RMJ

Rural Minnesota Journal

Educating Rural Minnesota's Children

September 2006

CENTER *for* RURAL POLICY *and* DEVELOPMENT

Seeking solutions for Greater Minnesota's future

The Center for Rural Policy and Development, based in St. Peter, Minn., is a private, not-for-profit policy research organization dedicated to benefiting Minnesota by providing its policy makers with an unbiased evaluation of issues from a rural perspective.

Any opinions voiced in the Journal are those solely of the authors and not necessarily of the Center.

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Editor's Note

Jack Geller

Welcome to the autumn issue of the *Rural Minnesota Journal*. With this second issue of *RMJ* come several significant changes that are worth pointing out. Of course, the most noteworthy change is the thematic approach to this second issue. Unlike the inaugural issue, which contained articles on a variety of important rural policy issues, this autumn issue is all about "Educating Rural Minnesota's Children." So in this issue you will read thoughtful, research-based manuscripts on changing K-12 enrollment patterns, early childhood education, school funding, agricultural education and educational disparities. This thematic approach is one that we will incorporate into all future issues of RMJ.

So a logical question might be, what's the next journal theme? Rural health care? Rural poverty? Rural economic development? That question brings me to the next change in the journal, that being the establishment of an *RMJ* editorial board. Here at the Center for Rural Policy and Development, our board of directors strongly believes that to establish the *Rural Minnesota Journal* as an enduring component of the rural policy landscape, the creation of a highly respected editorial board is a must. Accordingly, such an editorial board is now being established and will have the task of setting journal policy, deciding upon future thematic topics, and continuing to recruit well-established and thought-provoking authors to write for the journal. Needless to say, we are pretty excited about this change. Look for an announcement on the members of the editorial board soon.

Another new development is the establishment of the *Rural Minnesota Forum*, a regular follow-up feature to the *Rural Minnesota Journal*. Beginning with this autumn issue, we will regularly follow the dissemination of each issue of the journal with an opportunity to come together to thoughtfully discuss and debate the topics and ideas surrounding the issues addressed in the journal. So on

November 15 in Saint Paul we will host the first *Rural Minnesota Forum* to discuss the topic of "Educating Rural Minnesota's Children." I have to admit that the idea of disseminating a thematic journal and following it 8 to 10 weeks later with a policy forum on the same topic is a format that appeals to me, as it gives me an opportunity to read the articles and form my own opinions before coming to the forum. I somehow think that such a format will bring people together more prepared to discuss the question, "So what are we going to do about it?" I think of it as an opportunity to have a statewide conversation on issues important to rural Minnesotans and the communities they reside in.

With these enhancements we have taken on the task of elevating the statewide awareness and level of civic engagement around issues important to rural Minnesota's future. It is a task that we will not take lightly, but at the same time, it feels like a natural extension of what we do at the Center for Rural Policy and Development. So after reading the articles in this autumn issue of *RMJ,* if you are prepared to add your voice to the discussion, make it a point to attend the *Rural Minnesota Forum* on November 15. Registration information can be found on the back pages of the journal, or register online from our website at www.ruralmn.org.

Lastly, since the release of the inaugural issue of *RMJ* we have been inundated with one question more than any other, that being how do I subscribe, or ensure that I continue to get a copy of future issues of the *Rural Minnesota Journal*? Currently there are three ways we disseminate the journal. The first is through our distribution partners, a variety of organizations that agree to distribute the journal to their members. So organizations like the Association of Minnesota Counties, Minnesota State Colleges and Universities, the Federal Home Loan Bank of Des Moines, Education Minnesota, Southern Minnesota Initiative Foundation and the Minnesota Rural Education Association all take on this task to ensure that the journal gets widely distributed across the state.

Our second distribution method is electronically through our website. Just go to www.ruralmn.org and you can download an article or the entire issue of the journal. It's free, available 24/7, and as close as your nearest Internet connection.

Our final distribution method is the direct mailing of hard copies of the journal. While we do not charge for the journal itself, we do ask those requesting hardcopies to pay $3 to cover postage and handling. This is true with one exception: contributing members of the Center for Rural Policy and Development automatically receive hard copies of all the Center's research reports and newsletters,

including the *Rural Minnesota Journal*. So if you want to ensure that you always receive your individual copy of the journal, consider becoming a contributing member of the Center for Rural Policy and Development. For as little as $50 per year you will be assured of receiving the journal and a whole lot more! You can find membership information on the back pages of the journal also.

Until next time, I hope you find this issue of the *Rural Minnesota Journal* informative, useful and a little provocative. If you have comments or suggestions on the journal, please feel free to email us at crpd@ruralmn.org. Or better yet, come to the *Rural Minnesota Forum* on November 15 and add your voice. We all have a stake in "Educating Rural Minnesota's Children."

Foreword

Alice Seagren

The early roots of education began in the humble one-room schoolhouse where "school marms" taught children their ABCs, arithmetic and history. These small schools dotted the rural landscape all across the nation. Although unpretentious and lacking in the sophisticated educational theory and pedagogy of today, these schools educated hundreds of thousands of children who in turn built vibrant towns and cities, grew the food that fed our nation and created thousands upon thousands of small and large businesses that met the needs of ever more prosperous citizens.

Fast forward one hundred years, and we see a rural economy dramatically changed. Large corporate farms have replaced the family farm, businesses and services have moved to regional and urban centers, the local grocer and bakery have been replaced by large, multi-service "super" markets, and fiberglass cable and wireless networks are the new highway of today.

Rural Minnesota must redefine and reinvent itself, and our schools will once again be at the heart of this new challenge. One of these challenges is keeping rural schools viable as the population ages and people, especially younger adults, move to larger regional centers for jobs.

To address this decline, many school districts in the 1970s and 1980s combined and consolidated. We went from 438 school districts in 1978 to 342 in 2006. Yet we still have 230 school districts with fewer than 500 students, kindergarten through 12th grade. We probably will see more of these consolidations, but at some point this will not be an option if students must travel long distances to get to school. As schools become smaller and more isolated, they become less able to offer the breadth of curricular opportunities, which in turn results in less well-educated students.

The bright spot, however, is that many immigrant families are coming to Minnesota and going to small rural communities to work

and live. This has actually helped some school districts remain open. Of course, immigrant families bring special needs with them. They must learn English, learn about our laws and culture and be accepted and assimilated into communities who have been mainly white with western European heritage.

Aging buildings dating back to the 1900s also dot the rural landscape. Remodeling is not an option for most of these structures, and they lack the technological infrastructure that could provide educational opportunities through online learning and interactive TV.

While these challenges seem daunting, I am heartened as I travel throughout Minnesota to see the collaboration and creativity being generated as teachers, school boards and parents reinvent education in rural Minnesota.

New buildings centrally located among several old districts and outfitted with the latest technological equipment are providing educational opportunities to students miles away in another school. And even though rural schools struggle to maintain enrollment, small class sizes and more personal attention are great strengths that larger districts have a harder time offering.

As a state, however, we must assure that all regions of our state are able to have the same technological access, breadth and depth of educational coursework and safe, modern buildings for their children. We must continue to explore new funding methodologies for the building and operating of small, isolated schools and explore the ever-expanding online opportunities that will give students access to world languages like Mandarin Chinese and college-level classes.

But even as we work to assure the continued viability of our small rural schools, they will only survive if we have a reinvented, redesigned and diverse rural economy.

I am grateful that the Center for Rural Policy and Development has created the Rural Minnesota Journal and has chosen to focus on "Educating Rural Minnesota's Children." It is important to have a resource that assembles the best research, expertise and thinkers so that policymakers and citizens can have a broad-based look at the opportunities, challenges and potential solutions for rural schools.

As Commissioner of Education, I welcome this much-needed resource as we seek to give every child in Minnesota the best education possible.

Acknowledgements

The Center for Rural Policy & Development gratefully acknowledges our friends who have made RMJ possible.

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Rural Education in Minnesota

Martha McMurry & Barbara Ronningen

Education in rural Minnesota faces many challenges, including spread-out populations, financial tribulations, aging buildings and declining enrollments. The focus in this article is on demographic changes occurring in rural areas: enrollment shifts, racial and ethnic makeup and the effects of immigration.

Most rural districts are losing enrollment and are likely to witness further declines in the future. In this they are not alone. Enrollments are also falling in many urban districts, though the erosion is usually less dramatic. And like urban districts, rural districts are becoming more racially, ethnically and linguistically diverse, though this trend varies from district to district.

Definition of "rural"

There are many ways to define "rural." In this report, rural is given a simple operational definition based on enrollment per square mile. PK-12 enrollment in the 2005-2006 school year was divided by area. Data on district area comes from the Land Management Information Center at the Minnesota Department of Administration.

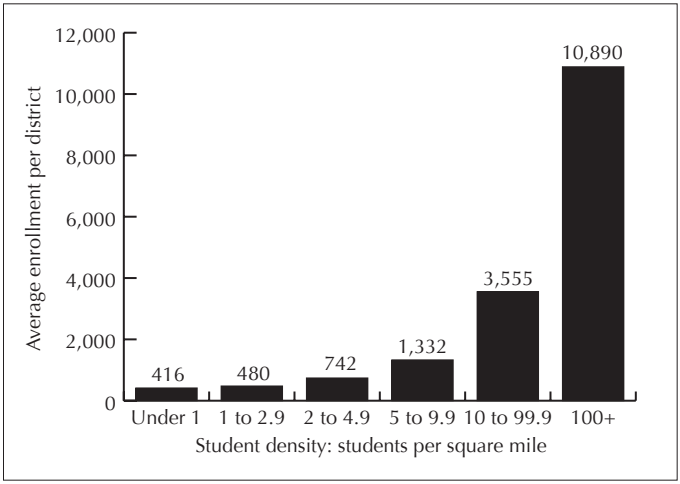
For this article, we define rural districts as those with fewer than 10 students per square mile. The rural category is then subdivided into four groups based on gradations of density: 5 to 9.9, 2 to 4.9, 1 to 1.9 and less than 1 per square mile.

Most of the territory of Minnesota is assigned to rural school districts, but urban schools enroll the greater share of students. Collectively, rural districts with fewer than 10 students per square mile cover 87% of Minnesota's geographic area but account for only 23% of students.

Rural districts

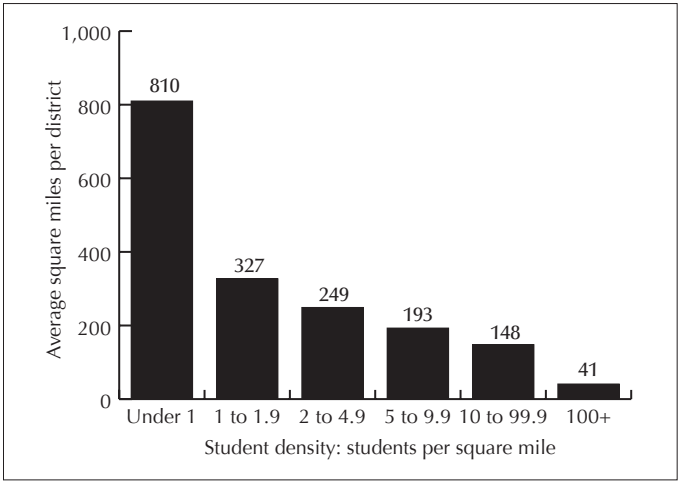
Fifty-two districts have between 5 and 9.9 students per square mile. These districts account for 12% of the state's area and about

Figure 1: *Average number of students per district, by district density: 2005-2006.*



Source: Minnesota Department of Education; Land Management Information Center

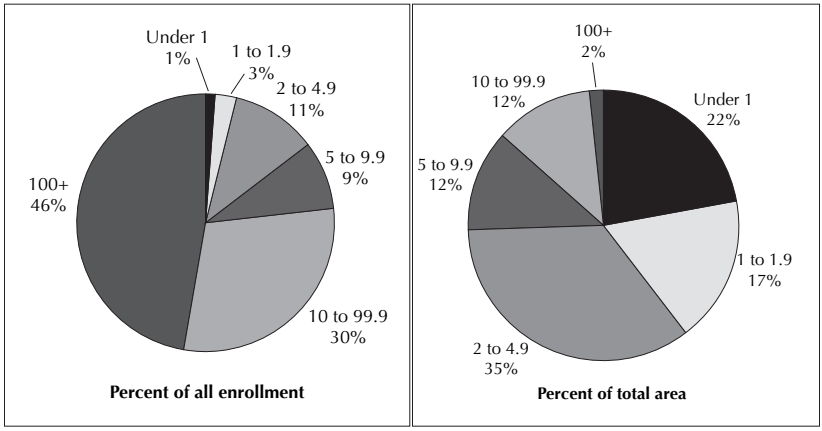
Figure 2: *Average square miles per district, by district density: 2005-2006.*



Source: Minnesota Department of Education; Land Management Information Center

8% of all students. Many are headquartered in moderate-sized cities, including New Ulm, Little Falls and Bemidji. On average these districts cover 193 square miles and have 1,332 students.

Figures 3 & 4: *In 2005-06, the vast majority of students are in denser districts, while the vast majority of area is in less dense districts.*



Source: Minnesota Department of Education; Land Management Information Center

One hundred seventeen districts fall into the next sparser category with between 2 and 4.9 students per square mile. These districts cover 35% of Minnesota's area and enroll 9% of all students. Western and southeastern Minnesota have the most districts in this category. The average enrollment per district is 742 students and the average area is 249 square miles.

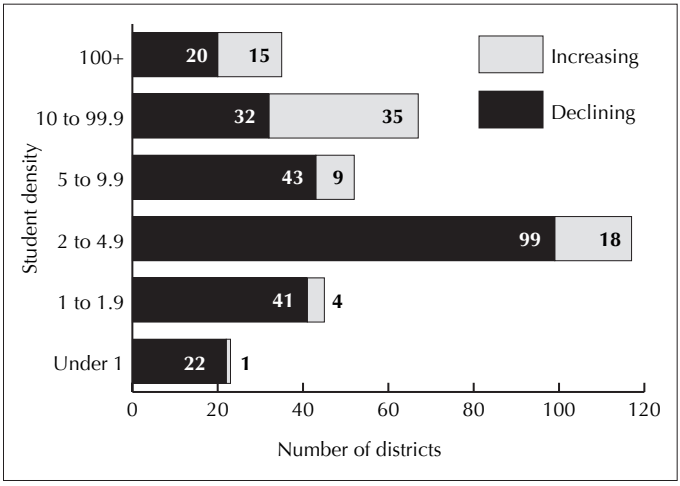
Forty-five districts have between 1 and 1.9 students per square mile. The majority of these districts are in western Minnesota. These districts cover 17% of the state's geographic area but enroll only 3% of students. On average, they have 480 students and cover 327 square miles.

The 23 least-dense districts have less than 1 student per square mile. These districts cover 22% of Minnesota territory and account for 1% of all students. These most rural districts are concentrated in the northwestern and northeastern parts of the state. The average enrollment per district is 416, and the average area is 810 square miles.

Urban districts

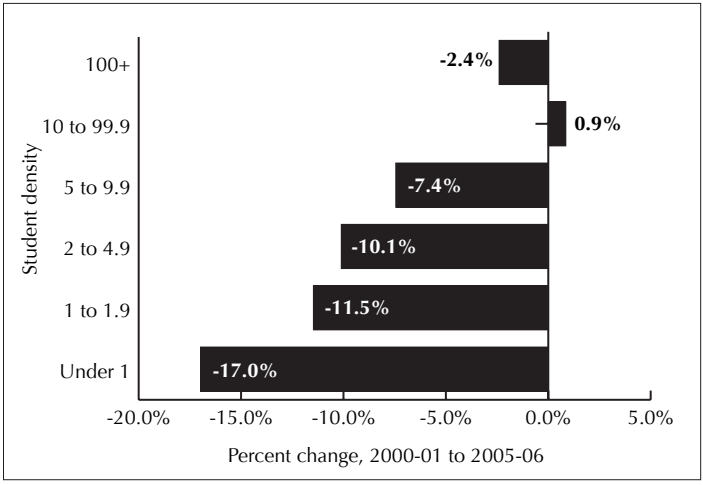
Districts with more than 10 students per square mile will be called "urban" districts in this report. Sixty-seven districts have between 10 and 99.9 students per square mile. This category includes some suburban districts as well as districts in regional centers such as St. Cloud and Duluth. These districts cover 12% of Minnesota's geographic area and enroll 30% of all students.

Figure 5: *Seventy-five percent of Minnesota school districts saw enrollment declines between 2000-2001 and 2005-2006.*



Source: Minnesota Department of Education

Figure 6: *Enrollments fall faster in rural districts: Enrollment change, 2000-01 to 2005-06.*



Source: Minnesota Department of Education

The most urbanized districts are those with a density of 100 or more students per square mile. Thirty-five districts meet this criterion. Almost all, including Minneapolis and St. Paul, are in the Twin Cities Metropolitan Area. Almost half – 46% – of public PK-12 students are enrolled in these districts, but they cover only 2% of the state's total area.

Table 1: *Less-dense districts lose enrollment at a greater rate.*

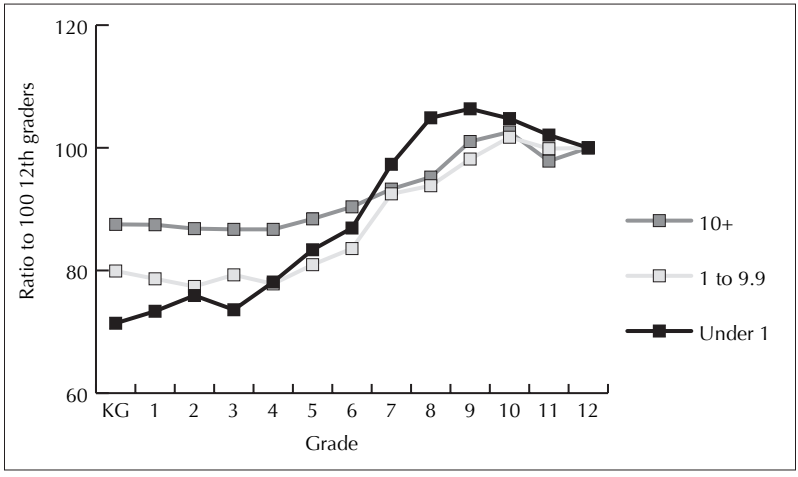
District Density (students per sq. mile)	Number of districts	Districts with declining enrollment
Less than 1	23	22
1 to 1.9	45	41
2 to 4.9	117	99
5 to 9.9	52	43
10 to 99.9	67	32
100+	35	20
All districts	339	257

Source: Minnesota Department of Education

Rural districts experience larger enrollment declines

Enrollment declines are widespread across Minnesota. Three quarters of all districts had fewer students in the 2005-2006 school year than in 2000-2001. The least dense districts were most likely to experience falling enrollments and had on average proportionally larger declines. Between 2000-2001 and 2005-2006, enrollment fell 17% in districts with fewer than 1 student per square mile, 12% in districts with between 1 and 1.9 students per square mile, and 10% in districts with between 2 and 4.9 students per square mile.

Figure 7: *Enrollment in lower grades is smaller than high school enrollment in all types of districts (12th grade=100).*



Source: Minnesota Department of Education

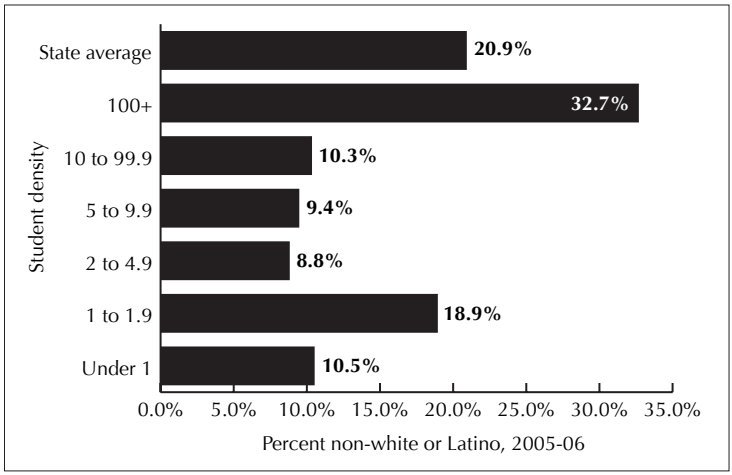
Table 2: *Enrollment change from 2000-01 to 2005-06, by grade and district density.*

				Density (Students per square mile)			
Grade	**Year**	**Under 1**	**1 to1.9**	**2 to 4.9**	**5 to 9.9**	**10 to 99.9**	**100+**
Kind.	00-01	715	1,570	5,916	4,709	15,539	29,187
Kind.	05-06	584	1,485	6,034	4,733	16,963	27,456
Grade 1	00-01	718	1,461	6,096	4,698	15,885	29,259
Grade 1	05-06	600	1,446	5,769	4,842	16,935	27,455
Grade 2	00-01	729	1,604	6,373	5,049	16,297	29,507
Grade 2	05-06	621	1,481	5,761	4,624	16,937	27,130
Grade 3	00-01	789	1,632	6,649	5,130	16,834	30,032
Grade 3	05-06	602	1,445	5,902	4,809	16,705	27,303
Grade 4	00-01	843	1,795	6,748	5,182	17,254	30,231
Grade 4	05-06	639	1,479	5,822	4,629	16,626	27,382
Grade 5	00-01	845	1,851	7,092	5,531	18,032	31,071
Grade 5	05-06	682	1,551	6,019	4,840	17,050	27,826
Grade 6	00-01	856	1,885	7,261	5,673	18,024	30,160
Grade 6	05-06	711	1,536	6,264	5,013	17,443	28,428
Grade 7	00-01	944	1,975	7,737	6,139	18,714	29,789
Grade 7	05-06	796	1,694	6,824	5,663	18,438	28,901
Grade 8	00-01	959	2,021	8,117	5,940	18,725	29,428
Grade 8	05-06	858	1,730	7,276	5,378	18,689	29,644
Grade 9	00-01	955	2,102	8,468	6,577	20,178	31,122
Grade 9	05-06	870	1,887	7,329	5,835	19,935	31,343
Grade 10	00-01	1,007	2,157	8,648	6,551	20,136	30,816
Grade 10	05-06	857	1,975	7,645	5,976	20,131	31,937
Grade 11	00-01	935	2,063	8,389	6,433	19,113	28,189
Grade 11	05-06	835	1,827	7,595	5,888	19,455	30,201
Grade 12	00-01	963	1,961	8,225	6,275	18,917	27,966
Grade 12	05-06	818	1,835	7,525	5,972	19,538	31,219

Source: Minnesota Department of Education

In the most rural districts, those with fewer than 2 students per square mile, enrollments fell in every grade. In districts with between 2 and 9.9 students per square mile, enrollments fell in all grades except kindergarten and/or first grade. The near-universal

Figure 8: *Diversity varies by enrollment density.*



Source: Minnesota Department of Education

enrollment declines across grade levels do not augur well for future enrollments in rural areas.

In addition, in districts across the urban-rural spectrum, enrollments are higher in the upper grades than in the lower grades. As the larger high school cohorts graduate, they will be replaced by the smaller classes now in elementary and middle schools. The discrepancies between high school and elementary enrollments are greater in rural districts. In districts with fewer than 5 students per square mile, the ratio of kindergarteners per 100 seniors is in the range of 70 to 80. The ratios in urban districts are closer to 90 per 100.

Widespread enrollment declines and smaller class sizes in the lower grades will make life challenging for rural school district administrators. While many urban districts face the same issues, the data suggests that student populations will dwindle faster in rural areas.

Race and ethnicity of students

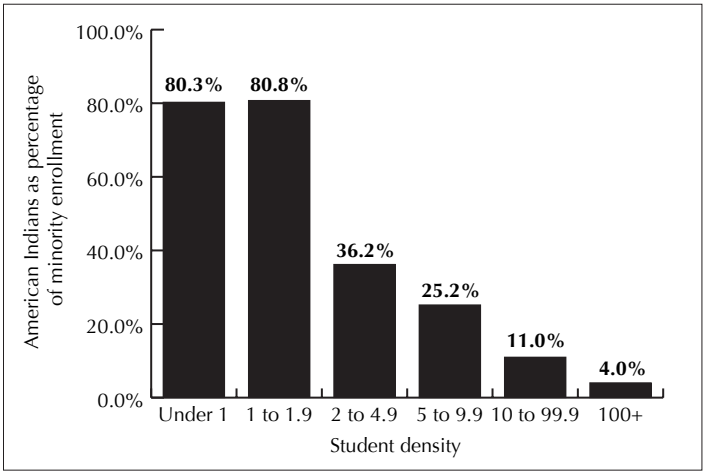
The racial and ethnic diversity of the student body varies greatly from district to district. Overall, urban districts with more than 100 students per square mile have the highest proportions of non-white or Latino students, 33%. Rural districts with between 1 and 1.9 students per square mile rank second with 19%. Large American Indian enrollments in districts such as Red Lake, Waubun and Mahnomen account for this high ranking.

