

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.

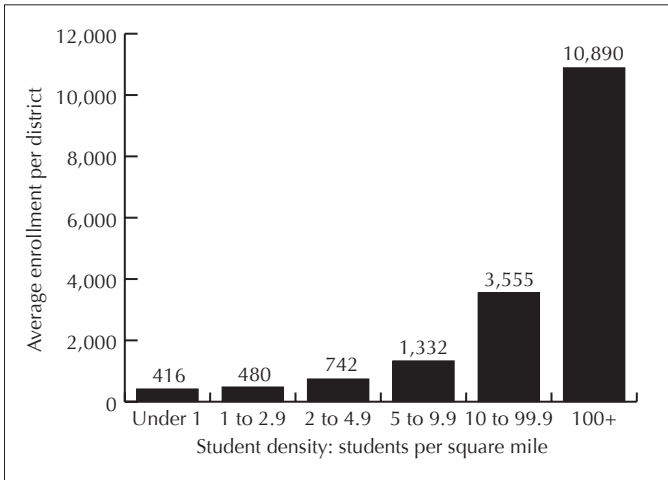
For this article, we define rural districts as those with fewer than 10 students per square mile. The rural category is then subdivided into four groups based on gradations of density: 5 to 9.9, 2 to 4.9, 1 to 1.9 and less than 1 per square mile.

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

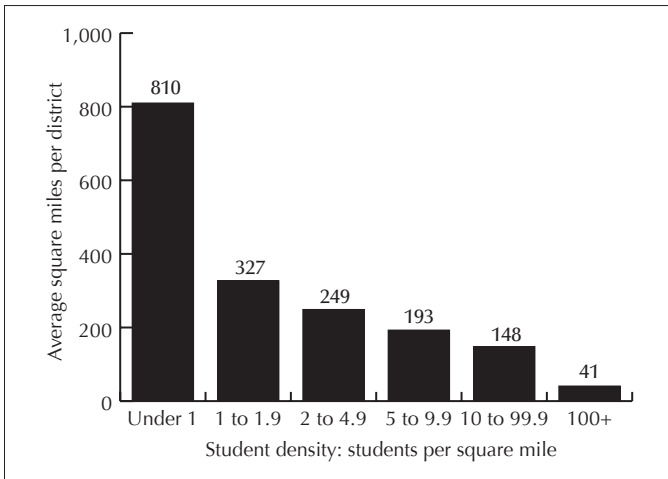
Fifty-two districts have between 5 and 9.9 students per square mile. These districts account for 12% of the state’s area and about

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



Source: Minnesota Department of Education; Land Management Information Center

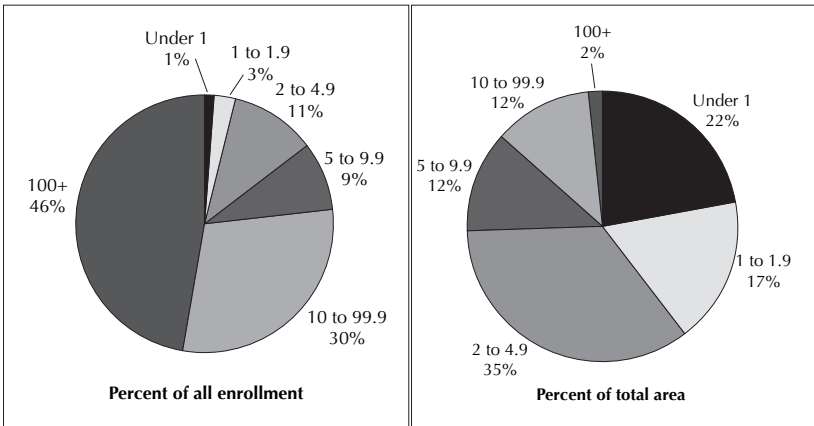
Figure 2: Average square miles per district, by district density: 2005-2006.



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.

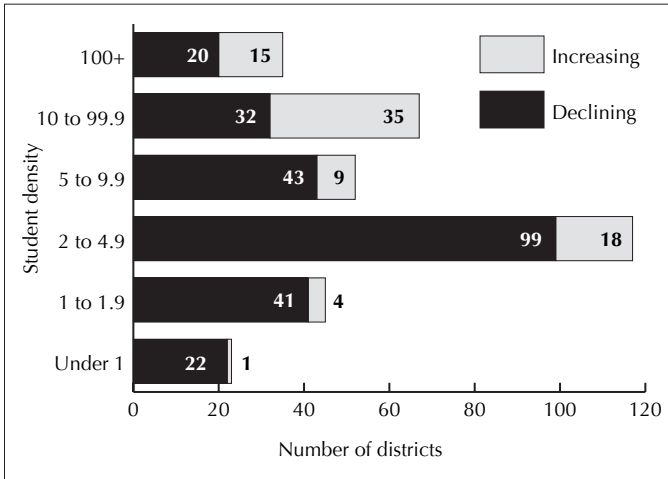
Forty-five districts have between 1 and 1.9 students per square mile. The majority of these districts are in western Minnesota. These districts cover 17% of the state’s geographic area but enroll only 3% of students. On average, they have 480 students and cover 327 square miles.

