their enrollment in a more traditional school.

Even though this approach seems to be fairly traditional, many of these schools are able to build in significant variation to meet individual student needs. Most obvious, of course, is that the place varies, but so can the pace. Many online schools let the students move at their own pace, which lets some take longer and others move more quickly. Many of these schools use a blended format with face-to-face opportunities as well as the online feature. A chartered

school in Minnesota, Cyber Village Academy, has the students meet at the school two days a week and then work online but with teacher interaction the rest of the time.

Other forms of schooling have also been greatly assisted by these new technologies. Several chartered schools in Minnesota have no courses at all. Probably the best-known school of this type is Minnesota New Country School in Henderson. In these schools the students do all of their learning around the projects that they do with the oversight of their advisors (teachers). The learning of the various subject areas is built into the projects. Using the real world in which they live and the almost limitless resources available through the Internet and in the broader community, they are able to complete some fairly complex projects.

The project-based learning model completely alters the economics of the school. This school is a grade 6-12 secondary school and usually enrolls about 125 students each year; it is largely because of the project-based learning model that this school is able to operate at this size. Two years ago this fall the first online project school was started.

Minnesota New Country is interesting also in its governance structure. Minnesota New Country is a school that is run by a teachers' professional practice. There are no administrators. The teachers formed a legal entity under the workers cooperative laws of the state. This entity (called EdVisions) then contracts with the board of the charter school to design and run the school. The teachers collectively have the responsibility for the school and through the contract with the board they also have the authority to run the school.

This creates quite a change in the culture of the school and of course it also eliminates some of the overhead that is common in administrator-led schools. The Bill and Melinda Gates Foundation has provided about $9 million in grants to replicate this school. There are now several such schools in Minnesota, as well as others around the country. There will be about 10 such schools operating in Milwaukee in the fall of 2007.

It is important not to get too captured by the specific models that have been created to date. Many of these are quite exciting and it would be fine to replicate them, but we believe our country needs to undergo an extended period of innovation in school/schooling design. We simply can't envision what new approaches might develop if we were to create an atmosphere that encouraged the type of innovation we think is necessary.

To go back to the compelling issues discussed above, we believe

that schools designed for more customization of learning for the students and provide more professional control for the teachers will help to increase motivation for the two key sets of workers in the learning activity. Making maximum use of the new digital technologies makes different kinds of school organization and different learning programs possible. These different approaches also have the potential to improve the productivity of the learning process.

It is important for our educational leaders and our policy makers as well as other opinion leaders to understand that this kind of exploration is needed. This will necessitate investment of public dollars and it will also require that we learn to accept failure of some of the models that are tried. We can't have true innovation without experiencing some failure. Starting and operating these new and different schools will also have an impact on our existing schools.

The Strategy for Change

So, how might we actually get from where we've been to where we need to be — in light of all this historic and perfectly understandable resistance to change?

First, it's important to understand that it is almost impossible to convert an entire existing school into one of these innovative schools. These new kinds of schools generally need to be choice schools. In other words parents and students need to be legally able to choose to enroll.

Most of the children in our existing schools feel that they are being well served by the traditional model, and they and their parents would resist strongly any effort to substantially change the school they are now attending. In addition, there is always the problem of forcing children to participate in what could accurately be called an experimental school.

Consequently it is best to think of this effort at innovation as being a second strategy alongside our efforts to improve the schools we now have. Even then there will always be strong resistance from the existing schools because this effort will remove students and the resources intended for their education as they choose to enroll in these new and different schools.

It is this reality that makes it so hard for the district sector to be active in this type of innovation effort. But just because something's difficult doesn't mean we shouldn't continue to try different approaches that would help districts participate in these kinds of innovations.

In particular, the legislature needs to be actively involved in

helping the district sector to be part of the effort to create new and fundamentally different public schools. Creating a start-up funding stream for new and different schools in the districts would be helpful. Legislation addressing the need for expanded autonomy in these schools within the district setting is also desirable. But even with these legislative changes, it will be difficult for most districts to create schools that compete with their existing operations.

Perhaps the best chance for districts to become involved in this innovative effort lies with the rural districts that are dealing with falling enrollment. Many of these districts are simply not going to be able to continue to operate if they stay with the traditional model. Facing the possibility of losing the schools entirely may make it easier for these districts to begin to implement fundamentally different approaches.

For example, several districts could join together and, using new design features, create a school(s) that would serve several (perhaps many) communities without the need to build the typical "cornfield" school that has become common. It clearly is legally possible for districts to create these kinds of schools, but it is quite difficult politically for districts to create schools that compete for students and resources with their traditional models. Getting anywhere near a consensus on this type of change is very difficult.

Because of this reality, chartering may be the best approach in attempting to create these new and different schools. Creating a chartered school does not require approval of the local school board. It also does not require that the regular school be fundamentally changed. It allows the students and parents who find the existing school satisfactory to stay with that option while allowing families who want a different educational experience to select the new school.

The research from our private sector in America indicates that the most profound changes come through the creation of new organizations and that seems likely to be the case with education as well. This indicates that the chartering sector will need to play an important role in this process of innovation we envision. While Minnesota's chartering laws are quite well structured, there are issues in the chartered sector infrastructure that also need legislative attention.

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Having attended school in a small town, having taught for several years in that sort of setting and having represented several such districts while a legislator, I am aware that there are several motivations that communities have for keeping their schools viable. And student learning is only one of them.

Many in a community think of the schools as the social center of the community. Many of the community gatherings occur around school activities. For others the school represents a significant source of financial resources for the community and helps sustain the economic vitality of the community. It will doubtless take lots of community discussion, but ultimately the community will decide that student learning is the feature that needs to be preserved above all else.

All of us who have grown up in rural settings understand that there are many positive aspects of life in such communities, but it will be quite difficult to attract young families if there is no local opportunity for student learning. Many of the communities in our state have had to forgo all of these desirable options because there seemed to be no viable alternative.

But that is no longer the case. Just as information has become more distributed and as work is increasingly possible from any location, so too is learning able to become distributed to almost any location. Models exist today for new approaches to learning making good use of the new technologies that will meet the needs of many of our smaller communities and enhance the learning experience in all of our communities.

We need to be open to changing our visions of what schools are and what schooling is. This will not be easy. This will require bold and strong leadership. This situation provides an exciting opportunity for civic leaders, for local business leaders, for political leaders and also for funding organizations to participate in the redesign of our education system in this country.

We have our ancestors to thank for giving us a public education system that served us very well during the 20th century. Will we have the vision, the courage and will to create a public education system that meets our learning needs during the 21st century? It will not be comfortable, but it is doable and it will be exciting and fulfilling. Some wise person once said that "the best way to predict the future is to create it yourself."