Table 3: *Various ethnic and racial groups as percent of total enrollment.*

District Density (students per sq. mile)	American Indian	Asian	Hispanic	Black	White	American Indian as percent of minority	Hispanic as percent of minority
Less than 1	8.4	0.5	0.7	0.8	89.5	80.3	6.8
1 to 1.9	15.3	0.9	2.0	0.7	81.1	80.8	10.7
2 to 4.9	3.2	1.0	3.7	0.9	91.2	36.2	42.4
5 to 9.9	2.4	1.0	5.1	0.9	90.6	25.2	54.4
10 to 99.9	1.1	2.3	4.0	2.9	89.7	11.0	38.7
100+	1.3	9.9	6.9	14.6	67.3	4.0	21.1
All districts	2.0	5.6	5.3	7.9	79.1	9.6	25.6

Source: Minnesota Department of Education

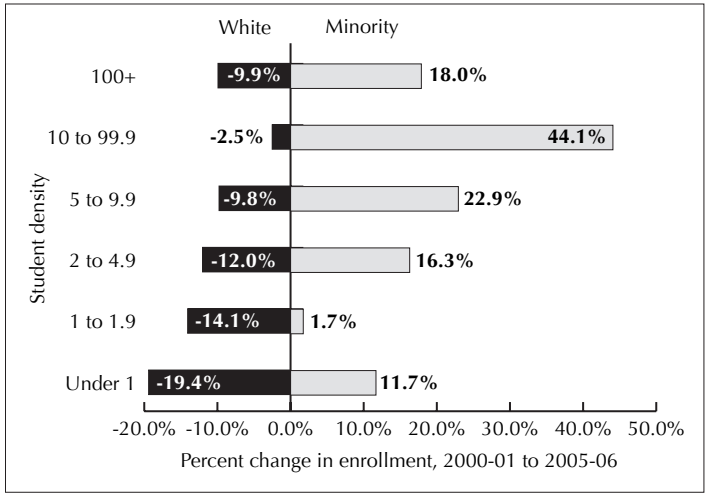
Figure 9: *Indian students make up a large share of minority enrollments in rural districts.*



Source: Minnesota Department of Education

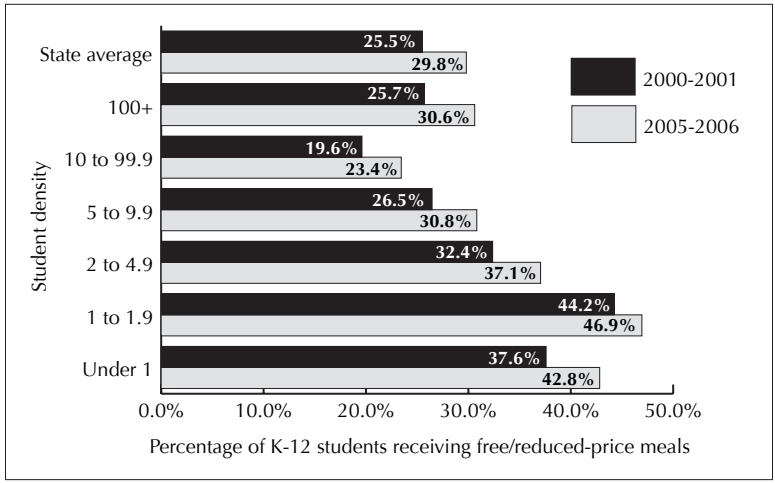
Minority students in rural districts are predominantly American Indians and Latinos. In districts with fewer than 2 students per square mile, more than 80% of minority students are American Indians. Outside of districts in traditional Indian areas, minorities account for only a small proportion of students in the least dense districts.

Figure 10: *White enrollments fall while minority enrollments rise in districts of all sizes.*



Source: Minnesota Department of Education

Figure 11: *Rural students are more likely to qualify for free or reduced price meals, and the percentage qualifying is increasing.*



Source: Minnesota Department of Education

In districts with between 2 and 4.9 students per square mile, about 3% of students are American Indians and about 4% are Latino. Latino enrollments grew 28% over five years in this size category. Districts with substantial Latino enrollments include Madelia, Crookston, Pelican Rapids, and Sleepy Eye.

	Enrollment in 2000-2001 school year							
District Density	**American Indian**	**Asian**	**Hispanic**	**Black**	**White**	**Minority**	**Total**	**Percent Minority**
Less than 1	719	57	79	44	10,620	899	11,519	7.8
1 to 1.9	3,273	195	423	133	20,418	4,024	24,442	16.5
2 to 4.9	2,716	858	2,529	460	89,943	6,563	96,506	6.8
5 to 9.9	1,683	730	2,465	448	69,552	5,326	74,878	7.1
10 to 99.9	2,441	4,542	6,051	4,024	219,106	17,058	236,164	7.2
100+	5,495	35,324	16,454	48,421	285,186	105,694	390,880	27.0
All districts	16,327	41,706	28,001	53,530	694,825	139,564	834,389	16.7

	Enrollment in 2005-2006 school year							
District Density	**American Indian**	**Asian**	**Hispanic**	**Black**	**White**	**Minority**	**Total**	**Percent Minority**
Less than 1	806	49	68	81	8,559	1,004	9,563	10.5
1 to 1.9	3,306	196	437	155	17,545	4,094	21,639	18.9
2 to 4.9	2,763	888	3,238	743	79,121	7,632	86,753	8.8
5 to 9.9	1,650	716	3,559	623	62,754	6,548	69,302	9.4
10 to 99.9	2,703	5,579	9,504	6,790	213,609	24,576	238,185	10.3
100+	5,025	37,661	26,243	55,668	256,897	124,597	381,494	32.7
All districts	16,253	45,089	43,049	64,060	638,485	168,451	806,936	20.9

Table 4a: *Non-white and Latino enrollments have increased in districts of all sizes, but the rate of growth varies from district to district.*

Source: Minnesota Department of Education

Table 4b: *Change in white and minority enrollment, 2000-01 to 2005-06, by district density.*

	Enrollment change, 00-01 to 05-06					
District Density	**Total Number change**	**Total Percent change**	**White enollment change**	**White enollment, percent change**	**Minority enollment change**	**Minority enollment, percent change**
Less than 1	-1,956	-17	-2,061	-19	105	12
1 to 1.9	-2,803	-11	-2,873	-14	70	2
2 to 4.9	-9,753	-10	-10,822	-12	1,069	16
5 to 9.9	-5,576	-7	-6,798	-10	1,222	23
10 to 99.9	2,021	1	-5,497	-3	7,518	44
100+	-9,386	-2	-28,289	-10	18,903	18
All districts	-27,453	-3	-56,340	-8	28,887	21

Source: Minnesota Department of Education

White enrollments decline

White enrollment has fallen in districts of all sizes, with the most rapid declines occurring in the most rural districts. White enrollments have also dropped substantially in urban districts with more than 100 students per square mile. Districts with between 10 and 99.9 students per square mile saw the smallest percent decline in white enrollment. This group includes many fast-growing suburban districts.

Non-white and Latino enrollments have increased in districts of all sizes, but the rate of growth varies from district to district. The most rapid gains occurred in urban districts with between 10 and 99.9 students per square mile. The least dense rural districts had the slowest rate of increase. Denser rural districts, those with 5 to 9.9 students per square mile, posted solid gains in minority enrollment. This largely reflects growth in the number of Latino students.

Free or reduced-price meals

Rural students are more likely to qualify for free or reduced-price meals than are urban students. In districts with fewer than 2 students per square mile, more than 40% are eligible. Urban districts with 10 to 99.9 students per square mile have the lowest proportions of low-income students. The proportion of students receiving a free or reduced-cost meal has increased in districts at all density levels.

Table 5: *Charter school and minority enrollment, 2005-06.*

	2005-2006	2005-2006	2005-2006	2005-2006	Charter school enrollment as percent of total enrollment, 2005-2006	
	Charter Total	Charter Minority	Total K-12 enrollment	Minority K-12 enrollment	Total	Minority
Twin Cities Area	15,845	10,127	501,293	142,857	3.2%	7.1%
Outside Twin Cities Area	4,502	543	337,704	39,370	1.3%	1.4%

Source: Minnesota Department of Education

The proportion of students receiving special education services shows little trend over time, and differences by density category are negligible.

Charter schools

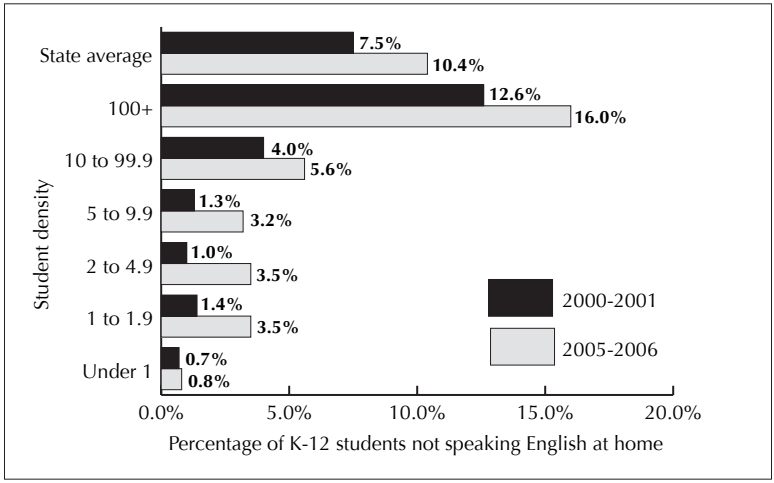
Charter school enrollments are increasing, but it appears they are having more effect in urban areas than in rural areas. Charter schools do not have geographic boundaries, so it is not possible to calculate density for charter schools. Instead, charter schools are grouped by broad region. In the 2005-2006 school years, 3.2% of students in the 11-county Twin Cities were enrolled in charter schools, compared to 1.3% of students in the rest of the state.

In the Twin Cities, charter schools have a strong appeal to minority students, but this is not the case in rural districts. Sixty-four percent of charter school students in the Twin Cities area are minorities, but only 12% of charter school enrollees outside the Twin Cities are non-white or Latino.

Private school enrollments are falling

Private school enrollments are falling in both urban and rural areas. As with charter schools, private schools do not have district boundaries, so it is not possible to calculate density. Outside the Twin Cities, private school enrollments dropped 15% and enrollments fell in every grade. In the 11-county Twin Cities region, private school enrollments fell 4%. Enrollments rose in the higher grades but declined in lower grades. About 11% of metro-area students and 9% of non-metro students attend private schools.

Figure 12: *Percent of students who do not speak English is rising in all types of districts.*



Source: Minnesota Department of Education

Many rural districts are becoming more linguistically diverse

Linguistic diversity in Minnesota schools has spread throughout the state. Metro area schools have long had large numbers of students who speak a language other than English at home, but for rural schools, the recent influx of immigrant children has meant a new set of challenges for educators. School districts in the southern part of the state have the most linguistic diversity, while those in the northern areas have very little.

Data note: The Minnesota Department of Education collects information on the language spoken at home for all students in Minnesota schools. The data is coded for each school district, for county (the location

Table 6: *The number of students who do not speak English has risen dramatically in the last few years.*

	Total Enrollment	Total Non-English-speaking Students	Number of Districts* with non-English-speaking Students	Non-English Speaking Students as Percent of Total
2000-2001	844,925	63,116	301 out of 444	7.5%
2005-2006	827,610	85,904	353 out of 499	10.4%

**Charter schools are included in this count and may account for some of the increase in the number of districts with non-English speaking students.*
Source: Minnesota Department of Education

Table 7: *Languages spoken by more than 1,000 residents of Minnesota and the number of students speaking those languages.*

Languages spoken by more than 1,000 students in Minnesota	Number of Students in Greater Minnesota	Percent of Students in Greater Minnesota
Hmong	976	4.3%
Spanish	10,790	35.4%
Somali	1,836	23.7%
Vietnamese	526	16.9%
Russian	466	19.0%
Chinese	264	16.1%
Laotian	772	37.4%
Cambodian	438	26.7%
Creole English	36	3.0%

Source: Minnesota Department of Education

of the administrative center) and for economic development region. Some students who speak a non-English language at home are also fluent in English. While some students who speak a non-English language at home also speak English, the language data provides a good indicator of the number of students needing English Language Learner instruction. In addition, this data can be used as a proxy for the geographic distribution of immigrants in Minnesota.

In the 2005-2006 school year, 85,904 students in Minnesota schools spoke a language other than English at home. This number continues to grow even as total enrollment declines. In 2000-2001, 7.5% of students spoke a language other than English at home; in the current school year, the proportion is 10.4%. Overall enrollment declines and increases in the number of students who do not speak English at home result in greater impacts on schools. This trend shows no signs of slowing in the near future.

In the current school year (2005-2006), about 67.5% of all non-English-speaking students attend schools with a density exceeding 100 per square mile. The number of non-English speaking students in rural schools (density less than 10 per square mile) in 2005-2006 is 5,657 or 6.5% of all non-English speaking students. Both the number and percentage are small, but the scattering of non-English speakers makes teaching these students more difficult and more expensive. When only a few students need these programs, the cost

per pupil becomes very high and a real challenge to small districts. The funding formula for English Language Learner (also known as Limited English Proficiency) programs provides $700 per average daily membership. Districts with up to 20 ADM needing English language instruction receive $14,000 per year in funding. In districts with few non-English speakers at several different grade levels, the additional $14,000 cannot be expected to cover the entire cost of the ELL program. In districts with hundreds or thousands of children needing English Language Learner instruction, the per-pupil cost of these programs is more manageable.

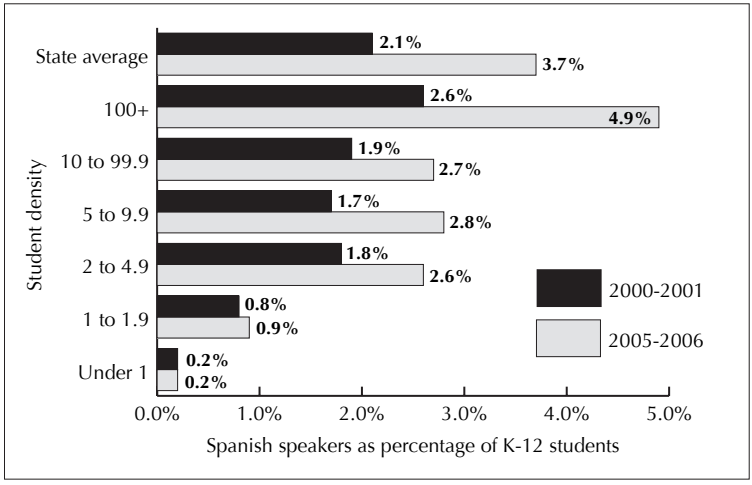
Proportion of non-English speakers increases

Since 2000-2001, enrollment in rural schools at all density levels has declined markedly. And except for the most sparsely populated districts, enrollment of students speaking non-English languages has increased. The result is higher proportions of students speaking languages other than English in all rural schools.

Spanish and Hmong are most widely spoken

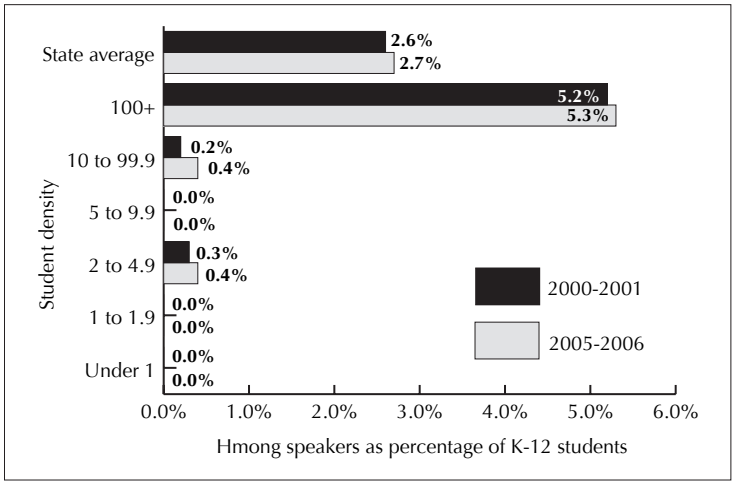
In the 2005-2006 school year, 30,464 students in Minnesota schools spoke Spanish — more than any other non-English language. Spanish speakers are also geographically widespread throughout the state. Hmong speakers rank second, with 22,737 speakers, but nearly all are in the seven-county Twin Cities area. Among non-English-speaking groups with more than 1,000 students, only Laotian

Figure 13: Spanish enrollments grew the most in the most urban districts.



Source: Minnesota Department of Education

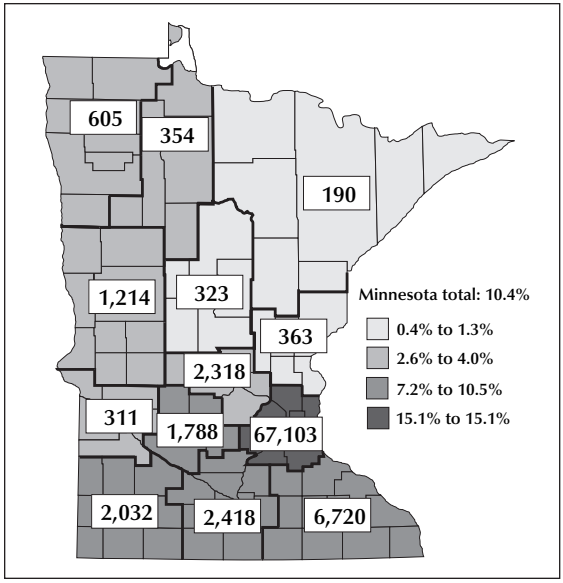
Figure 14: *Hmong speakers are concentrated in the most urban districts.*



Source: Minnesota Department of Education

speakers are more likely than Spanish speakers to live in Greater Minnesota. Almost one quarter of Somali speakers live outside the Twin Cities, and Cambodians are also likely to live in Greater Minnesota.

Figure 15: *Northern Minnesota has the fewest non-English speakers. (Number of non-English speakers and percentage of total enrollment by economic development region.)*



Source: Minnesota Department of Education

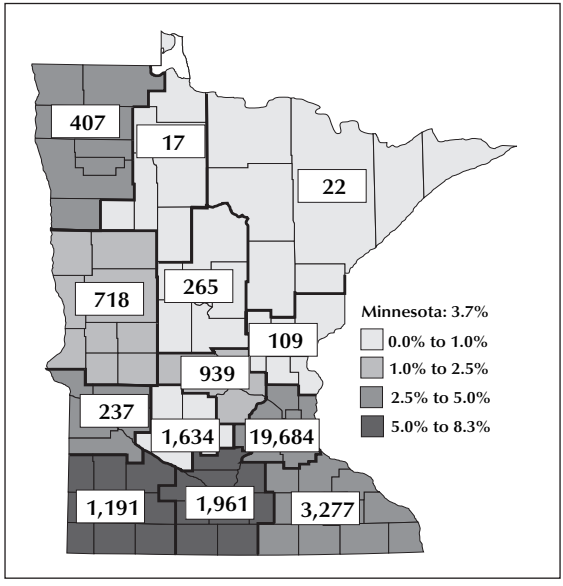
Chippewa, Serbo-Croatian, German, South Asian languages, Arabic, Nuer (Sudanese language), Kurdish and Korean all have more than 100 student speakers in Greater Minnesota.

Regional differences: the North

The northern part of the state (Economic Development Regions 1, 2, 3 and 5) has the least linguistic diversity. Total enrollment in this area is 101,055 but only 1,472 (1.5%) speak a non-English language. Half of the non-English students are in rural districts (those with a student density of less than 10 per square mile). Even the larger, denser districts in the northern region have little linguistic diversity. In Duluth, the largest district in this area, less than 1% of students speak a language other than English at home.

In Minnesota's northern regions, more than half of the non-English speakers are in just four districts. Districts with fewer than 1 student per square mile in the northern regions have only 18 non-English speaking students or 0.2% of total enrollment. Districts with between 1 and 2 students per square mile have a much larger number and percentage of non-English speaking students — 624, or 4.3%. Two districts account for most of the linguistic diversity: Red Lake has 307 Chippewa-speaking students and Win-E-Mac has

Figure 16: *More Spanish speakers live in western and southern Minnesota. (Number of Spanish speakers and percentage of total enrollment by economic development region.)*



Source: Minnesota Department of Education

107 Russian speakers. In addition, Warroad has 73 Laotian speakers and Warren-Alvarado-Oslo has 53 Spanish speakers. Districts with densities between 2 and 4.9 students per square mile had little linguistic diversity – 1.3% of all students (325) spoke a non-English language, but nearly half (157) were Spanish speakers in Crookston schools. Districts with between 5 and 10 students per square mile had a similar percentage (1.6%) of non-English speakers. Long Prairie schools with 203 Spanish speaking students had two thirds of all non-English speakers.

Regional differences: the South

The southern regions (Economic Development Regions 8, 9, and 10) are much more linguistically diverse than the north. The concentration of meat and poultry processing plants, other food processing and animal agriculture has drawn large numbers of immigrants to this part of the state. While Spanish is spoken by the majority of non-English students, linguistic diversity in the region is much greater than in the north. In these regions, 8.5% of students speak a non-English language at home with 6% speaking Spanish.

The southern region has fewer very sparse districts than the north – only two districts (both in Region 8) have fewer than 1 student per square mile. These districts have four non-English speaking students. Ten districts have 1 to 2 students per square mile, all but one in the southwest (Region 8). Less than 3% of students speak a non-English language, and 60 of the 65 non-English students in these districts speak Spanish.

A total of 1,349 students in districts with 2 to 5 students per square mile speak 27 different languages. These districts are fairly evenly distributed across the southern regions. Not only are the proportions higher in these districts, but the diversity of languages is much greater. In total 4.8% of students are non-English speaking, and 3% speak Spanish. In addition to Spanish (2,005 students), there are 308 Hmong speakers and 58 Laotian speakers.

In southern schools with from 5 to 10 students per square mile, a total of 23 non-English languages are spoken, and 9.9% of students speak a language other than English at home. This proportion is only slightly smaller than in southern districts with more than 10 students per square mile (generally larger urban districts). In districts with more than 10 students per square mile, 10.9% of students speak a non-English language. In the more dense rural districts (5 to 10 students per square mile) the proportion of students speaking non-English languages ranges from 39% in Worthington schools (including students in Worthington Public Schools and the

Worthington Area Language Academy) and 29.3% in St. James to 0.2% in St. Clair. Spanish speaking students in Worthington make up 28.3% of all students (643). But Worthington also has students speaking 13 other languages.

Regional differences: the Middle

Central Minnesota regions are a linguistic middle ground. Rural schools in Regions 4 and 6W are more like the southern regions, while those in Regions 6E, 7E and 7W are more like the northern regions. There are no very sparse districts in Regions 6E, 7E and 7W. In the sparsest districts in Regions 4 and 6W, 35 students speak German and 13 speak Spanish, or 5.1% of all students. In districts with 1 to 2 students per square mile, no students in the eastern regions speak a non-English language, but in the western regions, 52 students (1.7%) are non-English speakers, with about half speaking Spanish.

In districts with 2 to 5 students per square mile, the pattern reverses with a higher percentage of non-English students in the eastern regions (5.4% vs. 3.7% in the western regions). The most densely populated (5 to 10 students per square mile) rural districts in these regions are less linguistically diverse, with 2% of students in Regions 4 and 6W and 2.8% in 6E, 7E and 7W speaking non-English languages. The more densely populated districts in these regions are generally in regional centers such as Detroit Lakes, Fergus Falls, Montevideo, Litchfield, Sauk Center, and Mora. Spanish speakers dominate the non-English speaking student population, but in these larger areas, the proportion of total enrollment is smaller.

Summary

Rural school districts can expect to face serious challenges in coming years. School enrollments have fallen throughout Minnesota, but declines have been larger and more pervasive in rural areas. The decline in lower-grade enrollments suggest this trend will not go away any time soon. Districts will have to provide services to their shrinking student populations at the same time their state aid per-pupil revenues are shrinking.

The growing ethnic and linguistic diversity of Minnesota's student population will affect many rural districts as well. Overall, rural districts remain less diverse than urban districts, but in some districts the mix of students is changing rapidly. Small rural districts with growing immigrant populations need to provide special services, but if enrollments are small, the per-student cost may be substantially higher than in larger districts.

Small-Town Education: A Personal Perspective

Kathryn Peters

Growing up in the small town of Goodhue, Minn., was quite an experience. It is a small farming community with a population of about 800 people. The downtown area of Goodhue covers only a few blocks and consists of one grocery store, a bank, a post office, two gas stations, and a few other small businesses. Our small little town doesn't even have a stoplight in it. The first class from Goodhue High School graduated in 1913, and the school building that is there today was established in 1935.

Before attending Goodhue High School, I was enrolled at St. John's Lutheran School, just a few miles outside of Goodhue. I transferred to Goodhue in 9th grade, and I remember the feeling of dread as I left my little country school to go to the "big" high school. Needless to say, the transition between schools was not scary in the least. With about 200 students in the entire high school, I met almost everyone in just a few months. It turns out Goodhue wasn't as big as I'd thought. Goodhue seemed even smaller when I met students from larger schools who could not even name half of the students in their own graduating class.

The school itself was an old building, housing the elementary and junior high students as well as the high school. There hadn't been much remodeling done when I was in high school. Except for updates to keep the building up to code with the safety and health requirements, all of the classrooms were almost exactly the same as they were when my parents attended a few decades earlier. Other parts of the school, however, were added onto, giving us an ITV classroom, some offices and a new library with up-to-date computers. These were well used and much appreciated by the growing number of students and staff. My senior year, the school received enough funding to finally complete the much-debated and much-needed women's locker room, as well as an additional practice gym and more classrooms.