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

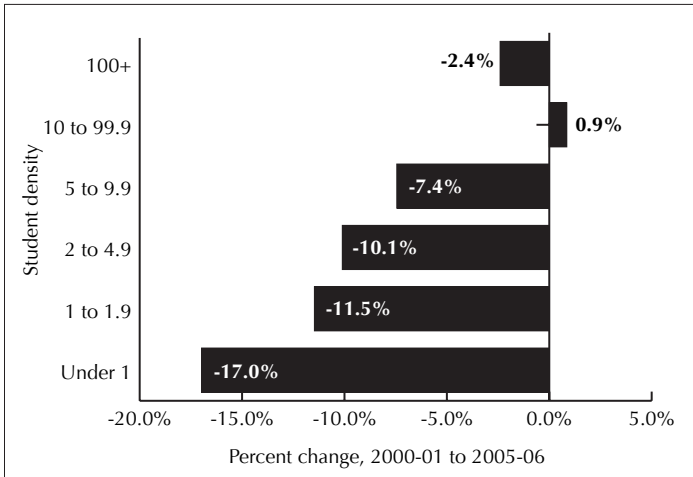
Districts with more than 10 students per square mile will be called “urban” districts in this report. Sixty-seven districts have between 10 and 99.9 students per square mile. This category includes some suburban districts as well as districts in regional centers such as St. Cloud and Duluth. These districts 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.

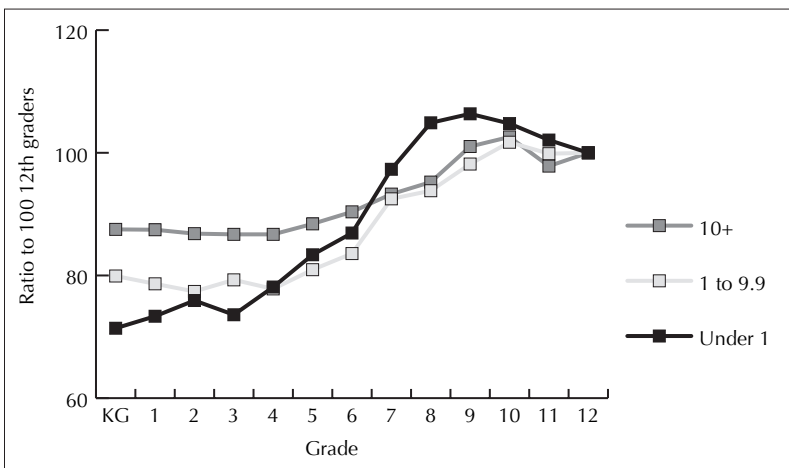
District Density (students per sq. mile)	Number of districts	Districts with declining enrollment
Less than 1	23	22
1 to 1.9	45	41
2 to 4.9	117	99
5 to 9.9	52	43
10 to 99.9	67	32
100+	35	20
All districts	339	257

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

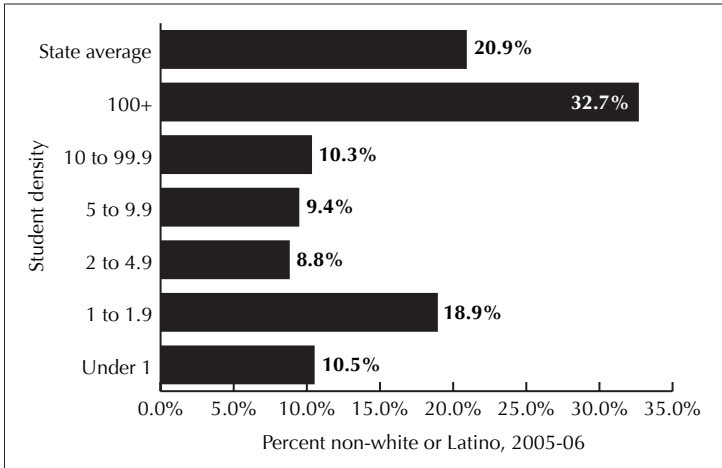
Table 2: Enrollment change from 2000-01 to 2005-06, by grade and district density.