The academic curriculum was typical of what you could expect from most small schools. They had the basic class agenda, or generals, that were required for everyone their first couple of years. As an upper classman, more elective classes and learning options became available, such as work-study, independent study and ITV classes. For the most part, I felt we had a good variety of educational opportunities to pick from; however, our school did not offer many classes, including advanced and honors classes, and many elective classes were either under-funded or lacked support, causing enrollment (and at times the quality of teaching) to dwindle.

One of the programs lacking support was the arts. Whether it was due to a lack of funding or a shortage of teachers, the art department was very small and only a few students were able to participate in those classes. Art classes were not encouraged during class enrollment, and most students graduated without taking a single art class in high school. This was very unfortunate, since art can help students by encouraging creativity, increasing problem-solving skills and helping them view things from different perspectives.

Likewise, theater was not big at Goodhue. The same handful of students participated in the school play each fall. It didn't seem that new participants were actively sought out as auditions for these events, together with the one-act play and regional theater events, were not well-publicized or announced.

The band and choir at Goodhue also suffered. It seemed that band was very popular for students in elementary and junior high; however, by high school many students had dropped out. During my time at Goodhue, there were two different instructors. Even though both were very talented, they did not have the tools (i.e., updated equipment and facilities) or support from administration to run a successful program.

Choir had better enrollment; however, people usually took choir since it was an "easy A" and it filled an elective requirement. The choir was not well directed, and no one had to audition to join. It wasn't very serious — few people actually sang, and many did other homework assignments during class.

Like theater, there were a variety of opportunities for students in these musical areas, such as regional competitions and small vocal and instrumental ensembles. The only problem was that these opportunities were not properly relayed to the students. Only a select few knew about and signed up for these events. These music classes definitely had potential, they just lacked funding and support.

Other missed opportunities for students included shop classes. This is just one of the examples of classes that were stereotyped. It was almost unheard of for a girl to be in an agriculture, woods or welding class. These classes would attract one or two female students, since the all-male atmosphere was extremely intimidating and usually outweighed any girls' interest in the classes.

While the boys were in woods and shop classes, the girls were directed towards "Consumer Foods" (primarily a cooking class) and home economics classes. Although there were no written rules about which people could participate in these classes, I think stereotyping really deterred people from experiencing things they may have been good at.

While there were many classes that lacked funding, support and equal gender enrollment, there were also innovative classes that gave students a chance to excel. One of these classes was ITV. Since Goodhue high school was not equipped for honors classes, faculty and staff worked with area schools to establish a TV network between classrooms. If Goodhue did not have teachers for certain advanced courses, we could utilize other school's teachers via ITV and complete courses that had not been offered in the past. Some courses fulfilled college generals and as a result introduced students to college-level academics. I received college credit for the ITV English class I took, which saved me money in college and was much easier than commuting to a community college for post-secondary (PSEO). It also allowed me to meet students from neighboring communities.

Another great opportunity our school offered was occasional trips abroad (completed every few years or so). Our high school offered Spanish and German as foreign languages, and students must have completed a minimum of two years to be eligible to travel to either Spain or Germany. While I was taking German, my class traveled to Germany for nineteen days. It was an amazing experience, and we all had an opportunity to see the world and interact with other cultures. While we were in Germany, we traveled to many different cities, learned about European history and even lived with a host family for a week. I was completing my second year of German and couldn't speak fluently, but I still learned a lot about the culture—more than I ever would have in a classroom! This was a great learning experience that opened my eyes to the world beyond my small hometown.

Finally, G.O.A.L.S. was a relatively new class that was offered when I was a senior. It was a type of "senior project" class that gave students a chance to be creative and design their own project (with

the approval of their advisor). I was really interested in this class and signed up, deciding to research diet and nutrition. As part of my project, I made a diet and exercise plan and researched various aspects of healthy living. I recorded everything I did each day, and at the end of the year I presented my findings to the school council. During this project, I found out how interested I am in diet and nutrition and decided to pursue a degree in dietetics. I am now a dietetics major, learning about nutrition and the human body. With my graduation fast approaching, I can't help realizing that without G.O.A.L.S., I may have never stumbled upon my interest in this field.

After discussing the pros and cons of the curriculum, it seems only fitting to talk about the teachers who taught these classes. The teachers really made high school worthwhile. They were kind, caring people who helped students accomplish their goals. I worked to establish good relationships with my teachers in class, and got to know them during extra-curricular activities (where they were the organizers and advisors). Those relationships were very helpful, as my teachers acted as references, mentors, and resources throughout my years in high school and even into college. Sometimes I felt that my teachers were pushing me too hard and their expectations seemed too high; looking back now, however, I am so thankful for the times that they did push me, because it helped me to get where I am today.

Outside of academics, there were a variety of extra-curricular events and student organizations that students could participate in. Some of those groups included: Teens Needing Teens (TNT), a peer helping group; Learning is Fun Together (LIFT), an elementary tutoring program; Family, Career and Community Leaders of America (FCCLA); Future Farmers of America (FFA) and National Honor Society. Most of these programs didn't require a nomination and students could join as they pleased. Once you made the choice to become active in one group, it was amazing how things always seemed to snowball until you were somehow part of almost every other organization in school. Personally, I was a member of quite a few different groups and it was a great experience! I was able to be in many different leadership roles, which gave me the time-management and organizational skills I needed to make it in college. Extracurricular activities also helped me when I applied for college (and scholarships), as they demonstrated leadership and the other skills I'd developed.

My favorite extra-curriculars, however, took place in the gym. Sports were definitely a huge part of the student life at Goodhue. For its size, my high school had an unusually strong athletic program,

peppered with trips to the Metrodome and state-winning trophies. From wrestling and football to basketball and softball, it was really exciting for the students and community to be able to support the teams throughout each season.

Support from the community was huge, as their donations and contributions kept us from having to consolidate with other area schools. Although the actual school building was small and we only had two gyms (one actually doubled as the cafeteria, a very unfortunate circumstance for the wrestlers who practiced there and suffered on days we had tater tots, chili or other pungent meals), our community raised enough money to update the large gym where the main sporting events were held.

In the works was also a project to remodel the women's locker room. Due to the increasing number of girls participating in sports and a shortage of lockers, the already-cramped locker room was beyond its capacity. The girl's varsity team, B-squad, 9th grade and junior high teams had to share a handful of tall lockers (the other lockers were so small you could barely fit your shoes, clothes and equipment inside). On some occasions, we would even have to share our locker room with the opposing team. Everyone was eagerly awaiting the long-promised expansion; however, the new locker room was completed the summer after I graduated (much to the dismay of my teammates and I).

I really liked being able to participate in sports in high school. It was a great way to be involved, be active, and make friends. Since our school's enrollment was small, we recruited just enough people to make complete sports teams. As such, most sports didn't really have try-outs. If you were dedicated and somewhat athletic, you were on the team. When I started playing sports, I was by no means an outstanding athlete, but over the course of high school, and with help from coaches and teammates, I was able to mold myself into a much better player than when I had started.

I played basketball and softball, and some of my best memories from high school are from those sports seasons. I know that I would most likely not have gotten chances like that if I was at a larger school, and I am really thankful to have had that experience in my life.

Overall, I would say that my high school experience at Goodhue public was a very positive one. I felt that the education I received did a good job of preparing me for college and for the future. Even though small schools lack many of the opportunities available to students in larger schools, my high school gave me the chance to stand out instead of being just another person in the crowd. With the

personalized attention I received from faculty and staff, I was able to excel. I got into a great college, received helpful scholarships and grants, and am now working on my dream career. Is this a result of luck? Maybe. Is it because I worked hard? Most likely. Does it have anything to do with the fact that I grew up in a small town with a huge support network? Definitely.

Something that people forget about small towns is that you always have someone there for you — everyone knows you, your family and your friends. Yes, this means there's gossip, and everyone always seems to know what you're doing. And maybe in this small town there's not a Subway or McDonald's to eat at, and you have to drive 45 minutes to get to a shopping mall. But you've got a support group — not just your teachers, parents and peers, but an entire community. Maybe you don't get every single opportunity as a student from the Twin Cities, but you'll always have someone to motivate you, celebrate with you, comfort you and be there for you, no matter what. My experiences shaped who I am and what I will be. I am grateful for the classes that challenged me, the people who inspired me, and the community that helped me excel at Goodhue High School.

The Minnesota Miracle Abandoned? Changes in Minnesota School Funding, 2001-2007

Gregory R. Thorson & Jessica L. Anderson

"The stability of a republican form of government depending mainly upon the intelligence of the people, it is the duty of the legislature to establish a general and uniform system of public schools. The legislature shall make such provisions by taxation or otherwise as will secure a thorough and efficient system of public schools throughout the state."

Constitution of the State of Minnesota, Article 13, Section 1.

The Constitution of the State of Minnesota, unlike the Constitution of the United States, grants its residents a substantive right to education. Minnesota guarantees its residents both a "general and uniform" public school system. The Minnesota Constitution charges the state government with upholding both the assurances of uniformity and efficiency, and the State has attempted to fulfill these requirements since its inception through a variety of school funding policies.

In this paper, we briefly track some of the most important changes to the state's education finance system over its history, including legal challenges that occurred along the way. We then examine in detail the important changes to Minnesota's system of financing that have been implemented since 2001. Finally, we examine what impacts these changes had on local school districts both in the short and medium term.

A Brief History of Minnesota Education Finance

Education finance in Minnesota has developed through many eras, shifting between various combinations of state and local

Special thanks to Ben Winchester and Curt Bredeson of the Center for Small Towns, Bob Porter from the Minnesota Department of Education, and John Jernberg from the Minnesota State Auditor's Office for their assistance in providing data.

funding.[1] Prior to 1956, education funding in Minnesota came primarily from local property taxes. Even prior to 1956, however, there were funding initiatives that were enacted that attempted to shift the financing of public schools from local property taxes to state assistance. For example, in 1915 Minnesota adopted its first form of equalization aid to supplement low-levy districts. Subsequently, when the state income tax was instituted in 1933, a portion of the money it collected was dedicated to school funding and distributed on a per-pupil basis.

Foundation aid emerged in 1957, which for the first time shifted the majority of school funding from local taxes to the state. Initially, the base per-pupil formula allowance covered the majority (84%) of per-pupil maintenance costs, but unfortunately it did not grow fast enough to keep up with inflation and increasing costs. As a result, within 13 years the percentage of costs covered by the state through this allowance formula had fallen back below half (43%) of districts' total costs.

Perhaps not surprisingly, Minnesota's school finance system came under legal attack for the first time. In October of 1971, a federal district court judge ruled in the case of *Van Dusartz v. Hatfield* that the Minnesota school finance system was unconstitutional[2]. Relying heavily upon a California case from earlier that year[3], the judge found that "the level of spending for a child's education may not be a function of wealth other than the wealth of the state as a whole" (*Van Dusartz v. Hatfield)*. The state's system of funding schools at the time was not in compliance with this decision; school funding varied based on property wealth in each district and the system was therefore unconstitutional. It was time for Minnesota to make some major changes.

The Minnesota Miracle and its Effects

Shortly after the *Van Dusartz* ruling, the Minnesota legislature passed a new omnibus tax bill which came to be known as the "Minnesota Miracle." This was not only a response to the recent legal challenge but also part of an effort to reduce property taxes (Knowles & Knowles, 2005). The bill shifted the main source of education funding in the state back off of local taxes and onto the state, reducing property taxes by instead increasing income and sales tax rates. The new legislation also called for classifying school districts based on their spending levels, and it equalized the foundation aid formula based on these classifications. This led to a considerable increase in the formula allowance. Prior to this, the formula allowance had covered only 55% of districts' median maintenance

costs; it now paid for 93% of these costs. The exact percentages varied over time, but the state remained responsible for the largest share of school funding after 1971.

The system saw its next major changes in 1991 when the state initiated referendum equalization. The purpose of an equalization program is to reduce the effects of discrepancies in property values between districts and provide property tax relief to lower-wealth districts. When aid is equalized, the state essentially makes up the difference so that poorer districts are not forced to pay higher percentages of their property value in taxes in order to fund their schools. However, since this 1991 equalization program was tied to referendums, it made a portion of state aid dependant on the passage of the local levy. Districts that failed to pass levies did not receive this state aid (Knowles & Knowles, 2005). In some cases, this undoubtedly served to make disparities all the more apparent.

This new and supposedly equalized system set the stage for a new legal challenge. A few years after the 1971 *Van Dusartz* ruling, the U.S. Supreme Court had ruled on the case of *San Antonio v. Rodriguez.* In the *Rodriguez* decision, the Court declared that education is not a fundamental constitutional right, relegating it to a state issue and thus ending the first wave of school finance litigation based on the Equal Protection Clause of the U.S. Constitution (Grider & Verstegen, 2000; Verstegen, 1998). The majority of the Court placed the solutions firmly in the political system as they articulated their belief that the Congress or the states would find a solution to funding inequalities. Yet Justice Marshall's dissent expressed concern that "in the meantime, countless children [would] unjustifiably receive inferior educations…" (*San Antonio v. Rodriguez).* Although the majority of the Court chose not to mandate equality of public education under the U.S. Constitution, the door was left open for subsequent litigation across the country based on education provisions found in many state constitutions (Grider & Verstegen, 2000).

In 1991, a district court judge in the case of *Skeen v. Minnesota* ruled that the new referendum equalization system violated the equity guarantee found in the Minnesota Constitution, but the Minnesota Supreme Court reversed this decision two years later.[4] Ultimately, the Minnesota State Supreme Court did *not* find the school funding system to be a constitutional violation, and they did not order reform. However, the lawsuit did reflect the discontent some Minnesotans felt with the school finance system in the 1990s and perhaps served as a catalyst for political change.

School Finance Reform Since 2001

The Minnesota Supreme Court may have overruled the decision in *Skeen* that rendered the state school finance system unconstitutional in 1993, but the legislature continued to make changes to the system. Major developments in education finance came in 2001 in a series of reforms many lawmakers and columnists compared to the 1971 Minnesota Miracle. Writers from as far as Cleveland, Ohio, took notice of this second so-called miracle, recognizing Governor Ventura for the sort of "bold and historic" tax overhaul their state had been demanding for years to no avail (Sheridan, 2001). Ventura himself sang the praises of the 2001 tax bill. He called it "historic and bold to the very last detail" and predicted it would be "a major property tax relief that finally brings fairness to the system" (Baden & Smith, 2001).

However, other state politicians were less enthusiastic. Representative Tom Rukavina (D-Virginia) was one lawmaker who expressed some skepticism. "I don't know how badly this bill will come back to haunt us," Rukavina said, "but I predict in a couple of years it will haunt us" (Baden & Smith, 2001).[5]

Of the reforms that passed in 2001, two were most significant. Perhaps the most important change was a $415 "roll-in" of local referendum revenue per pupil. Under the reforms of 2001, each school district's voter-approved referendums would be reduced by $415 per pupil. That amount would correspondingly be paid to the school district by the state in the form of increased general education formulas. In principle, the goal was to reduce the local share of financing education and replace that revenue using state funds. Indeed, this approach was very similar to the "Minnesota Miracle" of 1971.

Table 1 demonstrates the effect that the "roll-in" had on the general education formula. In 2002-03, the General Education

Table 1: *Basic General Education Formulas, 2001-2003.*

Year	Formula Allowance	% Increase from Previous Year	Inflation Rate
2001-02	$4,068	2.6%	1.6%
2002-03	$4,601*	13.1% (2.9%**)	2.3%

Source: Minnesota House of Representatives Fiscal Analysis Department; Bureau of Labor Statistics
** The 2002-03 includes a $415 conversion of referendum revenue into the basic formula.*
*** Percent increase without referendum revenue roll-in.*

Formula allowance increased from $4,068 to $4,601 per student, a 13.1% increase. While that may appear to be a significant increase for Minnesota school districts, it is important to remember that $415 of that increase did not benefit school districts at all, but rather school district taxpayers in the form of the "roll-in"(i.e. the state taking over $415 of locally approved referendum payments). The actual increase to school districts was a much more meager 2.9%.

It should also be noted that much of the new revenue tied to the $415 per pupil of referendum value went to the wealthiest districts in the state. Referendum revenues are equalized, with poorer districts paying less of the total excess levy cost than wealthier districts. When the state took over the full cost of the $415 "roll-in," the net effect was to pay districts for the non-equalized portion of the local levy.

The second important component of the 2001 reforms was that the general education levy that was previously administered statewide on all properties to pay for the general education formula was eliminated and picked up by the state for fiscal year 2003 and thereafter. Prior to 2003, each district levied their district taxpayers the uniform state rate (in 2002 the flat general levy rate was 0.3241%), and the state paid the school districts the difference between the amount collected and the general education formula allowance. So for more property-poor districts, the state would pay a higher share of the general education formula. For wealthier districts, more money for the general education formula would be provided through local property taxes.

For fiscal year 2003 and thereafter, the state would pay the entire amount of the general education formula allowance without any contribution from district taxpayers. The cost to the state was staggering. The total cost to eliminate the general levy rate cost the state $1.33 billion in the fiscal 2003 year alone.

Driven largely by the increased state expenditures due to the $415 "roll-in" and the elimination of the general levy rate, state educational expenditures shot higher. Table 2 lists the state education

Table 2: *Education State Aid Entitlement, 2001-2003.*

Fiscal Year	Total State Aid	Percent Change from Previous Year	Aid Per Pupil	Percent Change from Previous Year
2001	$4.27 billion	7.9%	$4,998	7.7%
2002	$4.33 billion	1.6%	$5,090	1.9%
2003	$6.09 billion	40.5%	$7,189	41.2%

outlays from 2001 through 2003. The changes that occurred in 2003 increased the state's overall educational payments by over 40% from the previous year.

So with such a huge investment in state dollars, where did all of this money go? Contrary to what many believed, very little of it went to school districts. As was previously demonstrated, none of the school districts that previously had $415 referendums received any additional revenue from the "roll-in." Only the district taxpayers saw the benefits of that change. Similarly, school districts did not receive any additional revenues by the state eliminating the general education levy. So, of this $1.76 billion of total increased spending on education, very little of it was used to actually benefit school districts. Virtually all of it went to district taxpayers.

So which taxpayers benefited the most, and which districts experienced the greatest increases in state revenue? Not surprisingly, wealth in Minnesota tends to be distributed disproportionately in the Twin Cities metro area. Figure 1 visually displays the average wealth per pupil (referendum market value per pupil) in Minnesota school districts. A close inspection of Figure 1 shows that the school districts with the lowest 20% of wealth in the state of Minnesota are scattered throughout rural Minnesota, and the wealthiest districts tend to be located in the Twin Cities metro area.

Minnesota's property wealth also tends to be distributed disproportionately among the largest school districts in the state. Table 3 shows that in school districts with the lowest enrollments, the average property wealth per pupil is just over $113,000. In the largest school districts in the state, average property wealth is over $260,000 per pupil.

Table 3: *District Wealth in Minnesota School Districts, by Enrollment Quintile, 2003.*

Enrollment Quintile	District Wealth Per Pupil (Average)	District Wealth Per Pupil (Median)
Lowest 20%	$113,680	$102,105
21 – 40%	$134,067	$120,682
41 – 60%	$132,869	$124,349
61 – 80%	$178,849	$141,253
Highest 20%	$260,814	$223,540

Source: 2003 Referendum Market Value per Pupil, Minn. Department of Education

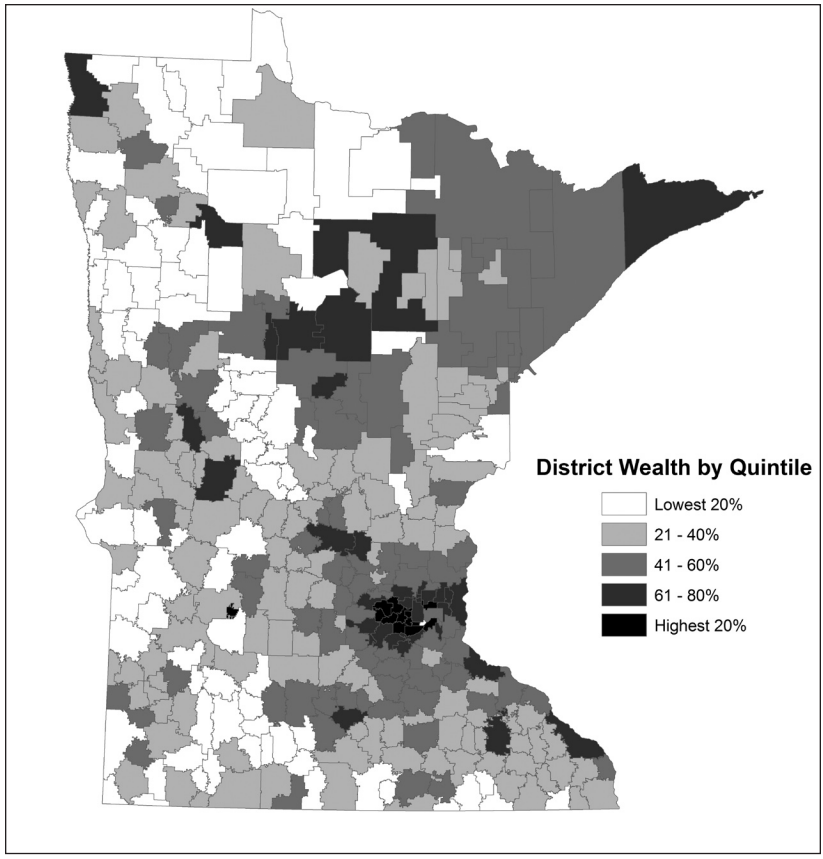


Figure 1: *Wealth per Pupil in Minnesota School Districts, 2003.*
Source: 2003 Referendum Market Value per Pupil, Minnesota Department of Education.

Table 4 shows then where the additional state revenues went to pay for the elimination of the general levy. The school districts with the lowest property values received an average of just over an additional $1,100 per pupil in aid from the state while those districts with the most wealth received over $2,200 in new aid from the state due to the elimination of the general levy.

Table 4: *Additional State Revenue Per Pupil Paid to Districts in FY 2003 Due to Elimination of Basic Levy, by Wealth Quintile.*

Wealth Quintile	Additional State Dollars Per Pupil (Average)
Poorest 20%	$1,107
21 – 40%	$1,255
41 – 60%	$1,190
61 – 80%	$1,375
Wealthiest 20%	$2,240

Source: Minnesota Department of Education

Table 5 translates this into the percentage change in total state aid due to these changes. While the poorest school districts saw their percentage increase in funding grow over 42%, the wealthiest school districts had mean increases of more than 109%.

Table 5: *Percentage Change in Total State Aid to Minnesota School Districts, 2002-2003 (by Wealth Quintile).*

Wealth Quintile	Percentage Change in Total State Aid (Average)	Percentage Change in Total State Aid (Median)
Poorest 20%	+42.3%	+33.1%
21 – 40%	+46.5%	+39.1%
41 – 60%	+37.5%	+32.8%
61 – 80%	+43.1%	+43.1%
Wealthiest 20%	+109.2%	+61.3%

State Mean: +51.5% ($1.7 Billion Increase)
Source: Total State Aid to School Districts, Minnesota Department of Education

The Fallout from the 2001 Reforms

The 2001 reforms were very costly and committed the state to billions of dollars of new spending for the benefit not so much of school districts but for the district taxpayers in the wealthiest school districts in Minnesota. However, hard times fell on the state almost immediately following the reforms.

The slowing of the national economy had significant effects on Minnesota tax revenues. The effects were most pronounced on taxable incomes, which were hit hardest by the slowdown. Saddled with an enormous amount of new entitlements toward education and other programs while simultaneously experiencing slow revenue growth, deficit estimates for the 2004-2005 biennium topped $4.2 billion.

Not surprisingly, the state moved to slow education spending. Table 6 shows that after the increase in the General Education Formula allowance in 2002-03, the state actually froze the formula for both 2003-04 and 2004-05.

Table 6: *Basic General Education Formulas, 2000-2006.*

Year	Formula Allowance	% Increase from Previous Year	Inflation Rate
2002-03	4,601*	13.1% (2.9%**)	2.3%
2003-04	4,601	0.0%	2.7%
2004-05	4,601	0.0%	3.4%
2005-06	4,783	4.0%	NA
2006-07	4,974	4.0%	NA

Source: Minnesota House of Representatives Fiscal Analysis Department; Bureau of Labor Statistics

** The 2002-03 includes a $415 conversion of referendum revenue into the basic formula.*

*** Percent increase without referendum revenue roll-in.*

The effects of this freeze were severe for local school districts. While overall inflation increased over 6% during this period, the costs of employee healthcare and fuel costs rose even more significantly.

Compounding the problem were widespread declining enrollments in Minnesota schools. Table 7 shows the change in enrollments in Minnesota school districts between 2001 and 2005. Over 10% of districts lost 15% or more of their enrollment, while 30% of districts lost over 10% of their enrollment. Over 75% lost at least some enrollment during this period.

Table 7: *Change in Enrollment in Minnesota School Districts, 2001-2005.*

Change in Enrollment	Percent	Cumulative Percent
15.0% or Greater Decline	10.8%	10.8%
10% to 14.9% Decline	19.2%	30.0%
5% to 9.9% Decline	24.2%	54.2%
0.1% to 4.9% Decline	22.7%	76.9%
Percent with Enrollment Losses		**76.9%**
0.0% to 4.9% Gain	10.3%	87.2%
5.0% to 9.9% Gain	5.5%	92.7%
10.0% to 14.9% Gain	2.8%	95.9%
15.0% or Greater Gain	4.1%	100.0%
Percent with Enrollment Gains		**23.1%**

Note: Enrollments standardized using current WADM calculations.

Table 8 shows that much of this decline disproportionately affected the smallest school districts in the state. In previous work (see Thorson and Edmondson, 2000; Thorson and Maxwell, 2002), we found that the smallest school districts in the state were being hit the hardest by stagnant budgets. Table 9 shows that the smallest schools were hit the hardest by these enrollment declines as well. While the smallest school districts in the state lost an average of 10% of their student populations, the largest districts in the state had small but measurable increases.

Table 8: *Change in Enrollment by Quintile, 2001-2005.*

Quintile	Mean Enrollment Decline
1st (smallest)	-10.1%
2nd	-4.9%
3rd	-6.6%
4th	-4.0%
5th (largest)	+1.4%
State Mean	**-5.1%**

Table 9: *Levy Amounts Subject to Equalization, 2001-2007.*

Year	Equalization
2001-02	$415
2002-03	$126
2003-04	$126
2004-05	$405
2005-06	$500
2006-07	$600
2007-08	$700

Coupled with stagnant per-pupil general education revenues, these enrollment drops precipitated the need for school districts to balance their budgets using a combination of steep cuts and the reinstatement of local levies. The state responded accordingly. Realizing that state revenues were insufficient to meet the obligation of providing the entire general education costs, the state moved to increase the local levy amounts that would be eligible for equalization.

Table 9 shows that after the "roll-in" of $415 per pupil that was enacted in 2001, the state quickly moved to increase the local financing of public schools through its attractive equalization program. After declining to just $126 in 2002, the state increased the amount subject to equalization to $405 in 2004, $500 in 2006, and $700 in 2007.

The state had now come full-circle with regards to the financing of its public schools. While conceptually wanting to fully fund Minnesota public schools at the state level in 2001, by the 2007 school year, the state had offered greater incentives than ever for schools to fund locally.

Figure 2: *Total Minnesota school district referendums passed, 1991-2005.*

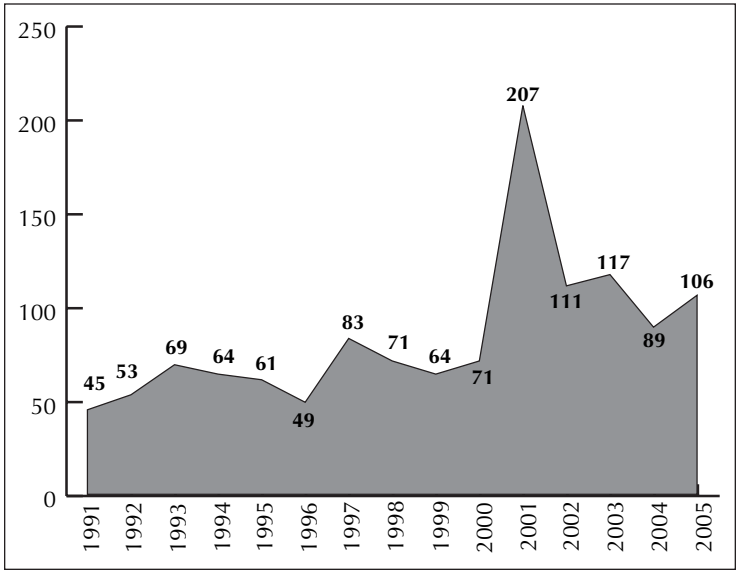


Figure 2 shows that a number of Minnesota school districts accepted these incentives for local levies. Minnesota school district voters passed large numbers of local referendums over this period. Indeed, many school districts, to the consternation of Governor Ventura, passed new school referendums at the same time that the state was "rolling in" their previous referendum. A whopping 207 school districts passed operating referendums in 2001. Figure 2 demonstrates that although the number of referendums passed lessened a bit in subsequent years, it has remained nevertheless historically very high.

The result of this activity is summarized in Figure 3. Despite the state's interest in fully funding the education of Minnesota's students, it has largely been unable to do so. The average referendum has increased for all size of school districts since 2003, and for many school districts, the amount levied is now more than prior to the "roll-in" in 2001.

The aggregate impact is visually displayed in Figure 4. While the percentage change in total state aid increased dramatically in 2003 due to the state eliminating the general education levy and the $415 per-pupil roll in of local referendums, few school districts saw much new revenue. Since that time, the percentage actually decreased in 2004 and 2005. In fact, the total Minnesota state spending on education entitlements *decreased* during that period from $6.08 billion to $6.01 billion.

Figure 3: *Minnesota school districts' average referendum per pupil by enrollment quintile, 2000-2006.*

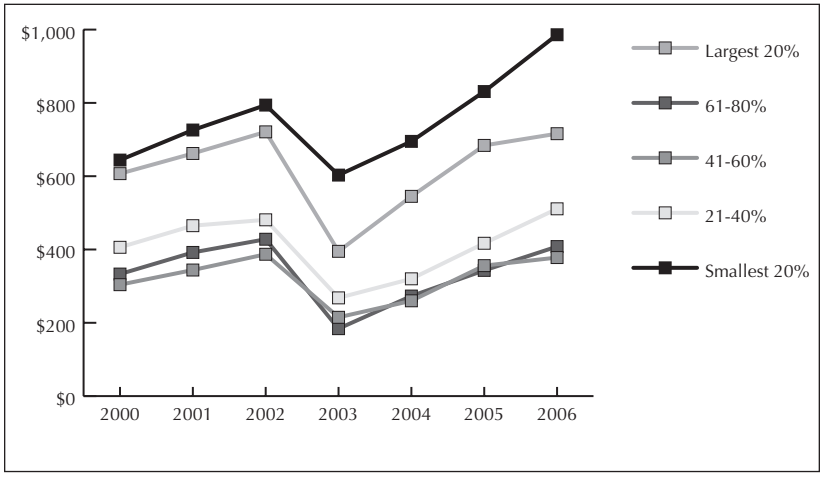
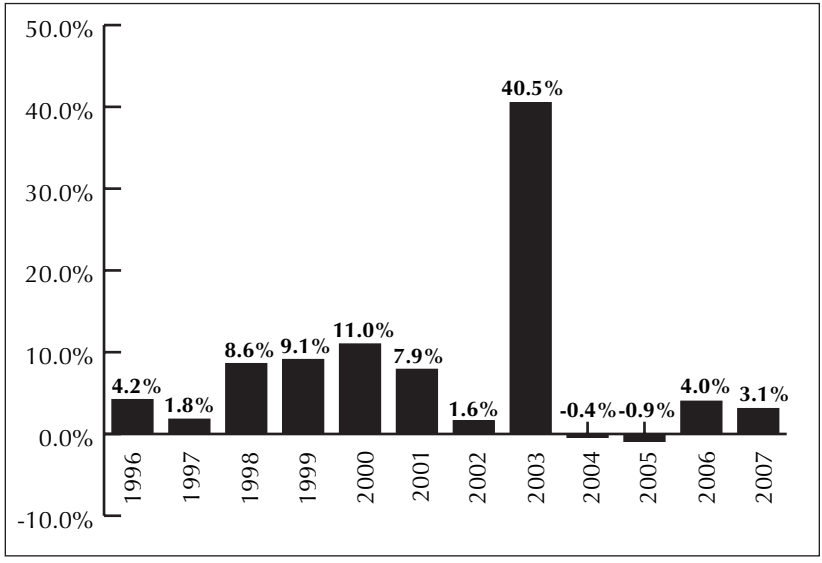


Figure 4: *Percentage change in total state aid entitlements, 1996-2007.*



Conclusion

Supporters of the education reforms passed by the state of Minnesota in 2001 pledged that a new era was unfolding in Minnesota where the state would finance the full educational costs of Minnesota's public school children. Many thought that these reforms would finally realize the vision established in the 1971 "Minnesota Miracle."

In reality, however, the reforms delivered little to Minnesota's school districts except for financial distress. Very little of the more than $1.7 billion pumped into education by the state even went to school districts. Most of the money went to reduce the property tax burden of district taxpayers by eliminating not only most local school referendums, but also the general education levy that previously paid for much of the cost of educating Minnesota's school children. Indeed, most of the money went to relieve the wealthiest property tax owners in the wealthiest school districts in Minnesota.

The aftermath of the reforms was also poor for Minnesota's school districts. The state's decision to offer tax relief to district taxpayers was untimely. When significant fiscal stress subsequently occurred, the state could not even meet the continuing inflationary needs of the state's school districts. Combined with widespread declining enrollment, Minnesota school districts were forced to cut educational programming as well as go back to the taxpayers and reinstate levies that in many cases were even higher than those that existed prior to the 2001 reforms.

Ultimately, the 2001 reforms did little to move Minnesota closer to the promise of the "Minnesota Miracle." Enormous state expenditures that appeared to direct more state spending to school districts instead simply served to provide tax relief disproportionately to the wealthiest Minnesotans living in its wealthiest school districts. The "Minnesota Miracle," with its promise to provide full state funding for the public education of every child in the state, appears today as elusive as it did in 2001.

Endnotes

[1] Unless otherwise noted, the data from the pre-2001 period was taken from the Minnesota School Finance History report from 1849-2005 issued by the Minnesota Department of Education.
[2] Plaintiffs in *Van Dusartz v. Hatfield* alleged that Minnesota's school finance system was in violation of the Equal Protection Clause of the 14th Amendment of the U.S. Constitution.
[3] *Serrano v. Priest* was decided in California in August of 1971.
[4] The Minnesota Supreme Court reversed the trial court's decision, ruling that "the current system of state funding of education does *not* violate the Education Clause of the Minnesota Constitution" (*Skeen v. State*, 1993; italics added).
[5] The two articles in which these quotes were found ran in the Star Tribune on July 1 and June 29, 2001, respectively. Both were co-authored by Patricia Lopez Baden and Dane Smith, and both were front-page stories.

References

Dayton, John. "Rural school funding litigation: A review of recent cases, Judicial and Legislative Interactions, and emerging trends." *Journal of Education Finance.* v. 29, no. 2 (2003) pp. 157-183.

Grider, Andrew & Verstegen, Deborah. "Legislation, Litigation, and Rural & Small Schools: A Survey of the States." *Journal of Education Finance.* v. 26, no. 1 (Summer 2000) p. 103-119.

Hoxby, Caroline. "All School Finance Equalizations Are Not Created Equal." *Quarterly Journal of Economics*. (November, 2001): 1189 – 1231.

Knowles, Glen & Elizabeth. "Equity Issues in the State of Minnesota School Finance." Midwest Economics Association. 2005.

Lopez Baden, Patricia & Dane Smith. "Legislature 2001: The Finale." *Star Tribune.* Star Tribune: Minneapolis, MN. (July 1, 2001) p. 1A.

Lopez Baden, Patricia & Dane Smith. "Hard part is done: House, Senate pass tax bill that was huge stumbling block." *Star Tribune.* Star Tribune: Minneapolis, MN. (June 29, 2001) p. 1A.

Minnesota Chamber of Commerce. "K-12 Education Background." January 2006. http://www.mnchamber.com/priorities/k12_bkgd.pdf

Minnesota Constitution. http://www.house.leg.state.mn.us/cco/rules/mncon/mncon.htm

Minnesota Department of Education. "Minnesota School Finance History: 1849 – 2005." http://education.state.mn.us/mde/static/004107.pdf

Minnesota Department of Education. "Options for General Education Formula Changes to Limit Revenue Disparities." Report to the Legislature. January 2004. http://children.state.mn.us/mde/static/002298.pdf

Minnesota Department of Education, Program Finance Division. "K-12 Education Finance Overview 2004-2005."

Minnesota Department of Education, Program Finance Division. "Governor's K-12 Education Budget Overview." Presentation. March 2005. http://children.state.mn.us/mde/static/GovK-12EdBudOverviewPres.ppt

Minnesota House of Representatives Fiscal Analysis Department. "Financing Education in Minnesota 2004-05." Greg Crowe. August, 2004 http://www.house.leg.state.mn.us/fiscal/files/04fined.pdf

Minnesota House of Representatives Fiscal Analysis Department. "Understanding the K- 12 General Education Funding Program 2002-03." Greg Crowe. 2003. http://www.house.leg.state.mn.us/fiscal/files/02gened.pdf

Minnesota House of Representatives Fiscal Analysis Department. "Financing Education in Minnesota 2005-06." September 2005. http://www.house.leg.state.mn.us/fiscal/files/05fined.pdf

Sheridan, Chris. "What a Forceful Governor Can Do." *Plain Dealer.* Plain Dealer Publishing Co.: Cleveland, OH. (July 15, 2001) p. 2G.

Skeen v. State of Minnesota. 505 N.W.2d 299 (Minn., 1993).

Smith, Dane. "Some May Get the Shaft from the Tax Shift: Huge changes in how the state assesses property tax and pays for schools may cost more in the end." *Star Tribune.* Star Tribune: Minneapolis, MN. (May 27, 2001) p. 1A.

Thorson, Gregory R. and Nicholas J. Maxwell. 2002. *"Small Schools Under Siege: Evidence of Resource Inequality in Minnesota Schools."* Published by the Center for Rural Policy and Development, Mankato.

Thorson, Gregory R. and Jacqueline Edmondson. 2000. *"Making Difficult Times Worse: The Impact of Per Pupil Funding Formulas on Rural Minnesota Schools."* Published by the Center for Rural Policy and Development, Mankato.

Toppo, Greg. "State Signs on to '65% Solution' for Funding Schools." *USA Today.* April 10, 2006. http://www.usatoday.com/news/education/2006-04-10-65-percent-solution_x.htm

Van Dusartz v. Hatfield. 334 F. Supp. 870 (U.S. Dist. Minn., 1971).

Verstegen, Deborah. "Judicial Analysis During the New Wave of School Finance Litigation: The New Adequacy Education." *Journal of Education Finance.* Vol. 24. No. 1 (1998) p. 51-68.

Risk and Resilience in Rural Minnesota: Helping Our Youngest Citizens Succeed

Martha Farrell Erickson
& Michele Fallon

Ten-month-old Michael cries in his high chair while his 3-year-old sister Lisa pleads with their dad to let her play outside. Exhausted from working the night shift at a factory in the next town, their dad lies on the couch wondering how he's going to get through the day until his wife gets home from her job cleaning rooms at a nearby motel. He knows the kids would be better off at the daycare home down the road, but then how would they have enough money to make ends meet? Maybe his sister will watch the kids for an hour when she gets off work today. But for now, if he can get the kids to watch TV, maybe he can sleep for an hour or two.

Before long Michael and Lisa will enter school in your community. But how will they fare in the classroom? Will they have the language and cognitive skills necessary to succeed? Will they have learned to focus their attention, express their feelings, and cooperate with others in ways that allow them to make the most of their classroom experience? Taking the long view, what are the odds that they will grow up to be caring, competent, responsible citizens of your community?

Our nation has had a longstanding commitment to education for all and a generally strong K-12 education system to support that commitment. Schools in our own state of Minnesota consistently rank well on educational outcomes when compared to schools in other states. Nonetheless, even in Minnesota, confidence in our education system is challenged by a persistent pattern of disparities showing that some children — particularly students of color and children living in poverty (like Michael and Lisa) — lag far behind their white, middle-class peers on almost any educational outcome of interest.

Too often discussions of education in general — and educational disparities in particular — fail to address the importance of the years before a child enters the K-12 system. But that is changing in

Minnesota, thanks to business leaders, private foundations, and a growing number of policy makers who have taken up the cause of early childhood care and education. That is good news for those of us who study early child development, and it is good news for children like Michael and Lisa, as well as anyone who cares about the future of rural Minnesota. A hot concept in economic development these days is "human capital" (the person power necessary to make a business, organization, or community thrive). Anyone who studies human development will attest that, to be effective, investment in human capital begins at (or even before) birth.

Unfortunately, investments in young children in Minnesota have been diminishing in recent years as the result of significant cuts in funding for child welfare, support services for struggling families, and early childhood care and education. Yet at the same time there has been a virtual explosion of research in child development, particularly in the area of early brain development, which strengthens the case for why early childhood experience is so important and worthy of significant investment. Taking that research to heart (and going beyond that research to demonstrate the cost effectiveness of investing early in the future work force), business leaders and other decision-makers around Minnesota have led the charge in building such collaborations as Ready4K, the Minnesota Early Learning Foundation, the Early Childhood Coalitions, and the Itasca Project. Those new and dynamic groups are adding their voices and important perspectives to other early childhood resources such as the Children's Defense Fund, the Center for Early Education and Development at the University of Minnesota, and the Minnesota Departments of Health and Education. With an eye to the research in child development, there appears to be a fair amount of consensus about what our children need to become healthy, contributing members of our communities, whether urban, suburban or rural. The foundation for competence in school, in work, and in relationships is laid in the early childhood years.

In considering the potential impact of early childhood education, especially in rural areas, it is important to consider a diversified delivery system that meets the needs of specific communities. Thus effective early childhood education can be delivered in a number of ways, e.g. through Head Start programs, high quality child care centers, and family childcare providers who have access to training and consultation. Our burgeoning knowledge of child development and infant and young children's

mental health informs us, however, of the need for a holistic approach to meeting the needs of young children, not only through formal "early childhood education" programs, but also by addressing the many factors of risk and resiliency in their families and their communities.

What do our children need to succeed?

According to *Neurons to Neighborhoods* (National Research Council, Institute of Medicine, 2000), a comprehensive summary of recent scientific research in child development, "Virtually every aspect of early human development, from the brain's evolving circuitry to the child's capacity for empathy, is affected by the environments and experiences that are encountered in a cumulative fashion, beginning early in the prenatal period and extending throughout the early childhood years" (p. 6). Thus, parents have a powerful influence on a child's early development, and therefore, the health and well being of parents is an essential variable in children's developmental outcomes.

Early brain development occurs rapidly and is extremely vulnerable to early experiences; the organization of the neurons and pathways among them are designed to change in response to experience, particularly prenatally and in the first year of life. For optimal development, infants need **consistent, responsive, nurturing caregivers**. This leads to a secure attachment, which becomes the foundation for the child's view of the world, the blueprint for future relationships, and a critical mediator of the child's response to stress in the future (see, for example, Erickson & Kurz-Riemer, 2002, and Sroufe, Egeland, Carlson & Collins, 2005).

Research demonstrates that first and foremost in contributing to a child's success in school is the quality of the relationship between the parent and child. As the child's first teachers, parents provide the earliest experiences that contribute to the architectural organization of the developing brain. By successfully interpreting the infant's cues and meeting the infant's needs the majority of the time ("good enough" parenting), parents help the child develop expectations of the world as a safe place and lay the foundation for the child's developing capacity to regulate his or her behavior and emotions. In contrast, a child with insensitive or unresponsive care comes to view the world as a scary place and fails to develop the capacity to express and manage emotions in a healthy way. An important part of the parents' role in the early years also is to protect the young child from trauma and excessive stress (for example, domestic violence or high levels of family conflict) that can

cause physiological dysregulation and undermine young children's capacity to focus attention and think logically.

Children also need a safe and stimulating home environment, with **opportunities for exploration** that builds on the child's natural curiosity and promotes the development of creativity, initiative and problem-solving. Children living in crowded or inadequate housing — or whose parents do not understand or respect the importance of play and exploration — often lack such opportunities. A safe and stimulating childcare environment can compensate to some extent for that lack of opportunity at home. But too often children have neither.

In order to develop effective communication and literacy skills, young children must be provided with **language stimulation** beginning at birth. Singing, reading, and talking to a baby long before he or she can talk back lays the foundation for nearly all later academic learning. And, as babies become toddlers, asking "how" and "why" and "what then" kinds of questions nurtures important thinking skills. In a major study of language disparities among elementary school children, Hart and Risley (1995) documented just how critical these early language experiences are to subsequent school success.

Finally, through **modeling and guidance**, parents teach their very young children to take turns, share, resolve conflict, focus and attend, and follow directions, skills that teachers identify as critical to school success. By creating enriching experiences, making careful choices of childcare or preschool, and recognizing children's efforts and achievements, parents also communicate their attitudes about the importance of learning and succeeding in school — attitudes the children will internalize and carry forward as they actively contribute to their own school success.

The Role of Childcare in Young Children's Development

Although family is the first line of care and education, for most young children in Minnesota, childcare is a close second. A survey by the Minnesota Department of Human Services in 2004 indicates that approximately three fourths of Minnesota families with children under 13 years of age regularly use some type of childcare arrangement. Of these, approximately one third of families use center-based care as their primary childcare arrangement, 10% use licensed family childcare, and 46% use family, friend, and neighbor (FFN) care. At its best, childcare can be a supportive complement to what children experience at home or, for children in less-than-

optimal home environments, a compensatory experience that can tip the balance toward good developmental outcomes.

Multiple researchers have demonstrated that children, particularly those considered high-risk, make notable long-term gains when they have the opportunity to participate in high-quality early childhood programs. High-quality programs provide children with the opportunity to develop close relationships with teachers in the context of cognitively stimulating environments. Those programs that include parent education and involvement are found to be most successful (Burr and Grunewald, 2006; Egeland & Bosquet, 2002). A developmental assessment of children attending 22 nationally accredited childcare settings in Minnesota found that almost twice as many children were rated as "proficient" or "school ready" compared to the statewide 2003 Minnesota School Readiness Study, regardless of the education level of their parents, family income, or minority status (Minnesota Department of Human Services, 2005). Economist Art Rolnick, Vice President for Research at the Federal Reserve Bank in Minneapolis, calculates as much as a 16% return on investment from high-quality early childhood programs aimed at children at risk; such programs reduce juvenile delinquency, special education services, teen pregnancy, welfare dependency and other negative outcomes later in life (Rolnick & Grunewald, 2003).

Identifying the risks

Risks that threaten children's achievement of their full developmental potential can occur in a number of ways. The environment into which a child is born can affect brain development, attachment relationships, and learning in profound ways. Environmental threats include poverty and its associated stresses, toxins in the environment (for example, residue from lead paint in substandard housing), family isolation, and violent homes or communities. Parents themselves bring their own histories of how they were parented; mental, physical and chemical health status; education and employment status; and other internal resources or lack thereof. The child also brings inherent strengths and challenges, including innate genetic potential, temperament, health status and developmental challenges. The strengths and challenges inherent in each of these three components — environment, the parent, and the child — need to be identified and addressed to truly optimize the developmental potential of each of our children.

We know that many of our children are falling short of entering kindergarten adequately prepared. A school readiness study conducted in the fall of 2004 by the Minnesota Department of Education found that within a "strategically selected sample" of new kindergartners, only 51% demonstrated adequate readiness in personal and social development, and 47% demonstrated readiness in language and literacy (Barnidge, Cooke, Kuklinski, Larson, Latchaw, O' Sullivan, Swenson-Klatt, & Wallace, 2004).

Many of our young children in Minnesota are considered to be "at risk" for falling short of their potential as a result of living in poverty and/or living in families whose lives are complicated by mental health issues, chemical dependency, domestic abuse, lack of adequate health care, adolescent parenting, low educational achievement, unemployment and isolation. Each of these factors alone is known to have deleterious effects on children's development and research tells us that the exposure to multiple risk factors (as is often the case) significantly increases the likelihood of childhood learning and behavior problems.

For rural children, many of these risk factors are complicated by relative social isolation, higher rates of unemployment, lack of health insurance, transportation barriers and inaccessibility of services, such as quality childcare, early childhood programs, and mental health care for both parents and children. A national study of rural children by the Department of Agriculture (2005) indicates that, in 2003, 21% of children in rural areas were living in poverty compared to 18% of urban children. Also, proportionately more rural children were without health insurance (22%) than urban children (12%). Within our own state, the 2005 Kids Count data for Minnesota counties suggest that some of the highest rates of child poverty occur in rural Minnesota, with 30 rural counties exceeding (at 11%-22%) the 10% poverty rate documented in Hennepin County. The national Department of Agriculture study (2005) also notes that, "Non-metro children are more likely than metro children to have younger and less educated parents, and children with younger and less educated parents are more likely to be poor."

The adverse effects of parental mental illness on children are well documented, as described in *Neurons to Neighborhoods*, a landmark volume that synthesizes recent research in early child development. For example, compared with children of non-depressed mothers, those with depressed mothers are at increased risk for developing social/emotional and behavior problems, resulting in school difficulties, poor peer relationships, and difficulty regulating emotions and behavior. Children of depressed

mothers are also at significantly increased risk for the development of serious psychopathology themselves. Infants and toddlers "who are acutely dependent on their mothers, whose frontal lobes are experiencing rapid growth, and whose attachment, social-emotional and regulatory capacities are developing, are particularly vulnerable to the negative effects of maternal depression" (National Research Council, Institute of Medicine, 2000, pp. 252-253).

Chemical health issues for parents are often very difficult to separate from mental health issues as the two so often co-occur. Children living with caregivers who are abusing chemicals, including alcohol, often experience very erratic patterns of care giving and are at much higher risk for neglect and abuse and a host of developmental difficulties (National Research Council, Institute of Medicine, 2000). Posing a particularly great risk to young children in rural Minnesota is methamphetamine use, which has risen dramatically in recent years. According to the Minnesota Department of Health, of 500 meth labs and affected sites identified in Minnesota in 2003, 75% were located in "rural or semi-rural areas."