Grade	Year	Density (Students per square mile)					
		Under 1	1 to 1.9	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

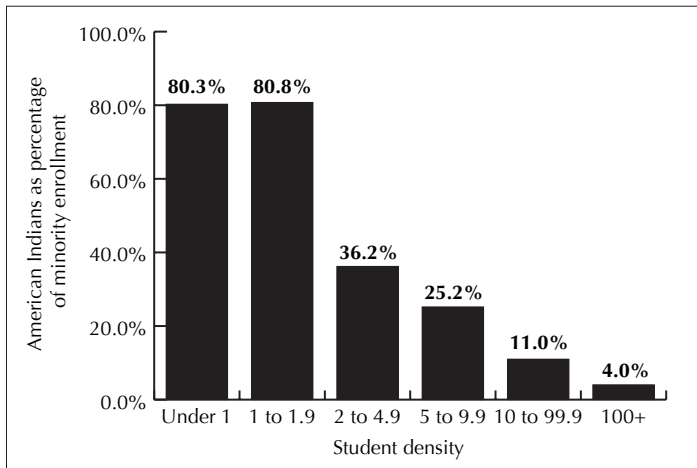
The racial and ethnic diversity of the student body varies greatly from district to district. Overall, urban districts with more than 100 students per square mile have the highest proportions of non-white or Latino students, 33%. Rural districts with between 1 and 1.9 students per square mile rank second 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

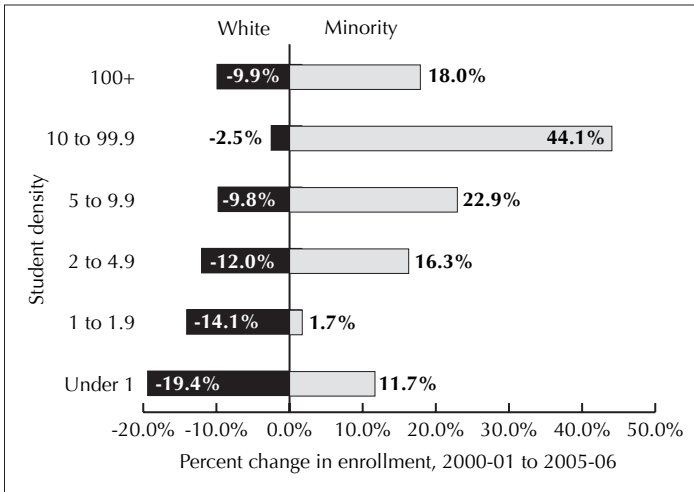
Figure 9: Indian students make up a large share of minority enrollments in rural districts.



Source: Minnesota Department of Education

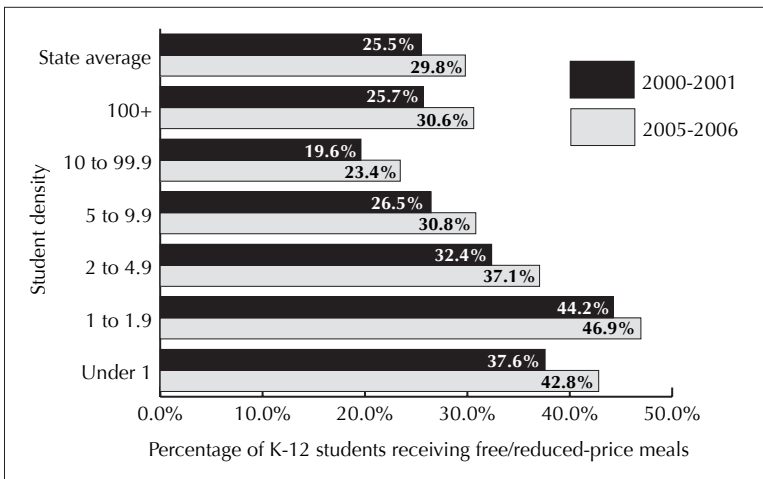
Minority students in rural districts are predominantly American Indians and Latinos. In districts with fewer than 2 students per square mile, more than 80% of minority students are American Indians. Outside of districts in traditional Indian areas, minorities account for only a small proportion of students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

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

District Density	Enrollment in 2000-2001 school year							Percent Minority
	American Indian	Asian	Hispanic	Black	White	Minority	Total	
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

District Density	Enrollment in 2005-2006 school year							Percent Minority
	American Indian	Asian	Hispanic	Black	White	Minority	Total	
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 4b: Change in white and minority enrollment, 2000-01 to 2005-06, by district density.