The Minnesota Rural Health Advisory Committee's Report on Mental Health and Primary Care (2005) indicates that, "While studies have shown that prevalence of mental health distress in rural Minnesota is not greater than that in urban and suburban areas, there is a greater chance that mental health services may be limited or nonexistent." For example, in 2003, there was a ratio of 12.3 psychiatrists per 100,000 urban population in Minnesota, compared to approximately 4.5 psychiatrists for every 100,000 rural Minnesotans. Figures on other mental health providers — psychologists, social workers, and advanced practice nurses — suggest similarly disproportionate services in rural areas.

The Minnesota Children's Defense Fund reported that during the 2003 legislative session, there was a $37.5 million reduction in state spending on child welfare grants for the 2004-05 biennium; 16 child welfare programs were merged into a single block grant, resulting in variation among counties' funding for child welfare programs, favoring those urban counties with a larger tax base. The Association of Minnesota Counties, when asked about the impact of the cuts, reported combating the cuts by "reducing or eliminating optional prevention and early intervention services in favor of 'deep-end' treatment services [child protection, foster care] which are usually more expensive," expressing concern that fewer early intervention programs would result in a higher need for these deep-end services. (Note that, in the last hours of this most recent

legislative session, a bi-partisan bill was passed by the House of Representatives and the state Senate which restores some of the cuts to childcare, increases funding for early childhood family education, and improves the foundation to improve school readiness with the reinstatement of the Minnesota School Readiness Kindergarten Assessment and incentives for improved child care quality.)

While this year's legislative action is a welcome step in the right direction, there currently is a significant lack of high-quality early childhood education opportunities for our children in Minnesota. A 2005 study of the quality of Minnesota's childcare centers by the Minnesota Child Care Policy Research Partnership found that only 25% of the 100 centers evaluated across the state met criteria for a rating of "good;" 71% of centers were above criteria for meeting "minimal" standards, but did not achieve a "good" rating; and 4% of centers fell below "minimal" standards. Those centers rated as "good" tended to have a higher-educated, better paid staff and were accredited and part of a multi-service agency; of note is that geographic area was not linked to quality, nor was the number of enrolled children receiving childcare assistance. However, there are rural counties in Minnesota that do not have an accredited childcare center.

Even when quality childcare is available, it may not be affordable for many families. Families with incomes under $20,000 spend an average of 28% of their household income on childcare, while families with average incomes spend 10% on childcare. Approximately 25% of low-income families with children under 5 are receiving state child care assistance, many fewer than could qualify. The 2003-legislated increase in co-pays for families receiving childcare assistance resulted in many families leaving quality care for less costly (and lower quality) options (Chase, Arnold, Schauben & Shardlow, 2005).

Promoting Resilience in Our Children

We have the research to tell us what children need to flourish, even in the face of adversity. We know that first and foremost, young children need consistent, nurturing, predictable relationships with their caregivers, whether this is provided by the parent and/or a child care provider. For this to occur, parents' social, emotional, educational, health and employment needs must be addressed as part of the promotion of successful parenting. Family support services can help parents enhance their competence and confidence in providing responsive and sensitive care by addressing factors that underlie the parent's ability to nurture his or her child, including both the relationship needs and more material needs of

individual parents and children. "Pre[k]now," a national advocacy group for universally available high-quality pre-kindergarten programs, identifies Wisconsin as a model in this regard, as the state offers a higher rate of reimbursement for pre-K programs with a parent engagement component (Doggett, 2006).

Resilience research suggests that in the context of care giving deficits and stress in the home, alternative caregivers play a critical role in supporting a child's development by facilitating the development of self-regulatory skills, the ability to provide clear cues and signals, and the child's sense of mastery. Quality childcare can serve as a protective factor for children by potentially combating many of the risk factors and reducing the disparities of school readiness created by income, culture and opportunities for learning. There is research to suggest that high-risk mothers whose infants were attending high-quality childcare actually demonstrated more affectionate behavior toward their babies than comparison groups who infants were with them full time or were in lesser quality care (National Research Council, Institute of Medicine, 2000).

Rural communities are known to have a number of important strengths from which to build in developing resources to help their youngest citizens flourish. A strong commitment to community typically characterizes rural areas, as does a tradition of collaboration and cooperation leading to practical solutions to complex problems. Enduring social networks and relationships also tend to be a significant strength in rural areas (Minnesota Department of Health, 2005).

The Early Childhood Coalitions in Greater Minnesota are a prime example of such community strengths. The "Minnesota Early Childhood Initiative … A Campaign for Our Youngest Children" is a statewide collaboration of the state's six Minnesota Initiative Foundations working together to advocate for investment in early care and education for the future of rural communities. More than 1,850 community members across the state have participated in face-to-face interviews, and 3,000 community members have been engaged in community forums to share their perceptions of the availability and accessibility of resources and supports for young children. A number of themes and issues have emerged from this initiative, including:

- The need for infant/toddler child care, as well as extended-hour and respite care;
- Barriers to accessing medical, mental health, dental and prenatal care;
- Limited financial resources for early care and education

programs due to state funding cuts;
- Long waiting lists for early childhood programs;
- The need for additional health and developmental screening and services for children from birth to 3 years of age;
- The need to recognize and address cultural, social, and economic disparities in communities; and
- The need to implement strategies to reach families who are not accessing services.

To address these identified needs, the MIFs are using a unique grassroots community organizing model in combination with enlistment of the business community, communication strategies, and public policy development and advocacy.

Collaborative, integrated systems of care that address the needs of very young children within the context of their families are essential if Minnesota's young children are to succeed in school and grow up to be responsible, competent citizens. This involves bringing all the stakeholders within communities to the table, including school districts, medical providers, business leaders, parents, social services, and the community providers of services to young children, including Head Start, center-based and family-based childcare providers. The equation for success must include strategies for addressing the economic needs, mental and physical health needs, and social support needs of parents. And the equation must include ongoing training, consultation, and support for all caregivers of young children. Targeting families with the greatest needs requires being creative in reaching parents where they are, as well as recognizing and communicating to parents that they are essential partners in educating strong and competent children. Programs that engage parents in this way early on assist them in staying engaged with their children's learning for the long term. This will require strong advocacy for community, state and national policies that acknowledge the efficacy of investing now in affordable, accessible, high-quality options for all children and families (especially those with the greatest needs) as a means of achieving an optimal future for us all.

References

Barnidge, L., Cooke, B., Kuklinski, W., Larson, A., Latchaw, A., O' Sullivan, B., Swenson-Klatt, D. & Wallace, K. (Fall 2004). *Minnesota School Readiness Year Three Study: Developmental Assessment at Kindergarten Entrance.* St. Paul, MN: Minnesota Department of Education.

Burr, J. & Grunewald, R. (April, 2006). *Lessons Learned: A Review of Early Childhood Development Studies.* Minneapolis, MN: Federal Reserve Bank.

Chase, R., Arnold, J., Schauben, L., & Shardlow, B. (November, 2005). *Child Care Use in Minnesota: 2004 Statewide Household Child Care Executive Summary.* St. Paul, MN: Minnesota Department of Human Services.

Children's Defense Fund Minnesota and Child Care WORKS. (April, 2005). *Childcare in Minnesota: Missed Opportunities Produce Costly Outcomes.*

Children's Defense Fund Minnesota. (July, 2004). *Child Welfare Services Face Cutback.*

Doggett, L. (May, 2006). *pre[k]now: Focus on Pre-kindergarten for All.* Address at the Center for Early Education and Development McEvoy Lecture Series, University of Minnesota.

Economic Research Service, United States Department of Agriculture. (March, 2005). *Rural Children At a Glance,* Economic Information Bulletin, No. 1.

Erickson, M. F. & Kurz-Riemer, K. (2002). *Infants, Toddlers and Families: A Framework for Support and Intervention.* New York, NY: Guilford Press.

Hart, B. & Risley, T.R. (1995). *Meaningful Differences in the Everyday Experiences of Young American Children.* Baltimore, MD: Paul H. Brookes Publishing Co., Inc.

Kids Count Minnesota and the Children's Defense Fund Minnesota. (2005). *Minnesota Kids: Focus on Health, 2005 Databook.*

Minnesota Department of Health, Rural Health Primary Care. (January, 2005). *Rural Health Advisory Committee's Report on Mental Health and Primary Care.*

Minnesota Department of Human Services. (2005). *School in Child Care Settings: A Developmental Assessment of Children in 22 Accredited Child Care Centers.*

Minnesota Early Childhood Initiative. (May, 2006). *Summary of Key Accomplishments from Phase I of The Minnesota Early Childhood Initiative: Excerpt from the Executive Summary of a Final Report to the McKnight Foundation.*

National Institute on Child Health and Development. (2000). Characteristics and quality of child care for toddlers and preschoolers. *Journal of Applied Developmental Sciences,*4 (3), 116-125.

National Research Council, Institute of Medicine. (2000). Shonkoff, J.P. & Phillips, D.A. (Eds.). *From Neurons to Neighborhoods: The Science of Early Childhood Development.* Washington, D.C.: National Academy Press.

Rolnick, A., & Grunewald, R. (2003). Early childhood development: Economic development with a high public return. *The Region.* Minneapolis: Federal Reserve Bank.

Sroufe, L. A., Egeland, B., Carlson, E. A. & Collins, W. A. (2005). *The Development of the Person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood.* New York, NY. Guilford Press.

Otis, T. (May, 2006). *Early Childhood—The Results Are In.* www.ready4k.org.

Patterson, J. & Watson, C. (2003). Children in their earliest years: many get a poor start. *Healthy Generations, Vol. 4 (2).* Minneapolis, MN: University of Minnesota, School of Public Health, Maternal and Child Health Program.

Tout, K. & Sherman, J. (September, 2005). *A Snapshot of Quality in Minnesota's Child Care Centers: a Report of the Minnesota Child Care Policy Research Partnership.*

Wilder Research Center. (March, 2003). *Ready 4 K: Early Childhood Care and Education in Minnesota, A Status Report.*

Harvesting the Talents of Minority Students: A Look at Achievement Disparities in Rural Minnesota Schools

Daria Paul Dona, Patricia Hoffman & Loretta DeLong

Challenges faced by Minnesota's rural school districts in addressing the future needs of students, families and communities emanate from myriad factors that are best understood through an analysis of intercultural relationships and the ecological dynamics of political, economic and educational systems. For example, current state funding formulas and school size have rendered rural districts at a disadvantage in terms of infrastructure, resources, and teacher recruitment and retention when compared to larger suburban and urban Minnesota districts (Thorson & Maxwell, 2002). Undoubtedly, these weaknesses will impact rural districts' capacity to address student needs. One issue that is of increasing importance to rural communities is the quality and degree of the achievement gap between majority and minority students within their local school districts. Another issue of growing concern across the state is the over- and under-representation of minority students in special education programs.

These are important issues deserving our attention. However, rather than problem solve by focusing narrowly on a student's academic achievement, the model we will propose later in this paper is an integrated approach that brings together representatives from all stakeholder groups to examine the student's educational context nested in other complex and interconnected systems. We provide the guidelines and structure that will allow communities to undertake this self-reflective analysis in light of their own unique issues and concerns.

Overview of Rural Challenges and the Ecological Model

The challenges facing rural schools in the 21st Century are correlated with increasingly diverse student populations and have been well documented at the national level (Banks, Cochran-Smith, Moll, Richert, Zeichner, LePage, Darling-Hammond, Duffy &

McDonald, 2005; Lee, 2002; Rochon, Herrara, Barnhardt & Brisk, 2002). For example, the achievement gap between white and minority students persists and has been shown to shift in degrees as different groups grow and cluster in various geographic areas (The Harvard Civil Rights Project, 2006). Furthermore, the tendency of school districts to place minority students in special education programs also appears to correlate with demographic shifts. The number of minority students identified with learning disabilities or emotional-behavioral disorders often exceeds the numbers expected based on the representation of that minority group in the nation's population (Donovan & Cross, 2002).

Rural districts have experienced a significant growth in the number of students representing a wide spectrum of national, racial and ethnic backgrounds (Nathan, 2006). The changing demographics in Minnesota have caused educators to reflect and reexamine how education has been provided to rural communities, especially as economic and population transitions in rural communities affect quality of life and funding for education. For example, in rural areas, half of the overall total population growth has occurred within minority groups who are younger than their white counterparts, represent a notable number of ethnic backgrounds, and who often experience a disconnect with what is occurring in majority classrooms (Gillaspy, 2006).

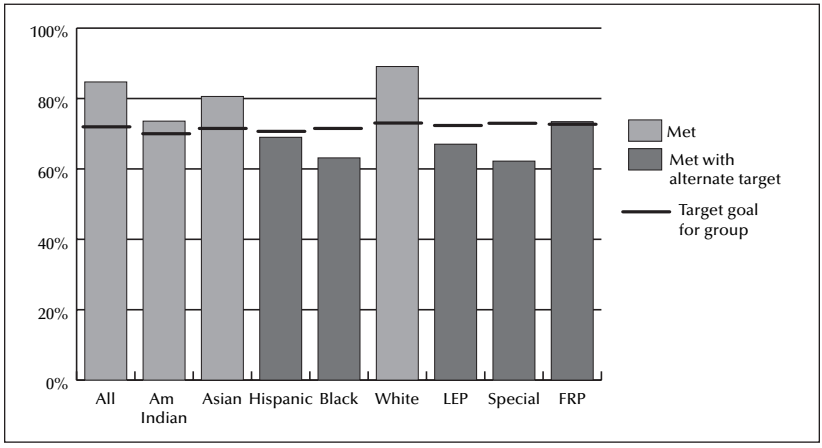
To gain a clear picture of achievement gap and disproportionate representation issues in rural Minnesota districts, the authors first reviewed national data related to Minnesota specifically. We then examined a number of databases provided by the Minnesota Department of Education specific to American Indian, African American and Hispanic students. Various obstacles were encountered in the search for "clean" and meaningful data. We discovered that there was no easy manner of gathering the relevant information for rural districts alone. Where information has been aggregated (or disaggregated) in meaningful ways, rural district results are not necessarily presented, since frequently only data for larger districts are reported. One outcome of our research, therefore, points to the fact that data-gathering and reporting efforts related to rural districts need to be improved. As an example, as the Minnesota Native American population accounts for less than 2% of the population, this group is considered statistically insignificant and is therefore frequently absent in policies that are designed to address the population at large. This oversight has the unintended effect of marginalizing an entire population and placing students from that group at additional risk of failure. In addition, we contend that methodologies should be user-

friendly, meaningful, multidimensional, and culturally sensitive. Based on what we can determine from national and state trends, we offer recommendations for addressing the achievement gap and over/underrepresentation challenges faced by rural districts and communities.

National Indicators of Minnesota's Progress

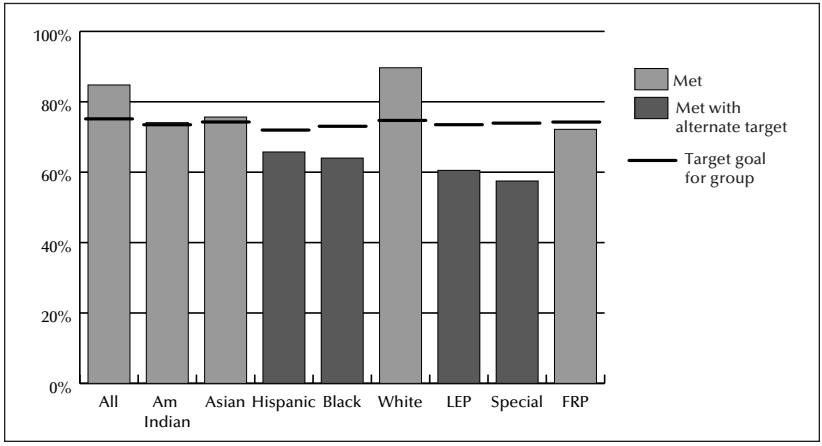
Assessment data compiled by the Minnesota Department of Education indicate a continuing lag in educational improvement and progress of minority students. The numbers are gleaned from the National Center of Educational Statistics, National Assessment of Educational Progress and National Indian Education Study. Figures 1 and 2 depict the academic progress made by Minnesota's students on NAEP tests. With the inserted line depicting target goals, one can see that Black, Hispanic, English language learners and special education students have not met target goals for achievement.

Figure 1: *2005 NAEP reading scores for various student groups.*



"FRP" indicates students living in poverty.
Source: Minnesota Department of Education

Figure 2: *2005 NAEP math scores for various student groups.*

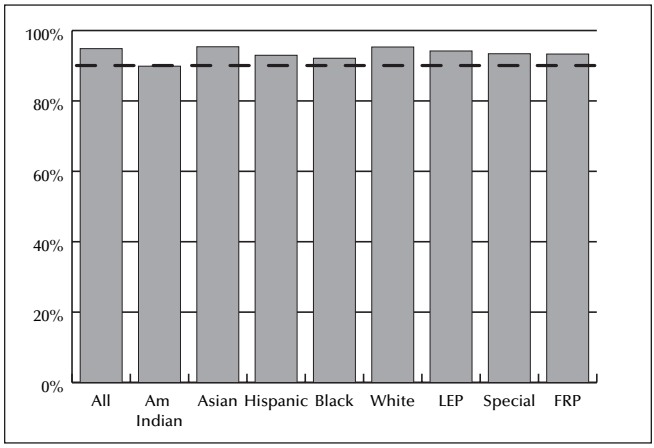


Source: Minnesota Department of Education

Attendance

In addition to specific achievement data, national data on factors correlated to student achievement show a slightly lower overall school attendance rate for Minnesota minority students. American Indian students appear to have the lowest attendance rate. While providing an explanation for this disturbing fact goes beyond the scope of this paper, this is the sort of data that would provide questions for discussion and exploration provided with the model we will outline.

Figure 3: *2004 NAEP attendance data for various student groups.*



Source: Minnesota Department of Education

Poverty

The 2000 census also shows more minority students living in poverty than their white counterparts. For example, the percentage of American Indian children 0-17 living below the poverty level in Minnesota during 1999 was 35%. Other racial groups were: White, 6%, Black, 34%, Asian, 24% and Latino, 23% (U.S. Census, 2000).

Minnesota's State Proficiency Indicators

The information in the following tables show the 2005 Minnesota Comprehensive Assessment (MCA) test subtest scores by various subgroups and are ranked from most successful to least successful. In the interest of space, only data for third grade and tenth grade will be shown. The numbers indicate that American Indians/Alaska Natives, Hispanic, Black and English language learners continue to achieve at a lower level than the White and Asian students.

Table 1: *2005 MCA Grade 3 reading assessment, percent proficient.*

Area	All students	White	Asian	American Indian	(FRP) Low SES	Hispanic	Black	LEP/ ELL
Literal	80.29	83.23	74.39	72.16	71.65	68.13	67.74	65.00
Interpretation Evaluation	75.00	77.81	69.04	67.44	66.67	63.15	63.07	60.22
Literary Passages	84.83	87.42	79.92	77.75	76.92	73.33	73.58	70.83
Information Practical Passages	76.02	78.96	69.80	67.93	67.33	63.83	63.48	60.65
Main Idea	80.15	83.15	73.95	71.75	71.40	67.80	67.35	64.70
Information Processing	80.55	83.27	75.18	72.91	72.00	68.73	68.45	65.55
Inference	74.47	77.2	69.0	67.53	66.27	62.73	62.87	60.07
Compare Contrast	89.00	91.50	85.00	82.25	81.75	78.00	77.00	75.75
Analysis	69.00	72.13	61.13	59.88	59.88	56.38	56.50	52.75

Source: Minnesota Department of Education

Table 2: *2005 MCA Grade 10 reading assessment, percent proficient.*

Area	All Students	White	Asian	American Indian	(FRP) Low SES	Hispanic	Black	LEP ELL
Literal Explicit	81.17	83.94	75.61	71.94	70.89	67.61	62.56	58.83
Interpretative Analytical	69.45	72.5	62.41	58.0	57.45	55.09	49.41	44.68
Critical Evaluative	66.14	69.07	58.71	55.14	54.79	51.64	47.36	41.71
Reading Complex Information	71.04	73.98	63.98	60.27	59.67	56.88	51.96	47.06
Technical Reading	84.17	87.00	80.83	75.00	73.83	70.17	63.83	61.00
Main Idea	80.48	83.30	74.22	71.30	69.91	67.04	61.48	57.26
Identify Bias Point of View	70.94	74.06	64.56	59.06	58.94	56.22	50.67	46.39
Analyze Evaluate Text	60.46	63.38	52.85	49.23	49.08	46.00	42.38	36.38

Source: Minnesota Department of Education

Disproportionate Representation of Minorities in Special Education

Another problem facing minorities is their disproportionate identification for special education services. While African Americans, Native Americans and some Hispanics are frequently over-identified for special education and under-identified for gifted and talented programs, the opposite is true for Asian American students. U.S. Department of Education data collected in 1995 indicated that 16% of the student population in the U.S. was African American. In contrast, African Americans made up 21% of special education enrollments in the United States. However, according to the 1998 OSEP calculations, approximately 14% of African American students were actually receiving special education services. Calculations using "odds ratios" indicate that African American students in particular are 1.18 times more likely than white students to be placed in special education programs (Donovan and Cross, 2002). Furthermore, African American students, in contrast to all other racial/ethnic groups, appear to be at the highest risk for placement in programs for emotional-behavioral disorders (Donovan & Cross, 2002). A similar trend can be found here in Minnesota where data gathered in 2001-02 indicate that 5.56% of the general education population is comprised of English-speaking African American students; however, these students represent 13.88% of the population identified as emotionally-behaviorally disordered (E. Watkins memo, 2003).

The data for English language learners is less clear. In a two-year longitudinal study, it was found that both over-identification and under-identification are occurring and that while the number of ELLs in special education is similar to the state average, some teachers report they are no longer even referring ELLs because of the belief they will not be found eligible regardless of whether or not they indeed have a disability (Hoffman, 2003).

Table 3 below reflects data collected by the Minnesota Department of Education regarding disproportionality of minority placement in special education programs for the 2001-02 academic year. This chart compares general education enrollment with the proportion in special education (all programs) and with the individual disability categories of Specific Learning Disability (SLD) and Emotional/Behavioral Disorder (E/BD). Figures for each racial group are subdivided according to home language status as a means of distinguishing students who are immigrants, refugees and/or ELLs.

Table 3: *Minnesota students placed in special education programs, 2001-02 K-12 comparison.*

Group	Home Language	# in Gen'l Ed	% of Gen'l Ed	# in Special Ed	%	# in SLD	%	# in E/BD	%
Am. Indian	English	13,824	1.86%	3,583	3.55%	1,273	3.38%	1,079	6.11%
	Non-English	349	0.05%	75	0.07%	24	0.06%	10	0.06%
Asian	English	10,310	1.39%	872	0.86%	214	0.57%	94	0.53%
	Non-English	30,599	4.12%	2,335	2.31%	1,074	2.85%	78	0.44%
Latino	English	9,565	1.29%	1,671	1.66%	645	1.71%	292	1.65%
	Non-English	18,341	2.47%	1,960	1.94%	989	2.63%	151	0.86%
African Am.	English	40,521	5.46%	9,366	9.29%	3,841	10.19%	2,451	13.88%
	Non-English	9,030	1.22%	422	0.42%	126	0.33%	49	0.28%
White	English	603,350	81.34%	79,956	79.27%	29,368	77.95%	13,394	75.87%
	Non-English	5,921	0.80%	627	0.62%	122	0.32%	56	0.32%
All	English	677,570	91.35%	95,448	94.63%	35,341	93.80%	17,310	98.05%
	Non-English	64,200	8.65%	5,419	5.37%	2,335	6.20%	344	1.95%

(From E. Watkins Memo, 2003)

Planning for Talent Development of all Students

Although the data currently available lacks adequate specificity for delineating the nature and extent of the achievement gap and disproportionality experienced within all Minnesota ruralplexes, it stands to reason that the trends identified across the state are evidenced within rural districts. Furthermore, it is clear that additional sources of data are needed to illuminate patterns and trends. As the demographics of rural areas change and become culturally, racially and ethnically more diverse, we recommend that the following question be addressed by each community: "What information (assessments), resources (human and tangible), collaborative relationships, and organizational policies and procedures are needed to prevent or curtail academic failure and inappropriate special education placement of American Indian, African American and Hispanic students?"

Rural residents will need to identify and work with the unique combination of resources, risk factors, stressors and intercultural dynamics that are embedded within their specific communities. Obviously, this is a tall order that will require leadership from both school and community members around issues that are sometimes politically contentious and divisive. Leaders will need to rely on intercultural skills in communication and consensus-building as they seek to resolve differences among community members and build tolerance for diverse cultural perspectives, styles and values and goals.

In order for communities and their respective school districts to analyze how the issues of achievement gap and disproportionate representation are impacting their student populations, we recommend the use of a four-dimensional axis designed by Linda Winfield (1991).

Dimension I: **Multi-Dimensional Assessment**

Since the enactment of NCLB legislation, the number of standardized assessments has increased dramatically. While assessment data is essential for planning and accountability, there is also a danger in the heavy reliance on one method of measurement. Standardized test scores are particularly vulnerable to misuse and misinterpretation, especially when cultural factors related to diversity are present. It is important to consider that these assessments generally represent a dominant cultural viewpoint that values, and therefore assesses, a specific cultural literacy. Conversely, information representative of non-dominant cultures is not valued and is not assessed. Because of these limitations,

standardized tests tend to reveal what a minority student does **not** know, but fail to illuminate the literacy indigenous to his or her own culture. This deficit view generates the premise that a gap exists and also attributes the deficiency to the child rather than looking for explanations within the educational system. Research has also revealed that increased testing can negatively impact how students view themselves. This is particularly true for students whose first language is not English (Zacarian, 2006).

Given this attitude, it is likely that many English language learners would perform poorly on tests due to low expectations and a resulting lack of motivation. Measurement theory informs us that, in order for a test to be truly valid, students must give their assent by responding with their best effort to do well on the test. Ysseldyke and Christenson (1993) have suggested that heavy reliance on standardized tests tends to restrict the focus of data analysis and related intervention planning to the following:

- An emphasis on the student's **characteristics** as the source of the problem
- An emphasis on understanding the **causes** of problems in order to prescribe **treatments** (similar to the treatment of "disease" in a medical model)
- An emphasis on the **description** of the student's problem
- "**Why**" questions dominate
- Interventions are targeted at **students only**

In light of the measurement fallibility inherent in the heavy reliance upon standardized tests, it is clear that districts would gain a more reliable and accurate picture of minority student achievement by expanding their methods to include those that demonstrate a greater degree of cultural sensitivity. We suggest that an ecological assessment approach provides a more valid method for determining academic progress among minority students. This orientation adheres to the following assumptions:

- The focus of assessment is on **interrelationships** between students and instructional environments
- The **interactions** among micro- and macro-systems are considered in the analysis
- The emphasis is on **problem solving** (not restricted to problem description)
- **"What**" and "**how**" questions dominate
- Interventions are targeted at **students, teachers, parents, peers, and instruction** (Ysseldyke and Christenson, 1993)

Measurement methods that tap the complex variables correlated with student learning, including cultural influences, will undoubtedly give educators more accurate data for use in intervention planning. As districts seek to close the gap between culturally diverse student groups, they will need to reduce the mismatch between the learner and the educational environment. Based on the research of Deno (2002) and Walker and Shinn (2002), a five-step strategy, described below, has proven to be successful in promoting growth in areas of learning and behavior for students who are challenged by their current educational environments. The model identifies the nature and extent of specific problem areas and utilizes methods for consistent, persistent, and meaningful monitoring of progress toward goals and objectives.

Step 1: Problem Identification: Problems are defined as situational rather than person-driven and are viewed as the difference between what is expected and what occurs; therefore, two initial questions for problem solving teams to pose are:

1. What *is* expected? For example, "Satisfactory performance in the general education academic and/or behavioral curriculum for all students regardless of ethnicity, race, gender…"
2. What occurs? This question is answered in step 2.

Step 2: Problem Certification: This step asks for the provision of data to certify the problem or to ascertain the degree or extent of the problem. It would be important at this stage to determine the degree to which community members view the existence of achievement gap and disproportionality conditions as a "problem" based on their value system, cultural orientation toward these issues, etc.

Step 3: Exploring Solutions: Collaborative planning should be designed to produce results that both "filter down" from the larger macro-system (community and district) levels to the smaller micro-system (family/student and building) levels and concomitantly "scale up" from micro-levels in order to strengthen infrastructures at school district and local community and governmental levels. Democratic, culturally responsive governing committees can participate in this planning.

Step 4: Evaluation Solutions: Progress must continue to be monitored through both quantitative and qualitative measures on a regular basis to determine whether the gap is closing and bias in special education placements is diminishing. If, through data

analysis, governing bodies cannot establish the success of their strategies, they will need to revise or eliminate those plans and continue to monitor for effectiveness.

Step 5: Problem Solution: This step involves the verification that those individuals experiencing the defined problem and those assisting with its resolution agree that it has been solved.

Dimension II: School and Community Involvement

Winfield (1991) found that school-community involvement became a critical variable in the success of Hispanic students. Parent and/or community-school involvement, however, is frequently too narrowly defined and is often measured by counting the number of times parents show up at school conferences or parent-teacher organization meetings. In order for involvement efforts to lead to productive results with families from diverse backgrounds, communications and activities must demonstrate the school's sensitivity to the families' cultural traditions and styles and responsiveness to their needs and stressors. We believe that schools and their respective communities should form coalitions of school and community members who are charged with providing specific supports that are valued by different cultural groups and have a track record of successful outcomes related to academic achievement. Families will only respond to supports that fit comfortably within their "world view." When teams include this critical variable into their planning, the process of "involvement" becomes bi-directional and will ultimately increase opportunities for children to engage in the learning process and thrive in the school environment.

Based on two decades of research (see, for example, http://www.search-institute.org), we recommend that school and community involvement efforts target interventions that promote resilience in families, reduce risk factors, ensure equitable access to both human and tangible resources, and honor the cultural traditions and styles of American Indian, African American and Hispanic families. Rutter (1987) defines resilience as one's ability to cope with risk, stress and adversity. The concept of resilience has been particularly beneficial for minority populations as it has shifted perspectives from "deficit" to "strengths-based" orientations.

For collaborative committees and teams to create action plans that support resilience in students, a tool such as the one depicted below can be useful for designing interventions that protect students from risk, reduce the impact of risks that cannot be prevented, and support the growth of resilience (Winfield, 1991).

	School Interventions		Community Interventions		
Protective Mechanisms	**School-based**	**Classroom-Based**	**Family**	**Peers**	**Policymakers**
Reduction of risk impact					
Reduction of negative chain					
Self-esteem, self-efficacy					
Opening up of opportunities					

Reduction of risk impact is exemplified by changing the degree of exposure to the risk variable. For example, providing a developmentally appropriate and quality kindergarten program may reduce the risk of a child developing negative attitudes and behaviors that would be problematic in the community's formal school setting. Negative chain reactions, once risk has been incurred, can be reduced by providing appropriate supports. For example, after-school mentoring programs promote self esteem and self efficacy and often serve to fill relationship voids in the lives of students who have few opportunities to form significant relationships with positive adult role models. The fourth protective mechanism relates to a student's access to resources, such as counseling, curriculum, and talent development training, which impact his or her chances in life for school and job success.

While there is a considerable research base that confirms the importance of equitable resource allocation in preventing achievement disparities among students (Chiu & Khoo, 2005), it has been far more difficult for researchers to establish the connections among achievement outcomes and variables characterized as "human resources." For example, research has indicated that sharing similar social norms and cultural capital with the teacher (and majority of community residents) is a human (relationship) resource that is associated with higher achievement outcomes (Heath, 1983). Creating a level playing field, therefore, for children who lack the opportunity to learn from teachers representing their own cultural background will be challenging. This has been the case for many states that rely primarily on a white, middle-class teaching force and who have experienced significant difficulty recruiting minority

teachers. School administrators in rural districts have very limited opportunities to hire teachers of color due to the lack of diversity represented in their applicant pools. Fortunately, current research (e.g., Ladson-Billings) indicates that student-teacher backgrounds do not need to be matched in order for teachers to be effective with their minority students. Teachers do, however, need knowledge, skills and attitudes that enable them to be culturally responsive.

Dimension III: **Culturally Responsive Pedagogy**

Teachers who have acquired the attitudes, knowledge and skills inherent in culturally responsive pedagogy adjust their instruction in response to culture, race, gender, class, and other variables. To be capable of designing and implementing such instructional variations, teachers require a degree of knowledge regarding their own and others' cultures. Curricula and/or training programs that are designed to enhance teacher skills in this area are required.

Teachers who exhibit intercultural competencies are able to identify how their own inherent unintentional biases affect their students. For example, teachers must be aware of their expectations regarding student performance and consciously alter these expectations when they inhibit student success. These teachers also learn to critically analyze their curriculum and pedagogical techniques as they interact with various cultures and challenge practices that sustain and perpetuate poor performance or disengagement from the process of schooling.

Geneva Gay's research (2000) indicates that teachers who are able to nurture academic success in culturally diverse student populations take on a role as cultural organizer, cultural mediator, cultural orchestrator and validator of student cultures. Through these roles, teachers facilitate students' strategic ways of accomplishing tasks, create opportunities for students to participate in critical dialogue regarding culture, create social contexts that provide multiple opportunities for learning, and build a context for honoring all students' cultures.

Dimension IV: **Collaborative Governance**

Collaborative governance is required for families, schools and communities to establish and reach goals that truly represent all stakeholders. Nationwide, many school districts have embraced "site-based decision making" models; however, just their existence does not necessarily diminish achievement disparities. To succeed in promoting the success of all constituents, stakeholders must possess a considerable degree of intercultural competency.

Democratic governance will not survive without leaders who can also help the majority population recognize the role of privilege and power as it functions within the various contextual systems. Gary Howard (1993), a white American whose heritage is firmly rooted in a Minnesota farming community, trains white educators to move from a paradigm of dominance to one of diversity. Howard makes the point that many white Americans not only choose to remain ignorant of other cultures, but have the "luxury" of doing so based on their position of privilege. Privilege, in this context, does not refer to socioeconomic status, but to the condition of never having to wonder whether or not one was denied an opportunity based on racial or ethnic background.

Based on the work of intercultural theorists such as Bennett and diversity trainers such as Howard, we assert that school-community collaborative governance bodies must include members of representative cultures as well as individuals trained in diversity leadership and inter-cultural communication. This call may require that school districts and community government provide the financial support necessary for training and sustained development of individuals.

Conclusion

We conclude that the presence of an achievement gap and disproportionate special education representation in rural areas of Minnesota will inevitably require unprecedented community engagement and commitment. It will be crucial for communities to reach consensus on valued goals that lead to student learning, to identify methods for determining whether these goals have been obtained, and to plan for sustained success. By using a planning model that supports the development of advocacy-oriented assessment methods, collaborative teaming for designing interventions around resilience and protective factors, and collaborative democratic governance that engages skilled diversity leaders, rural communities will be well on their way to establishing a strong foundation for nurturing the talents of their rapidly changing student population.

References

Banks, J., Cochran-Smith, M., Moll, L., Richert, A., Zeichner, K. LePage, P., Darling-Hammond, L., Duffy, H. with McDonald, M. (2005). Teaching diverse learners. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 232-274). San Francisco: Jossey-Bass.

Bennett, M.J. (2004). Becoming Interculturally Competent. In J. Wurzel (Ed.*). Toward multiculturalism: A reader in multicultural education* (2nd ed., pp. 62-77). Newton, MA: Intercultural Resource Corporation.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, pp. 513-531.

Chiu, M. & Khoo, L. (2005). *Effects of resources, inequality, and privilege bias on achievement: Country, school, and student level analyses.* American Educational Research Journal, 42(4), pp. 575-603.

Deno, S. L. (2002). Problem-solving as best practice. In A. Thomas & J. Grimes (Eds.), *Best practices in School Psychology IV*. National Association of School Psychologists, Washington, D.C.

Donovan, M.S. & Cross, C.T. (Eds.). (2002). *Minority Students in special and Gifted Education.* Washington, DC: National Academy Press.

Gay, G. (2000). *Culturally Responsive Teaching*. New York: Teachers College Press.

Giese, Paula. (1997). Minnesota Reservations. Retrieved June 1, 2006, from http://www.kstrom.net/isk/maps/mn/mnrezmap.html.

Gillaspy, T. (2006). Changing demographics in Minnesota, Implications for natural resources. Minnesota Department of Administration. Retrieved May 5, 2006, from http://www.demography.state.mn.us.

Harvard Civil Rights Project. (2006). *Tracking achievement gaps and assessing the impact of NCLB on the gaps: An in-depth look into National and State reading and math outcomes.* Retrieved June 28, 2006, from http://www.civilrightsproject.harvard.edu/news/pressreleases/nclb_report06.php.

Heath, S.B. (1983). *Ways with words: Language, life and work in communities and classrooms.* Cambridge, England: Cambridge University Press.

Hoffman, P. (2003). *Exploring educators understanding of typical English language learners and those with special education needs.* Doctoral Dissertation. Minneapolis, MN: University of Minnesota.

Huit, W. (1999). *Systems model of human behavior the context of development.* Retrieved February 18, 2001, from http://chiron.valdosta.edu/whuitt/materials/sysmdic.html.

Gordon, E. & Bhattacharyya, M. (1992). Human Diversity, cultural hegemony, and the integrity of the academic canon. *Journal of Negro Education*, 61(3), pp. 405-418.

Hilliard, A.G. III (1998). *SBA: The reawakening of the African mind.* Gainesville, FL: Makare Publishers.

Howard, G. (1993). Whites in multicultural education: Rethinking our role. *Phi Delta Kappan.* Sept. pp. 36-40.

Ladson-Billings, G. (2001). The Power of pedagogy: Does teaching matter? In W. Watkins, J. Lewis & V. Chou (Eds.), *Race and Education: The Roles of History and Society in Educating African American Students* (pp. 73-85). Boston: Allyn and Bacon.

Lee, J. (2002). Racial and ethnic achievement gap trends: Reversing the progress toward equity? *Educational Researcher,* 31 (1), pp. 3-12.

Minnesota Department of Education, http://education.state.mn.us/mde/.

Nathan, J. (2006). Challenge helps promote creativity. *Rural Minnesota Journal,* (January), pp. 55-78.

National Assessment of Educational Progress. *The Nation's Report Card.* Retrieved June 12, 2006, from http://nces.ed.gov/nationsreportcard/.

National Indian Education Study. *The Nation's Report Card.* Retrieved June 12, 2006, from http://nces.ed.gov/nationsreportcard/nies/.

National Center for Educational Statistics. *Dropout Rates in the United States: 2002 and 2003*. Retrieved June 10, 2006, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006062.

No Child Left Behind Act of 2001, Pub.L. No. 107-110.

Rochon, R., Herrera, S., Barnhardt, R., & Brisk, M.E. (2002). *Educators Preparation for Cultural and Linguistic Diversity: A Call to Action.* Washington, DC: Committee on Multicultural Education, American Association of Colleges for Teacher Education.

Rutter, M. (1987). *Psychosocial resilience and protective mechanisms.* American Journal of Orthopsychiatry, 37, 317-331.

Thorson, G. & Maxwell, N. (2002). "Small schools under siege: Evidence of resource inequality in Minnesota public schools." Published by the Center for Rural Policy and Development, Mankato, Minnesota.

U.S. Census Bureau (2000). Retrieved June 5, 2006, from http://www.census.gov/prod/cen2000/index.html.

U.S. Department of Education, Office of Special Education and Rehabilitation Services. Retrieved June 5, 2006, from http://www.ed.gov/about/offices/list/osers/osep/index.

U.S. Department of Education. (1995). *Individual with disabilities education act: Amendments of 1995*. Washington, DC: Office of Special Programs.

Walker, H. & Shinn, M.R. (2002). Structuring School-Based Interventions to Achieve Integrated Primary, Secondary, and Tertiary Prevention Goals for Safe and Effective Schools. In M. Shinn, H. Walker and G. Stoner (Eds). *Interventions for academic and behavior problems II: Preventive and remedial approaches.* pp.1-25. Washington, DC: National Association of School Psychologists.

Watkins, E. (2003). Memo from the Minnesota Department of Education: Special Education Policy.

Weissglass, J. (2001). Racism and the Achievement Gap. *Education Week*. August 8. Bethesda, Maryland.

Winfield, L. (1991). *Resilience, schooling, and development in African-American youth: A conceptual framework.* Education and Urban Society, 24(1), pp. 5-14.

Ysseldyke, J. & Christenson, S. (1993). *TIES – II: The instructional environment system–II.* Longmont, CO: Sopris West.

Zacarian, D. Testing, testing. (2006). Essential Teacher. 3(2), pp. 10-11.

Minnesota's K-12 Schools: How Chartered and Other New Ideas are Opening Up the Public School System

Doug Thomas

"The definition of power is changing, too. Real power is the ability to change."

— Adam Urbanski
American Federation of Teachers

James is a pretty typical kid. He does better than average in school, is active in several extra-curriculars (he's a very good baseball player), hunts with his buddies on Saturdays, and spends his free time socializing like most rural kids, both in small groups and sometimes online. His medium-sized high school looks like most, offering a wide range of classes, both for the college-bound and those expecting to head for technical schools, the military or work. He starts his day at school at 8:20 in the morning and ends it at 3:15. He likes some of his classes and dislikes others. It often depends on the teacher, the expectations and the importance of the grades. He detests classes and assignments that require memorization over activity, which shows in his not-so-successful test taking. Although he will attend a two- or four-year college, he doesn't know what his true career interests are yet. He hasn't talked much with his folks about his plans. A few of his teachers have suggested what they think he might want to pursue.

Andrea starts her day with a reading report to her dad at breakfast. She does so out of her intense interest in reading and her enjoyment in spending "intellectual" time with her dad. She's been taught at home (mostly by her mom) her entire life, except for the fourth-grade week she spent at the local school (that didn't go so well). She's now 13 and her daily lessons from Mom are much the same as they were five years ago. After Dad heads for work, she spends the morning working on a self-paced curriculum designed for home-schooled students. She's two years ahead of her curriculum guide. Her mother has a real estate job but spends most of her morning working with Andrea and her sister, who is two years younger. They are active in 4-H and church activities and often combine those efforts with school work. She's also planning to play volleyball next year at the local district school,

which may be difficult given that her dad doesn't get home until 5:30 and her mom is often at appointments in the afternoon and early evening. They're still working that out. Up to this point, her afternoons have usually been spent doing extra work on things of interest, reading, using her computer for research, or outdoors with her sister, exploring their farmstead and woods and completing assignments. Next month, she will start an online Algebra II class. If that goes well, she will complete most of her high school work online.

Evan is a 15-year-old student at an innovative chartered school. He's been attending since seventh grade. His parents liked the idea of a smaller, more personalized school. It was started by some of the teachers from the local high school and some parents with whom Evan's family was familiar. He works very independently at this school. Part of his day is entirely project-based, so he can follow his interests and prepare for the post-secondary options program, which he intends to use next year. His goal (part of his personal learning plan) is to graduate with thirty college credits before leaving high school. He is very interested in the sciences (as in fiction), not sure what career that will lead to, but wants to explore some science courses, as well as complete a few of his general education credits. He also likes his school because the students have a lot of input into some of the standard policies of how the school is run, how students are expected to behave and what interesting choices of activities the students have. He has a small group of close friends at the school but considers himself to be somewhat non-social. His true hobby is the online world of games, chatting and research. He knows he needs to be out of doors more often, but his dad travels a lot and his mom likes him to be home rather than out with friends. His advisor at school is sort of a "tech-head," and they get along quite well, which motivates Evan to do well in school.

Lisa can't seem to be able to decide which world she wants to live in: the world of the rambunctious, short-sighted rebel, or that of the steady, long-range goals of school and work. Impatience is her most obvious characteristic. Her school is the local district Alternative Learning Center. She likes the school and is less distracted there. Some of her friends, some who she isn't so proud to know, also attend the school. Lisa is very bright, but was inattentive at the regular high school. At 16, she is ready for the real world in many ways. She wants to continue her education after high school, but her teacher/counselor says she needs to learn to focus first. Her way to solve that dilemma is by threatening to get her GED rather than her diploma. She is far too social, has an obsession with hair color and loves her siblings, a younger brother and sister (even though she doesn't want to stay home with them when necessary to help out her single mom). Her special interests are music (she used to play three instruments) and math, which she is particularly adept at. Her reading skills are her biggest deficit. She is

quite close to her paternal grandparents but seldom sees her dad, who lives nearly a hundred miles away.

In rural Minnesota in 2006, which of these scenarios constitutes K-12 schooling? For Lisa, Evan, Andrea and James, school isn't what it was for their moms and dads, or their grandparents. In some cases, the setting is quite different and in others, the learning program is far from anything traditional. The common theme is learning, choices and technology. In the U.S., and particularly states like Minnesota, we are growing more choices and high-tech environments. Different schools for different students seems to be the trend. With greater technology, attention to learning styles, parent preferences, district competition and rural economic realities, schools in the 21st century will continue to look substantially different. The four scenarios above are but a few of the more consistent options available to parents and young people today. On the horizon is a staggering number of new learning opportunities: online, experiential, apprenticeships, internships, project learning, etc. But first, a look back.

There was a time here in the rural heartland when virtually every high school looked the same and offered essentially the same learning program. As Ted Sizer pointed out in his 1984 groundbreaking book, *Horace's Compromise,* "You could visit high schools from Maine to California and Florida to Oregon, and see the same thing happening from classroom to classroom" (Sizer). Students were using textbook curriculums and being assessed in similar fashion. It was comfortable and successful for a great number of students and adults. Success meant getting a job. In Minnesota specifically, the rural schools have been an engine of productivity and brain power, feeding the metropolitan Twin Cities area economy with talent and work ethic. The out-migration of skill and leadership has been both a curse and a blessing for our rural communities. We take pride in our educational accomplishments and more particularly our own family members and friends, but as the late Paul Gruchow pointed out, it has given us a "left-behind" mentality that "if you are any good, you go elsewhere." For at least the last fifty years our schools (both colleges and K-12) have been driving the train to "elsewhere" (Gruchow, 1996).

By design and purpose, our rural schools have been filling a strategic need for business, the professions, agriculture and labor. The typical selecting and sorting of our young people is both fruitful and limiting. We have always needed a certain number of people to sustain our agrarian livelihood and small-town lifestyles, but the reality is that those numbers aren't as seemingly necessary any

more. To quote Gruchow again, "people and towns are obsolete … all we need is bigger tractors and more petroleum." So more and more of our talent is being prepared for different careers in more complex urban areas. And as the economy becomes more diverse and complex, the demands on our schools have begun to change. All this is pressuring schools to re-consider their purpose and design. Add technology to the mix, and we are beginning to see that the industrial model may have outlived its purpose.

We've seen the slow, steady pressure for change. Federal special education requirements changed some of the look of schools. Other pressures have centered on solving some of our social ills, most often created by economic disparity. Most recently, we have been challenged by issues of diversity (language and cultural barriers), a new push for more engineers and scientists, and the ever-present No Child Left Behind Act, the strongest federal standards and subsequent state testing movement in history. For our schools, NCLB is the "stick without the carrot." It is a terrific attempt to raise the expectations and results of schools nationwide at a time when the complexity of the world is de-constructing standardization and curriculum. As good as our rural schools are and want to be, the task of being everything for everyone may be overwhelming. The prospects for meeting all the demands and getting more kids through college will require substantial sacrifices for our state.

We have already begun to react to these pressures in Minnesota. Part of our strategy has been to begin to "open" up the system: get more learning out of the system without spending substantially more money or dismantling our current schools. During the past 20 years we have implemented a number of interesting and challenging policies to both spur competition and to create opportunities. For urban and rural communities, school choice in the form of open enrollment, post secondary options, chartered schools, alternative schools, online schools, second-chance programs and increasingly popular home schools have become legitimate options for students and families (Minnesota Department of Education). Minnesota is leading the nation in K-12 options supported publicly. We now have more than 100,000 students in alternative, charter and home schools (MDE). We are arguably the state that most believes that we cannot only raise standards as a way of meeting new educational demands, but we can also exercise the strategy of creating new schools and programs. Many states have not embraced the latter.

This idea of improving learning by creating schools anew rather than dramatically reshaping or converting traditional schools has been dubbed the "open sector" by "Education Evolving," an

initiative created by the Center for Policy Studies and Hamline University in St. Paul (Education Evolving). Working from the notion that we need more high quality options, Education Evolving is supporting the policy environment that would give us a new combination of chartered schools, online learning environments, contract arrangements with districts, and schools authorized by organizations other than school districts. Essentially, this would open the system to teachers, parents and other public institutions that can create the space to allow for a new kind of public to emerge. This idea rests heavily on the belief that districts are by nature too slow to respond to changing demands, do not have the capacity to always see the need, and are set in a bureaucracy that is rule-bound and fiscally constrained. The greater the supply of open sector options, the more robust the public sector, both within and without the district system.

Like many states, Minnesota allows for its school boards to contract for services beyond its typical unionized master agreements. Many districts have already done so, especially in the at-risk student area, often through the Area Learning Centers or contract for-profit providers. They also have several contracts for low-incidence needs with entities like service cooperatives, special education cooperatives and education districts, created by the state legislature for collaborative efficiency and service delivery. These are often used by rural districts to fill real needs and offer new programs. We also saw several technical cooperatives over the years, but some of these have faded due to budget cuts and priority changes. Contracting and collaborating is just one way rural districts have attempted to answer the call for more and better programs delivered efficiently. For the most part, they have been successful.

The new "Open Sector" is asking for more, in part, because the current system can not re-create itself. Clayton Christenson of the Harvard School of Business and others have written much about innovation and how old institutions, like old businesses, cannot innovate. Their structures and culture prohibit their ability to adapt (2000). They must create a sector designed for innovation, just like Dayton's did with Target and 3M had in creating its "Skunkworks." For this reason, the "disruptive innovators" will continue to gain a foothold in the public market, whether rural or urban. For their foresight in opening up the system, Minnesota legislators of the past three decades should be applauded. No other state has come this far and continued to achieve this much in meeting the needs of so many students.

The sector that has attracted the most attention for a variety of reasons has been the chartering sector. My own experiences with

school reform are tightly tied to chartering, as a former district board member and a member of a chartered school planning committee, and now as a developer of new schools nationwide. The charter law came about in Minnesota in 1991 as a result of passionate discourse and practical realities. It was a novel idea with straightforward and attractive policy implications: allow groups of parents and teachers to start new schools, following public admission requirements, and trade flexibility for accountability. Over 20,000 students now attend chartered schools in our state (MDE). With a few Minnesota nuances, like teachers being a majority of the boards, and with a few tweaks over the years, the law still stands as one of the strongest in the country. It offers a solid combination of district options, true independence, optional sponsors (colleges, non-profits, etc.) and enough accountability support to be effective. In some cases, the law has resulted in the kind of showcase schools it was meant to create.

From the beginning I saw the chartering law as a means to rural re-independence. Just as many of our ancestors did when they came to this part of the world over 100 years ago, if you could gather enough families together and had a dream for a school, you could petition the state government to "charter" your school as public. That can be done again today. After four terms as a school board member, I no longer had the illusion there was anything left to the description of the "independent" school district, but I felt strongly that the possibility for at least some schools to be able to formally act "independently" was good for the system as a whole. The idea that innovation, however defined, could occur without meddling, was most intriguing. There is no better population than our educated, independent, entrepreneurial rural citizenry to carry out the best intentions of this opportunity.

Part of that optimism came from my ten years of working with Minnesota's most innovative teachers and communities as a part of a team from the Humphrey Institute at the University of Minnesota. At the Center For School Change (www.centerforschoolchange.org), funded primarily by the Blandin Foundation of Grand Rapids, we identified and worked with projects all across the state. We learned much and we attempted to energize nearly a hundred communities around greater involvement in their schools. In some, we introduced the chartering idea, but mostly we helped districts consider various interesting options. Near the completion of that work in 2000, I was asked to assess what it would take to get the kinds of changes necessary to take rural Minnesota schools into the future. What was my answer?

• First, we actually have to change something in terms of the learning program.

Far too often schools make cosmetic changes. They improve buildings, consolidate or share programs with others, buy more technology, etc. But the real changes in how young people work with adults, their community or other students changes very little. At the bottom of the learning pyramid is lecturing (5% retention) and at the top is practice by doing or teaching (90% retention) (National Training Lab, 1996). In between is a whole range of strategies, yet the most consistent teaching style in schools, even after all we know that works, is still what some call the "sit and git" method. Many programs or schools set out to be quite different, but because of comfort, security, control, etc., they find themselves falling back to traditional methods. A related issue is that we do not reward risk, difference, or challenging the status quo, no matter how much we talk about it.

• Second, those who choose to innovate should be given the autonomy to do so.

The cruelest act of any system is to encourage others to take risks and try new things without the authority to shape that innovation into what might work for their clients or themselves. Some of the best educational ideas in the country are squelched by meddling boards, administrators or jealous colleagues. We need new ideas in order to compete in this "flattening" world (Friedman, 2005), and the ingenuity will not come from institutions where micro-managing is more prevalent than rule waivers. Remember, the last act of a dying institution is to make more rules!

• Third, those who are implementing program changes must be given control of and the responsibility for the money.

This is the area of most difficulty for many Boards of Education. It is quite often the last holdout to reform. "We'll let you do what you want, but we'll control the money," is often the battle cry. This is a matter of both trust and accountability. The public is very responsive to its institutions' and officials' handling of money, but at the same time we will get virtually no change without trusting a public research and development sector. In fact, we may never discover new efficiencies without allowing reformers to re-allocate funding. The other battle cry is, "You can do it, but you're going to have to find your own money." This, too, is neither respectful to innovators nor a sustainable reform strategy.

• **Fourth, those who reform must be willing to share and accept the results**.

Not all good ideas work well or soon enough. If we've learned anything in the last fifteen years of work, we know that only some of what gets proposed gets accomplished, that it often takes longer than anyone thinks, that the public is impatient and judgmental, and there are a variety of ways of determining success. The trust I referred to earlier should also include a respectful exchange of honest information about what works and does not work for students. That should include, but not be limited to, the assessment of required outcomes deemed to be in the public's interest. (Note that I did not say how that assessment should be done as I think NCLB gets it wrong sometimes.) Remember, too, part of the Open Sector idea is based on the tradeoff of flexibility for accountability.

• **And fifth, it must remain small**.

The evidence is in on many fronts. Small, personalized schools do better in most academic and life-skills areas. Tom Vander Ark, Education Director at the Bill and Melinda Gates Foundation, is fond of saying, "Small class size makes all the difference at the elementary level, and small schools make all the difference at the secondary levels" (2000). Minnesota's small, rural schools consistently score well in the Minnesota Comprehensive Assessments tests (elementary grades) and on the Basic Skills Testing (secondary grades) (Standard and Poor's, 2006). In the Mankato area, for instance, of the 30 high schools reported on the basic skills writing tests this year, six schools had 100% passage (Mankato Free Press, 2006). They were six of the seven smallest high schools in the region. In addition, the real cost of not graduating (factoring in social costs, prison rates, etc.) is now being considered as a serious determinant to school success (Nebraska Alliance, 1999). Both small and rural schools have higher graduation rates and are especially significant in high-poverty areas (Rural School and Community Trust, 2005).

School size also makes a difference in making reform possible. The Bill and Melinda Gates Foundation has invested over $1 billion in high school reform over the past six years and reports significant challenges in getting improvements in large districts with big high schools (Bill and Melinda Gates Foundation). This is impacting strategies at the district and state levels nationwide in their attempts to downsize schools and mimic the success of smaller and rural high schools.

If all of these factors were present, does it still make sense to have a new schools sector? I believe so, but there are certainly implications in deciding to create a parallel system of schools while at the same time attempting to improve. Like many others, I was drawn to this effort because of my strong belief in good small schools and a passion for different models of learning. Even then, I had to make a substantial trade-off: to recognize that some things would have to be discarded in order to take up new ideas. This is the crux of the implications. There is no free ride on the train to redesign and reallocation. There is a definite cost to prepare people, facilities and programs for a new look. My own calculation puts this figure at around $1,500 per secondary pupil during the first year, and $500 per pupil for years 2 and 3 of the re-design (not including facility costs).

But the larger issue for rural schools is the downsizing of current programs as a result of students moving to new programs or schools. There is no answer for this dilemma yet. The public is not accustomed to this level of adjustment. Some states have attempted to provide declining enrollment indexes or count phantom enrollments for a few years, but the reality is that in system transformation, true reallocation is highly controversial, painful and publicly visible. The good news is that it seems we are much more flexible than we think, and we adjust faster than one would expect.

Another implication has to do with power and control. What does a system of non-geographic boundary schools do to an institution based on definite lines of control and jurisdiction? The new schools 'open sector' has no geographic boundaries: not chartered schools, not online learning, and not even open-enrolled students. In fact, it's beginning to make our traditional school districts look both constrained and somewhat old-fashioned. It appears that districts have boundaries only for purposes of taxing authority, yet other schools are proving to operate effectively and efficiently without taxing authority. Education Evolving's 2002 study of school efficiency shows the top ten schools in Minnesota are all chartered schools. Incidentally, the top ten district schools were all rural and mostly small. Without opening the entire education financing can of worms, I would contend that eventually we must take a serious look at how schools are funded, what that means for local taxpayers, and what the role of the state is in funding schools. This is not only an equity issue, but a larger question of whether the state should take full or partial responsibility. The current trend for rural schools does not look good. The smaller communities are caught in a cycle of modest and unpredictable state funding increases and fickle local taxpayer/voters being asked to approve

additional local funds. This can't be a good way to guarantee anything close to enough money, especially as our population ages.

An open sector also changes who gets to have a say in educational programming and the operation of schools. Today's typical boards of education have been around for well over a century. Their role is reasonably clear with the public: deliver quality education at a fair and reasonable cost. Some would argue that it is more a matter of "protecting the public's money," but we'll leave that discussion to others. Many of the new schools being created today do not have publicly elected boards and often look like small non-profit corporations. In the case of many chartered schools in Minnesota, teachers make up a majority of the boards of directors. This was hard to imagine just a couple of decades ago. So in many districts around the state there is someone other than the locally elected board of education offering the service of public education and fulfilling the state mandate to "provide a fair and equitable education." That is a very new idea to most people.

This also leads to a question of leadership. Do we have enough educational leadership to carry us forward into a different kind of educational environment? Can we move toward a system of small, flexible and flat organizations prepared to adapt to changing needs and demands? I believe it will take a transformation of both instructional and organizational leadership. Frances Moore Lappé, in her new book, *Democracy's Edge*, is hopeful that we are evolving from a large group/organization mentality to a much more democratic, small group nation (2005). She is adamant about the need to practice democracy — that it is not just something we have, but something we do — and that the small schools movement in America is positive, because it will serve as learning labs for young people and foster greater, active leadership and democracy. She cites hundreds of examples of inspiring organizations and schools that are making a difference for their communities by being small, focused and changeable.

A further consideration here is the possibility this movement possesses to allow for small communities to have a measure of self-determination and economic development. Many towns have struggled with the loss of local schools, particularly high schools. With new and different kinds of schools, especially those with enhanced technology capabilities, there is the possibility that schools may redevelop in communities that no longer have schools. They may require full-time enrollment, part-time enrollment or entirely online enrollment. In any case, it means real dollars, employment for community members and students again bringing their active

involvement back to town. This has happened in a number of places that I will reference later.

Perhaps the biggest implication is what the reality of different schools has done and will do to our understanding of learning and human development and how it can be assessed well. In a world currently dominated by standardization, the new sector may be compliant but is by no means buying into the notion that students can be standardized, nor can schools for that matter. It has been 30-40 years since we tried to create new schools around the latest research on learning, and we have learned so much since then it is staggering to consider: learning styles, brain-based research, learning disabilities, autism, new teaching strategies, technology, alternative assessments, etc. We may be finally getting to a knowledge base that will allow us to create the schools that John Dewey, Ted Sizer, John Goodlad, Don Glines (Wilson Campus School in Mankato), and others imagined.

I recently found a copy of *LOOK* magazine from January 1970, the year I graduated from high school. The series title was "Mankind's Last Best Chance" (rather ominous), and the education piece by reformer John Holt was called, "Why We Need New Schooling." It called for many of the same changes we are making or want to make today, along with several very radical ideas. For example, he says, "People should be free to find or make for themselves the kinds of educational experiences they want their children to have." Also, "In most of history, children have been educated by the whole community. Nothing else makes any sense." And, "Any school charging no tuition and open to all should be considered an independent public school and receive tax support." And my favorite, "Many schools are too big to be human. Instead, we could have, in any of our giant school buildings, a number of small schools, each independently run and using its own ideas and methods." Radical ideas? He also advocated the elimination of all required curriculum, testing and grading and believed that students should vote in school board elections.

So how are schools to look and act in this new era? Should we tighten up or lighten up in order to meet the demands of an ever-changing world? Here are a few suggestions:

1) **Fight standardized testing as the dominant measurement of student success.** We need multiple strategies to determine individual and school results. No Child Left Behind is a negative, punitive and discriminating solution to school improvement. If poor minority students began to do really

well on standardized testing, how long do you think this movement would last? Our efforts toward value-added measurements are much more useful in this area. Rural Minnesota could be a beacon for multiple, authentic assessments. The Hope Study, measuring dispositional growth and motivation, developed by Mark Van Ryzin at the University of Minnesota, is just one of many such assessments (2004).

2) **Do everything we can to encourage real-world, active learning.** The previously mentioned learning pyramid puts "memorization" as having a 15% retention rate (National Training Laboratories). That just does not justify continuing the current learning model in most schools. The use of internships, field study, project learning, apprenticeships and service learning are all good ways to encourage active learning. Ask most adults what they remember from their school days and they will invariably mention these experiences, not sitting in a particular class. If we're worried about the Asian students surpassing us in engineering knowledge, we need to focus on both learning and interest (Star Tribune, 2006).

3) **Require all graduating high school seniors to make a major public presentation showcasing their academic and presentation abilities.** We've heard the word "relevance" more than occasionally the past few years. We have to have more than grades to determine a student's readiness to move on to college and work in this "flat-world" economy. Redefine relevance and rigor by expecting a whole new level of success before graduating. Some Minnesota high schools are experimenting with this idea, but it is not nearly far enough along yet and not yet articulated with state graduation requirements.

4) **Enhance the use of technology beyond computer labs.** Technology has advanced to the point where every classroom should be a computer-infused setting. Some of every high school's offerings should be online. It's embarrassing in Minnesota that we have schools that are often more technically under-equipped and under-used than many student's bedrooms. Checking your email once a week during computer time is not techno-literacy.

5) **Create individual customized learning plans for every student.** We can no longer afford to think of students, no matter how large the school, as groups or grades. If we ever expect to meet higher standards we have to start with each child. Every student should carry an electronic portfolio as a personal documentary (including videos and other authentic means) of their learning. At the EdVisions network of schools, all students now have an electronic means, accessible on the Web by their parents, to track how and when they reach required standards.

6) **Continue to encourage use of the post-secondary options program.** It not only serves as an incentive to start college, but it helps young people know if they are capable of doing college work. Some would like to backpedal away from this popular program that has now been around for 20 years, but as someone recently told me, "You can't put the toothpaste back in the tube." Every advantage we can give students to attend and complete college should be explored (Center For School Change, 2005).

7) **Create a pilot K-14 or K-16 system model.** We need one real, seamless example of a community willing to merge the K-12 and post-secondary systems. If we're serious about having students attend and graduate from college, we need a model partnership to make that happen by allowing all high school graduates to move directly from high school to college without discrimination or arbitrary admissions.

8) **And lastly, continue to support the creation of both district- and non-district-sponsored schools of choice, particularly schools of specific focus and interest.** Parents are very aware in rural Minnesota that choices are a part of the educational system, both private and public. They want schools of distinction, smaller school settings and school programs that fit their child's learning styles and needs. The bubbling up of new schools, schools-within-schools, magnet programs and charters are helping make Minnesota one of the leading states both educationally and economically.

Check out these Minnesota K-12 schools to find out more about the great Minnesota options being offered in rural areas:

- Nerstrand Elementary School, Nerstrand, www.faribault.k12.mn.us/ne
- North Shore Community School, Two Harbors, www.northshorecommunityschool.org
- Studio Academy, Rochester, www.studioacademyhs.org
- Lafayette Charter School, Lafayette, www.lafayettecharter.k12.mn.us
- Northern Lights Charter School, Grand Rapids, www.nlcschool.org
- Bluffview Montessori, Winona, www.bluffviewmontessori.org
- Crosslake Community School, Crosslake, www.crosslakekids.org
- New Century High School, Hutchinson, www.newcenturycharter.com
- E.C.H.O. Charter School, Echo, www.echocharter.com
- Prairie Creek Community School, Northfield, www.prairiecreek.org
- Schoolcraft Learning Community, Bemidji, www.schoolcraft.org
- TRIO Wolf Creek Distance Learning Charter School, www.wolfcreek/trio-wcwebsite.htm
- ARTech, Northfield, www.artech.k12.mn.us
- Minnesota New Country School, Henderson, www.mncs.k12.mn.us
- EdVisions Off Campus High School, Henderson, www.edvisionshighschool.com
- Great River Education Center, Waite Park, www.greatriver educationcenter.com
- Southwest Star Concept School, Okabena, www.hlo.k12.mn.us
- Harbor City International School, Duluth, www.harborcityschool.org
- Ridgeway Community School, Houston, www.ridgewayschool.org
- RiverBend Academy, Mankato, www.riverbendacademy.com
- Great Expectations School, Grand Marais, www.greatexpectationsschool.com
- TrekNorth High School, Bemidji, www.treknorth.org
- Voyageurs Expeditionary High School, Bemidji, www.vehs.org
- Green Isle Community School, Green Isle, www.greenislecommunityschool.org
- Minnesota Virtual Academy, Houston, www.mnva.k12.mn.us
- Minnesota Center of Online Learning, Houston, www.mcol.org
- Summit Learning Center, Houston, www.houston.k12.mn.us
- TEAM Academy, Waseca, www.waseca.k12.mn.us
- Bridges Elementary School, Mankato, www.isd77.mn.us/bridges

Looking at this partial list, one can see how the four scenarios at the beginning of this writing are just a sampling of the dozens of new and exciting programs being developed to serve the students of rural Minnesota. Minnesota is an extraordinary place to live, work and learn. We are a hotbed of innovation and at the same time a place of strong tradition. Many would argue that Minnesota has little reason to change its current educational system, from pre-kindergarten to its many colleges and technical centers. But with a quietly growing drop-out rate and nearly 15% of secondary students already attending schools that don't look or act like traditional schools, we must think about how we will be both different and better for more of our young people in the future. Our rural schools and communities are on the cusp of great changes and face a growing demand for options with all their need for better technology, personalization, flexibility and accountability. These are challenging and exciting times in the heartland. Will it be a grand "opening" for more learning and better schools? Let's hope so.

References

Bill and Melinda Gates Foundation. Various reports. www.gatesfoundation/education/ResearchandEvaluation/HSImprovement

Christensen, Clayton. (2000). *The Innovator's Dilemma*. Harper Business.

Center For School Change. (December, 2005). *Stretching Minds and Resources: 20 Years of Post-Secondary Options in Minnesota*.

Competing with the World. (2006, March 26). *StarTribune.* Minneapolis. Section AA.

Education Evolving. (January, 2005). *Education Financing: More Money or Different Spending Choices*. www.educationevolving.org.

Education Evolving. (2004). *Open Sector: Creating a Positive Environment for Creating Schools New*.

EdVisions Cooperative. www.edvisions.coop/edvisionsschools.

Friedman, Thomas. (2005). *The World Is Flat: A Brief History of the 21st Century.* Farrar, Straus, and Giroux.

Funk, Patricia and Bailey. Jon. (1996). *Small Schools, Big Results*. Nebraska Alliance for Rural Education.

Gruchow, Paul. (1996). *Grass Roots: The Universe of Home*. Milkweed Editions.

Holt, John. (1970, January 13). Why We Need New Schooling. *LOOK Magazine.*

Johnson, Jerry and Strange, Marty. (2005). *Why Rural Matters.* Rural School and Community Trust. www.ruralschoolandcommunitytrust.org.

Lappé, Frances Moore. (2005). *Democracy's Edge: Choosing to Save Our Democracy by Bringing Democracy to Life.* Jossey-Bass.

Minnesota Department of Education, various accountability reports. www.education.state.mn.us/mde/index/accountability.

National Training Laboratories. (1996). *Learning Pyramid*. Bethesda, MD.

School Matters: Minnesota Public Schools and Districts. (2006). Standard and Poor's.

Sizer, Theodore. (1984). *Horace's Compromise: The Dilemma of the American High School*. Houghton-Mifflin.

Van Ryzin, Mark. (2004). *Hope Study.* Unpublished.

Vander Ark, Tom. (2000, September 8). Speech at the Minnesota New Country School, Henderson, Minn.

Writing Tests Results. (2006, April 26). *Mankato Free Press*, page B-1.

Expanding and Enhancing Rural Education Through Agricultural Education

Julie Tesch

Premier leadership, personal growth and career success through agricultural education.

— National FFA Mission

The above mission statement from the National FFA Organization touches key issues for rural America. A mission statement promising premier leadership, personal growth and career success addresses what everyone wants for youth in America. Can curriculum and activities in agricultural education really offer that reality? Is there a future in the food, agricultural, and natural resources industry? Why would students want to study this basic industry?

These are all questions that we as agricultural educators face daily. The answer is yes, curriculum in agricultural education does address premier leadership, personal growth, and career success in our students. Our inter-curricular education model is unique and has worked for millions of students across the country. Yes, there is a future in the food, agricultural, and natural resources industry. This industry is not and never will be obsolete. Our world is growing at an unprecedented pace and our current students need to learn how to live and work in a global society. Feeding and clothing the world will be one of the many issues they face in the future. Our current secondary students can be the change-makers in our society. And finally, students do want to study agriculture, because contrary to popular belief, agricultural education does not just educate students to be farmers, which is a noble profession. Agricultural education students are future chemists, veterinarians, government officials, entrepreneurs, international business leaders, teachers and premier professionals in numerous other careers.

What makes agricultural education unique is the context it provides for learning. Science becomes real, mathematics makes

sense when it connects with real-life problems, communication areas of speaking and writing become far more interesting when they involve issues important to life such as the food, agricultural, and natural resources industry.

My thesis is that every school in Minnesota is capable of building and sustaining a secondary agricultural education program that will help increase student achievement. When I think of agricultural education, I think of prosperity, opportunity and success for students. Agricultural education worked to educate generations before us and will hopefully continue to educate future generations. It provides reasons to learn.

We as a society are at a crossroads. Agricultural education is not seen as a value in most schools, where high test scores seem to dominate a school. Schools have become so focused on making the magic test score that making schooling interesting and useful is lost for many students. Agricultural education can make schooling interesting and useful again, but although the number of agricultural education programs in Minnesota has held steady the past five years, the future looks bleak if we do not take some immediate steps to help qualify and quantify why agricultural education is of value in the rural school system.

Historical Value of Agricultural Education

Agricultural education in the secondary public schools can trace its roots to pre-Industrial Revolution America. Several factors contributed to the development of agricultural education. During the mid-1800s this nation was experiencing steady population growth, and a vast majority of the workforce was engaged in agriculture. The United States was a net exporter of goods and held a positive balance of trade as an exporter nation. Because it was such a large part of the culture, agriculture was often taught in the public schools as one of the core subject areas, as a "liberal art" or a "core science."

The late nineteenth century saw rapid population growth. At the beginning of the Industrial Revolution much of the rural work force moved from rural towns and villages to the population centers in the cities where industrial expansion was beginning. A decreasing proportion of the work force was engaged in agricultural production while the need for agricultural products was expanding with the population and with increasing exports. A smaller proportion of the population was expected to produce an ever-increasing amount of food and fiber products. Whether agriculture could keep up with the demand was a chief concern of the decision-makers of that period.

Agriculture was both a social and cultural concern of the time. Seeing the long-term impact of the inability of agriculture to meet future demand, Congress passed legislation such as the Morrill Act of 1862 and the Hatch Act of 1887. Each of these and several other pieces of legislation provided clear evidence of the concern of this nation during that period for the health of agriculture. It is interesting to note that the Morrill Act was passed during one of the greatest periods of social strife in this nation, a time when Congress undoubtedly had many pressing issues. American society was asking agriculture as an industry to produce more with fewer human resources.

The first two decades of the twentieth century brought a persistent debate in Congress over the need for an agriculturally literate populace. This discussion was included in the argument for a trained workforce and a technically literate society. In nearly every session of Congress from 1904 to 1914, legislation was introduced to promote the teaching of agriculture in the public schools. Each was defeated, not over the issue of "why" but of "how." Then in 1917, Congress passed the Smith-Hughes Act. This permanent federal legislation gave an incentive for secondary schools to teach vocational agriculture, industrial arts and home economics. This was the first piece of federal legislation providing direct support for vocational education. To distinguish between programs, vocational agriculture focused on entrepreneurial skills, while industrial arts taught skills for students to gain employment from others.

In Minnesota, agriculture developed as a part of the school curriculum in the early 1900s with the passage of the Putnam Act. With the help of $2,500 from the state, a school could develop an agriculture program that included the use of land to carry out students' research efforts. With the passage of the Smith-Hughes Act, the emphasis changed from the science of agriculture to a career and vocational focus, requiring agricultural education to change if schools wanted to participate in the program.

But even in this time of change, agricultural education was growing while the social emphasis on agriculture diminished across the country. In 1928 the Future Farmers of America (FFA) component was added to the agricultural education experience, making it the only school-based youth organization specifically given the right to operate by federal law. The classroom laboratory, FFA and a supervised out-of-school work experience became the core components of the agricultural education program. The bottom line was the development of the "whole" student. FFA's leadership component turned out to be an excellent teaching tool and laboratory

for many youth to learn communication and leadership skills, skills that are not normally associated with classroom instruction in a content area. FFA has produced countless citizens who experienced its benefits through hands-on learning in leadership and agriculture. Local business and community leaders, industry CEOs, governors, congressmen, and even a president have been FFA members (Leske, 1989).

(To reflect the broadening field of agriculture, in 1988 the official organization name of the Future Farmers of America was changed to The National FFA Organization).

Establishing the Need for Agricultural Education in Rural Minnesota

Leaders and decision-makers in this country determined more than a century ago that education was for all citizens and that education for work was worthy of integration into the public school system. Public education for the masses has generally been successful, accommodating a wide range of learning styles (Leske).

In this era, having high academic standards for our students is critically important. Students need to be challenged and motivated to learn. Careful attention needs to be paid so that we are not involved in an educational program that has no purpose and meaning. Agricultural education should be creating options in a student's life (Copa, 1989).

The context of agriculture provides an excellent educational setting when we are surrounded by bio-technology and hi-tech issues in rural areas. Teaching and learning in all phases of education (K to post-secondary) can be enhanced by the social, economic, scientific and technical connections to food, fiber, environment and natural resources.

Personally, I struggled with math and science throughout my time in elementary and high school. It wasn't until I started learning about math and science through the context of agriculture that I was able to overcome my struggles with learning these subjects. Agricultural education truly saved me and provided me an avenue to be a successful student in a collegiate setting. I am a hands-on learner and therefore learn in a manner different from some other students. When I can apply my knowledge directly to agriculture I can understand the concepts of algebra, chemistry and physics.

There are many students in our schools who struggle the same way I did with math and science. They get upset with their studies and give up. Agricultural education is a way for these students to experience success in math and science. Requiring more and more

science at the high school level to fulfill standards is a noble cause, but what about students who do not see the connections or relevance of chemistry, physics or physical science? They become upset and frequently stop trying to learn or eventually quit school.

We need to think about a wider view of excellence. The focus on mathematics, science and social studies as definitions of excellence are very narrow. To survive in a career, one needs to be able to cooperate with other people, take responsibility, make decisions, consider options, and build relationships. Agricultural education brings out a greater diversity of talents and possibilities in young people than schools sometimes focus on (Copa).

By allowing agricultural education teachers to offer their classes for science credit, the state will be opening up a completely new delivery mechanism for students to learn. What we need in rural Minnesota is a trained workforce that understands the basic concepts of science, communication, and civic engagement as a part of their everyday life experiences. If we can get students excited to learn about science through the context of agriculture, we can expand the economic base in Minnesota. A mechanic or welder in your local community utilizes mathematics, chemistry, physics and communication competencies every day in carrying out their work. However, neither of them would tell you, "I'm doing physics or chemistry." They simply function in a real and practical manner. That is the central point of today's agricultural education: simply putting the core sciences and communication in a meaningful and practical context.

Agricultural education is all about delivering options to students. We all want our students to succeed. Some will go on to a four-year college, some will enter the military, some will attend a two-year technical college, and some will work directly out of high school. Whatever their choice, we want them to be able to give back to the community and be knowledgeable citizens about the basics of life. I believe with my whole heart that agricultural education delivers that to our students.

Bucking the Trend

"I began to learn how to make a speech. And I began to learn how to work with other people. I also learned the value of agriculture, farm families, stability, commitment, idealism, hope, truth, hard work and patriotism from the FFA."

–Jimmy Carter, former U.S. president and former FFA member in Georgia.

Society has not held agriculture as a profession in as high esteem as it has other "professional careers." Because of economic problems associated with agriculture coupled with negative perception, it may be difficult for parents whose livelihoods have depended upon agriculture, either directly or indirectly, to advise their children to pursue career interests in agriculture (Leske).

But consider this: The world is increasing in population at an astounding rate and all people of the world need to be clothed and fed properly. If anything, there is a shortage of well-trained workers in agriculture. We not only need farmers, we need scientists, sales personnel, engineers, educators, technicians, managers, and the list goes on. In order to keep up with the demand for high-quality food and fiber, we need to have high-quality students who understand agriculture and its complexities. Agricultural education students become part of a heritage that gives them distinct advantage.

In our agricultural education classrooms, there could be a future Norman Borlaug in our midst. Schools need to provide opportunities for students to find their dreams. Expanding their opportunities to include agricultural education will help them see the world and may challenge some to be our future leaders.

Value of Curriculum

Tradition has suggested that agriculture is only farming. However, it is far more than production. The science and business of agriculture provides a critical source of basic human needs that is often overlooked and undervalued.

Agricultural education programs go beyond the subject matter, using content to make education real and meaningful, providing a context in which students learn many skills while also taking into account alternative learning styles of students. The agricultural content becomes the context within which they learn math, science, etc.

In a study by Leske on the value of agricultural education courses, students answered that they liked these courses because of the group activities, the hands-on experiences, field trips, experiments, etc. These students noticed a genuine difference in teaching methods when comparing agriculture courses to other courses in which they were enrolled at the secondary level. Research has found that when an individual possesses a knowledge base or an interest in a given area, that base can be used as a foundation on which to build new interest in a given area (Leske, 1988).

Current students often do not have the luxury of enrolling in elective classes. Beyond a highly regimented course of study, today's

students must also deal with the pressures of taking and passing standardized tests (Roberts & Dyer, 2004).

To help students reach their capabilities both academically and socially, agricultural education engages students in a balanced program of three core components:

- Classroom/Laboratory Instruction – quality instruction in and about agriculture that utilizes a "learning by doing" philosophy. This is fulfilled in a variety of courses of study.
- Supervised Agricultural Experience Programs – all students are expected to have an agriculturally related, work-based learning experience while enrolled in agricultural education courses. These experiences may involve entrepreneurship or placement in various on-the-job positions.
- FFA Student Organization – FFA activities are an integral part of the agricultural education program that all agricultural education students should participate in if they are to fully benefit from their enrollment in the program.

Value of Teachers

The most important variable in a successful agricultural education program is the teacher. They see opportunity in their students when nobody else does. Many prospective teachers want to be placed in a program that they can build from the ground up, and they want the students to be involved in building a program where they can be proud of their accomplishments.

Obtaining a degree and teaching license in agricultural education is not an easy feat. Teachers of agricultural education are often viewed as a jack-of-all-trades. During their academic career they will take such classes as microbiology, biochemistry, animal science, economics, and plant science along with all of their required education courses to become qualified, licensed teachers. Teachers also learn how to utilize their community and public relations to convey agriculture's scientific and technological contributions. They learn how to instruct students in public speaking, conducting a meeting using parliamentary procedure, and becoming a leader in society.

Agricultural education instructors want all students to succeed on standardized tests. All teachers are expected to immediately contribute to advancing test scores in their students, regardless of the classes they teach. Therefore, agricultural education classes are advancing a student's ability to perform. This occurs when they extract DNA from plants, use algebra to determine application rates,

and learn about chemistry through food technology classes.

Students value good teachers who are invested in their education and want to see students succeed. Luft & Thompson (1995) identified an effective agricultural education teacher as having the following traits: showing enthusiasm for teaching, serving as good role models for students, being committed to helping students learn, showing their commitment to teaching by belonging to a professional teaching organization, enjoying teaching, being self-confident and poised, being prompt and on-time, and being neatly dressed and groomed.

To help increase the retention rate of young teachers staying in the agricultural education teaching profession, the Teacher Induction Program (TIP) was started at the University of Minnesota. This program is for teachers in their first through third year of teaching agricultural education. Participants are paired with a senior mentor (a teacher labeled as exemplary) to help guide them through their experiences. They also meet quarterly to have peer reviews and discuss the nuances of teaching. Retention rates of early career teachers have been increasing since the inception of the TIP program. In 2004-05 the retention rate of teachers who participated in TIP was 81.2% (Joerger & Greiman, 2005). Teachers are staying in the profession longer and are making more positive impacts on their students. Students value consistency in teachers from year to year. Agricultural education teachers build strong relationships with their students because of the structure of the curriculum used. And when students help make a program excel, it not only grows the program, it also gives students a sense of community in their school.

Value of Students

Students are the sole reason we are educators. We see a future in their eyes and will do anything in our power to help make them be successful. Seeing students grow and develop is the most satisfying thing in my professional life.

Hubert Humphrey spoke about democracy creating a probable destiny. He spoke of extraordinary possibilities in ordinary people. You can see the opportunity agricultural education creates with students, extraordinary possibilities in ordinary students that other people may not see (Copa).

Everyone has a different definition of what makes a quality student. Some look at test scores, others look at extra-curricular involvement. But what about a host of other students with other gifts and talents? Agricultural education teachers take pride in seeking out those students, as well as the high-achieving students. We seek

to educate the student as a whole with curriculum, leadership, and applied work. All students can be successful in agricultural education.

The success of students taking agricultural education courses and FFA involvement is undeniable. Students involved in agricultural education earn a higher grade point average and participate more actively in sports, school and community activities than non-members (Balschweid & Talbert, 2000). It is also interesting to note that in the past decade the number of female students involved in agricultural education has increased. The common stereotypes of agricultural education being just for males who want to farm are past history. Females are now more likely to enroll in agriculture courses to develop life and teamwork skills as a whole (Sutphin, 1995).

Researchers have concluded that undergraduates at four-year institutions who enrolled in high school agri-science courses and participated in FFA and/or 4-H were more likely to complete their degree program than students who did not participate. These students were also more inclined to select agriculture for their major, less likely to change majors, and more likely to earn higher grade point averages (Ball, 2001).

Major obstacles that agricultural education programs face in recruiting and retaining students are scheduling difficulties, including competition from other programs and activities, lack of guidance counselor support or administrative support, and the overall image of agriculture. With a student's class load practically pre-determined for him or her, there is very little room for an agricultural education experience. This has the added effect of cutting students off from the opportunities of FFA, because the FFA organization is unique in that a student must be enrolled in an agricultural education class to participate in FFA.

Student Leadership

"I would not be in Congress if it wasn't for the FFA. It developed my interest in politics, gave me a better understanding of government procedures and an enthusiasm for service. The leadership skills I developed and the values that were enhanced during my FFA years have provided concrete results in my life."

–U.S. Senator Sam Brownback, former FFA member from Kansas

It goes without saying that the FFA organization is recognized as a premier youth leadership organization. One of the benefits of being a part of an agricultural education program is the opportunity

to participate in FFA. The inter-curricular nature of agricultural education and FFA helps students strengthen their classroom experience by letting them apply what they learn to leadership situations in the FFA. They also receive hands-on supervised agricultural career experience such as starting a business or working for an established company.

Participation in FFA and 4-H has been found to contribute to students' communication abilities (McKinley, Birkenholtz & Stewart, 1993). FFA programs and activities help members develop public speaking skills, conduct and participate in meetings, manage financial matters, strengthen problem-solving abilities and assume civic responsibility. Competitive events and awards programs in areas such as public speaking, commodity marketing and agri-science recognize students' achievements, encouraging them to excel beyond the classroom and develop career skills.

FFA members can participate and learn advanced career skills in 45 national proficiency areas based on their hands-on work experience ranging from food science and technology to agricultural communications to wildlife management to production agriculture. FFA members are also able to extend and test their industry knowledge through 23 national career development events such as public speaking, environment and natural resources, and business management.

Leadership development and organizational participation in high school appears to translate into continued involvement in college. If a similar pattern would hold true into professional careers, some of the current undergraduate leaders may develop into community and state leaders in agriculture and beyond (Sax, Astin & Avalos, 1998).

Agricultural Education in Minnesota

Currently, Minnesota has 188 secondary and middle school agricultural education programs, the majority of them in rural Minnesota. There are 240 agricultural education teachers reaching a total of about 20,000 students in grades 7-12 in agricultural education, and 8,500 of these students are involved in the FFA program in Minnesota.

Is there room for expansion of agricultural education in the rural school structure? Yes, now more than ever. Those schools seeking to fulfill more science credits should realize the opportunities a quality agricultural education program offers their students. In 2006, the Minnesota State Legislature adopted language stating that "*an agriculture science course may fulfill a science credit requirement in*

addition to the specified science credits in biology and chemistry or physics" (Sec. 4. Minnesota Statues 2004, section 120B.024). This opens up doors for local school districts to offer science in agricultural education classes if the teacher is qualified.

Ironically, while rural schools seem to struggle with providing this agricultural education opportunity for their children, metropolitan schools are seeing the value of making food, agriculture, natural resources and the environment a context for learning. Metropolitan agricultural education programs are functioning today in the Twin Cities at the Agricultural & Food Sciences Academy (AFSA), and also in Chicago, Indianapolis, New York, Los Angeles, and other metropolitan areas across the country.

Funding

Funding for agricultural education is a joint responsibility between the state government and the local community, while federal funding, which provides for some regulation in programs, has made up a relatively small percentage of funding for agricultural education (Carl Perkins funding is the primary source of funding from federal dollars). For the second straight year, President Bush's federal budget plan eliminates funding for all technical education programs, including agricultural education.

In such an environment, attention needs to turn to the local level. Much attention has been focused on the state level, and changes have been made to policies, but more of the changes in the future will be settled by local school districts. Budget concerns usually are cited as the top reason for cutting agricultural education programs. The pressure to save money is not unique to local school boards. Rural school districts are finding it more difficult to offer electives to their students when state and national standards are increasing. This leaves not only agricultural education out of a student's academic experience, it endangers all career and technical education, the arts, and business classes. If programs are valued, they are funded and supported in school districts.

Team AgEd Minnesota

Minnesota has been proactive in helping sustain and expand agricultural education. In 1997 the Minnesota Association of Agricultural Educators (MAAE) enacted legislation to start the Minnesota Agricultural Education Leadership Council (MAELC). MAELC was created to help revive agricultural education in the state of Minnesota both as a profession and as a course of study in secondary schools. Successes include:

- Awarding over $900,000 to local school districts and community groups around Minnesota through our grants program. Grant money has been used to start five new secondary programs and has helped purchase much needed curriculum and equipment in over 100 schools.
- Enrollment in the Agricultural, Food & Environmental Education program at the University of Minnesota has tripled in the past nine years. There are 105 students enrolled in the agricultural education major at the University of Minnesota.
- Increased academic test scores and class rank among incoming freshman at the post-secondary level.
- Increased retention rate of beginning teachers in the profession due in part to the Teacher Induction Program at the University of Minnesota, partially funded by MAELC.

Besides MAELC, Minnesota has a strong network of agricultural education organizations that we term "Team AgEd Minnesota." The organizations involved in making agricultural education a success are: Minnesota Association of Agricultural Educators, Minnesota FFA Association, Minnesota Department of Education, the University of Minnesota, Minnesota State Colleges and Universities, Minnesota Association of Career and Technical Education, Minnesota Management Education Programs, and the Minnesota Postsecondary Agricultural Student Organization.

Bright Future Ahead

Think toward the future for your school and community. Think proactively. Start an agricultural education program in your rural school system. There are strategies in place to help you start a program. If you already have a program, support the teacher and students. Many of our rural communities are not experiencing a growth trend in population, but that doesn't mean we cannot deliver a high quality, engaging education. Agricultural education is something to be added to every school's curriculum, not taken away. When looked upon as an opportunity to deliver increased science, math and economic standards, it is surprising it hasn't grown in size already. Add on top of that the opportunity to be a part of the FFA organization and the leadership opportunities afforded a student, and it seems too good to be true. Agricultural education has a long history of educating all students in all walks of life. Living proof of the impact our programs make live in your communities and are having positive effects. Give agricultural education another look. You may be surprised at the results you see.

References

Ball, A.L., Garton, B.L. & Dyer, J.E. (2001). The influence of learning communities and 4-H/FFA participation on college of agriculture students' academic performance and retention. Journal of Agricultural Education, 42(4), 54-62.

Balschweid, M.A., & Talbert, B.A. (2000). *A comparison of agricultural education students to the "typical high school student" as quantified in the state of our nation's youth: By the Horatio Alger Association.* West Lafayette, IN: Purdue University.

Copa, G. (1988). The Present Structure of Agricultural Education.

Dyer, J.E., & Park, T.D. (2005). Contributions of agricultural education, FFA, and 4-H to student leadership in agricultural colleges. Journal of Agricultural Education, 46(2), 83-95.

Dyer, J.E., & Roberts, T.G. (2004). Characteristics of effective agriculture teachers. Journal of Agricultural Education, 45(4), 82-94.

Greiman, B. & Joerger, R.M. (2005). 2004-05 Annual Activities of the Minnesota Agricultural Education Teacher Induction Program (TIP).

Leske, G. & Wardlow, G. (1988). The Future of Agricultural Education in the Public Schools.

Luft, V. D. & Thompson, G. W. (1995). Factors contributing to the effectiveness of agricultural education teachers: What students say. *The Agricultural Education Magazine, 68*(3), 23-24.

Sax, L.J., Astin, A.W., & Avalos, J. (1998). Long-term effects of volunteerism during the undergraduate years. *Review of Higher Education, 22*(2), 187-192.

Sutphin, H. D., & Newson-Stewart, M. (1995). Student's rationale for selection of agriculturally related courses in high school by gender and ethnicity. *Journal of Agricultural Education, 36*(2), 54-61.

About the Authors

ALICE SEAGREN was appointed by Governor Tim Pawlenty as the Commissioner of the Minnesota Department of Education in July 2004. As Commissioner, she is responsible for MDE operations and policymaking for all aspects of K-12 education, implementing the No Child Left Behind Act in Minnesota, early learning, libraries, and adult, career and technical education.

Prior to her appointment, she served six terms in the Minnesota House of Representatives. During her legislative career she was Chair of the House Education Finance Committee and a member of the Education Policy, Education Finance, Ways and Means, and Transportation Policy committees. Before winning election to the Legislature, she served on the Bloomington School Board; she has also been a volunteer in her church and in the community. She is currently a board member of the Normandale Community College Foundation Board and Fraser Community Services, an organization providing services to the disabled. On the national level, Seagren chaired the Education Committee of the National Council of State Legislatures, Assembly of State Issues, reflecting her commitment to education and helping people become self-sufficient.

A graduate of Southeast Missouri State University with a B.S. in marketing, Commissioner Seagren is married to Fred and has two children, Christina and Greg.

MARTHA MCMURRY is a senior research analyst with the State Demographic Center at the Minnesota Department of Administration in St. Paul. Her responsibilities include preparing population, household and labor force projections and tracking demographic trends. She received a Ph.D. in sociology from Indiana University.

BARBARA J. RONNINGEN has worked in the State Demographic Center for more than 15 years. During that time, she has written a number of papers and reports, including *Ahead at Halftime: Minnesota at Mid-Decade* (1996). Most recently, she developed estimates of immigrant populations in Minnesota in 2004. She has also worked on and written reports for the Governor's Task Force on Sports Facilities (1998) and the budget study project, *Within Our Means.* Areas of special interest in the Demographer's office include international immigration, local area population trends, labor shortage, federal spending, fertility, income, agriculture, housing and children. Before coming to the Demographic Center, Barbara worked in the Department of Economic Security, primarily in the area of unemployment insurance. Barbara received her bachelor's and master's degrees from the University of Chicago and an additional master's degree from UCLA, all in anthropology, with special emphasis on the Middle East and North Africa.

JULIE TESCH is executive director of the Minnesota Agricultural Education Leadership Council (MAELC), a legislative council created to improve agricultural education across the state. She works closely with legislators, state departments and teachers to implement innovative and effective programs related to agricultural education.

A native of Waldorf, MN, she received both her master's degree in agricultural education and her bachelor of science degree in applied economics from the University of Minnesota, Twin Cities. She also recently completed her tenure as a Hubert H. Humphrey Policy Fellow. She has studied agriculture in both Russia and Switzerland. Prior to MAELC, she worked as an Extension educator for 4-H youth development in Waseca and Steele counties. As a volunteer, she devotes much of her time to FFA and 4-H activities across the state.

GREGORY R. THORSON is an associate professor of Political Science at the University of Minnesota, Morris. His current work focuses on a variety of rural issues, including rural education, rural access to healthcare insurance, and rural housing. Prof. Thorson has previously published two papers with the Center for Rural Policy and Development: *Small Schools Under Siege: Evidence of Resource Inequality in Minnesota Schools* (2002), and *Making Difficult Times Worse: The Impact of Per Pupil Funding Formulas on Rural Minnesota Schools* (2000).

Prof. Thorson has published more than twenty articles in a wide variety of publications, including the *Journal of Politics, Political Research Quarterly, Congress and the Presidency, Educational Leadership, and the International Journal of Forecasting*.

JESSICA L. ANDERSON is a junior at the University of Minnesota, Morris. She has worked on a variety of rural issues at the Center for Small Towns. She is majoring in Psychology.

MARTHA FARRELL ERICKSON, having served as the first Director of the University of Minnesota's Children, Youth & Family Consortium (1991 to 2003), now directs the Harris Programs in the U of M's Center for Early Education and Development and co-chairs the President's Initiative on Children, Youth & Families. Marti specializes in linking research, practice and policy in the areas of parent-child attachment, child abuse prevention, and children's mental health. Her publications include many scholarly articles and books, as well as a syndicated parenting column, "Growing Concerns." Since 1995, Marti has also appeared regularly on NBC's Today Show and KARE-TV's Sunrise Show, and with her daughter, hosts a weekly radio show, "Good Enough Moms," on FM 107.

Marti holds a Ph.D. and has been honored by numerous state and national organizations, including the Minnesota Psychological Association (Outstanding Contribution to Psychology Award, 2003) and the Minnesota School Psychologists Association (Distinguished Best Practices Award, 2003).

MICHELE FALLON is a licensed clinical social worker and has worked with young children and their families in a variety of settings for the last thirty years. Her primary interests include training, consultation, and reflective supervision promoting infant and preschool mental health with parents, caregivers and early intervention providers; working with high-risk families to promote healthy parent-child relationships; and working with special needs children and their families. Currently, she works with the Harris Programs of the Center for Early Education and Development at the University of Minnesota as the clinical director of the Baby's Space Partnership, integrating family support services into childcare, and A Circle of Women, which promotes sober parenting for mothers with chemical health issues.

DARIA PAUL DONA, Ph.D., holds an appointment as associate professor in the College of Education at Minnesota State University, Mankato. She earned her doctoral degree in educational psychology from the University of North Carolina-Chapel Hill in 1990 and has practiced as a school psychologist in the public schools in both North Carolina and Minnesota. She is past president of the Minnesota School Psychology Association and former editor of *School Psychology Minnesota*.

Dr. Paul Dona conducts research on policies and procedures that influence achievement gap trends and the disproportionate representation of minority students in special education programs. She has recently produced a series of professional development training modules aimed at promoting intercultural competence for designing responsive instruction and behavioral support systems. Her work has been published in professional journals and books and presented at national and international conferences.

PATRICIA HOFFMAN is an associate professor of Educational Studies at Minnesota State University, Mankato. She received her Ph.D. from the University of Minnesota in Curriculum and Instruction: Second Languages and Cultures and her M.S in special education from St. Cloud State University. She has taught ESL, special education and foreign language in public schools and overseas. Her research interests

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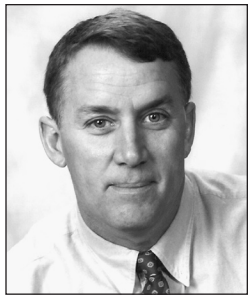
LORETTA DELONG holds a doctorate in education from the University of North Dakota and is currently a professor in the Educational Leadership Department at Minnesota State University, Mankato. She is an enrolled member of the Turtle Mountain Band of Chippewa Indians located in very north central North Dakota. She has worked as a teacher, Bilingual Director, Vice President of United Tribes Technical College in Bismarck, former Post Doctoral Bush Fellow, superintendent of schools, Education Line Officer for 9 schools in North Dakota, manager/editor for the Turtle Mountain Community College NSF Project, Telling the Story.

Loretta is a mother, wife, grandmother, sister, aunt. Traditional teachings of her people guide her and teach her, ceremonies weave her with her spirit always and her vision in life enables her.

KATHRYN PETERS is currently a junior at Minnesota State University, Mankato. Kathryn grew up in a rural area near Goodhue, MN, with her father, mother and three sisters. After attending school in Goodhue, she graduated in 2003 as valedictorian of her class. Following high school, she enrolled in the dietetics program at Mankato and will be graduating in the spring of 2007 with a bachelor's of science in dietetics. After college, she plans on completing her internship and R.D. board and becoming a registered dietician. Once certified, she plans to work as a clinical dietician in Minnesota and someday raise a family here.

DOUG THOMAS is executive director of EdVisions Cooperative in Henderson, MN, a public educator professional practice serving 15 public charter schools and more than 200 individual members. A former teacher and business owner, Doug served as the founding president of EdVisions Cooperative and was also a founder of the Minnesota New Country School, a nationally recognized innovative charter school located in Henderson. He spent ten years



as the Southern Minnesota representative for the Center for School Change at the University of Minnesota's Humphrey Institute and was a four-term member on the board of the LeSueur-Henderson Public Schools. In 2000, EdVisions was awarded a grant from the Bill and Melinda Gates Foundation for small-high schools replication, and Doug has since led the effort to create 35 new small secondary schools using the New Country/EdVisions model. He is a strong advocate for small and rural schools, teacher leadership and innovative learning strategies and has a special interest in rural community development.

Doug earned a bachelor of science degree in secondary education from Bemidji State University and a master's degree in educational leadership from Minnesota State University, Mankato, where he has taught a graduate course in educational reform and leadership for ten years.

For the past 25 years, he has also been co-owner of New Leaf Development Inc., a small historic preservation and management company located in Henderson.

About the Center for Rural Policy and Development

In 1997, a group of rural Minnesota advocates came together around a bold idea: to create a rural policy think tank that would provide policy makers, rural advocates and concerned citizens with an objective, unbiased and politically "unspun" examination of contemporary rural issues.

Funded through a public-private partnership, the Center for Rural Policy and Development today is an independent non-profit research organization dedicated to the objective study of the economic, social and cultural forces that are impacting rural Minnesotans and the communities they reside in. Over the years, our audience has grown to include state legislators, city and county officials, community leaders, business executives, college presidents, school superintendents and everyday citizens concerned about rural Minnesota and its future.

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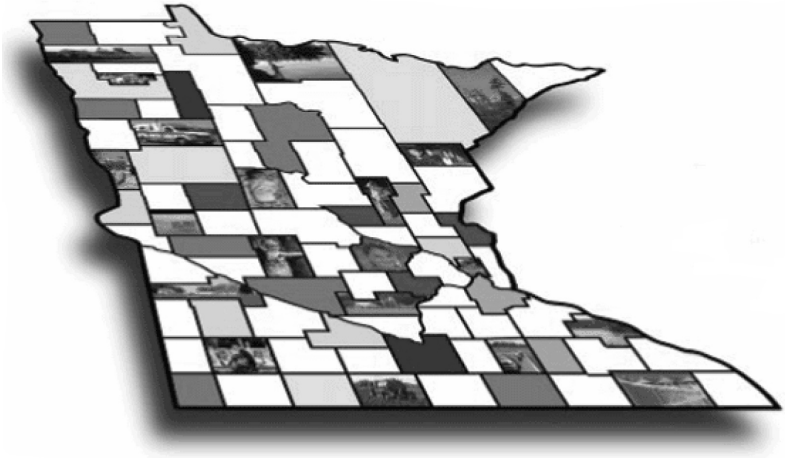

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