District Density	Enrollment change, 00-01 to 05-06					
	Total Number change	Total Percent change	White enrollment change	White enrollment, percent change	Minority enrollment change	Minority enrollment, 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

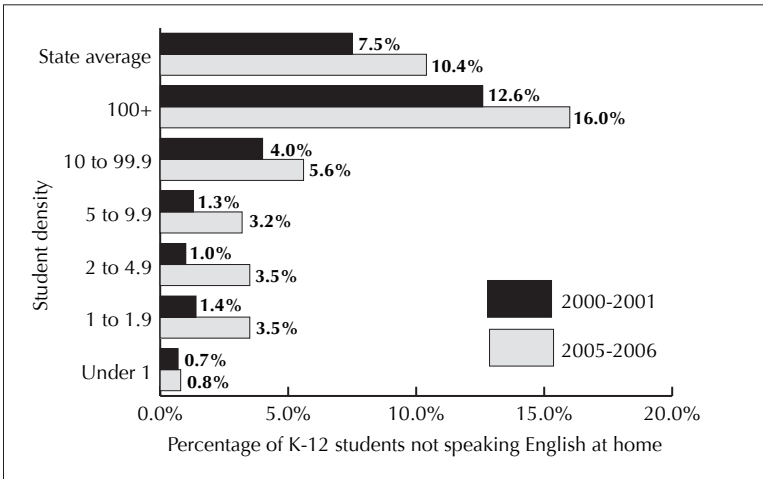
Charter school enrollments are increasing, but it appears they are having more effect in urban areas than in rural areas. Charter schools do not have geographic boundaries, so it is not possible to calculate density for charter schools. Instead, charter schools are grouped by broad region. In the 2005-2006 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.

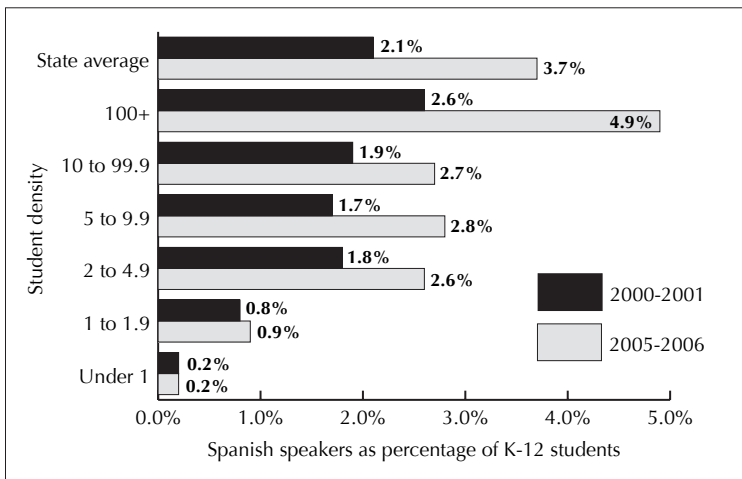
Proportion of non-English speakers increases

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

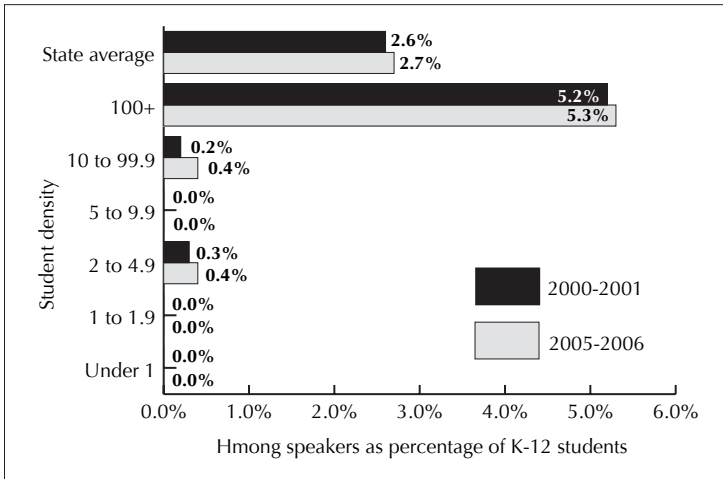
In the 2005-2006 school year, 30,464 students in Minnesota schools spoke Spanish — more than any other non-English language. Spanish speakers are also geographically widespread throughout the state. Hmong speakers rank second, with 22,737 speakers, but nearly all are in the seven-county Twin Cities area.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

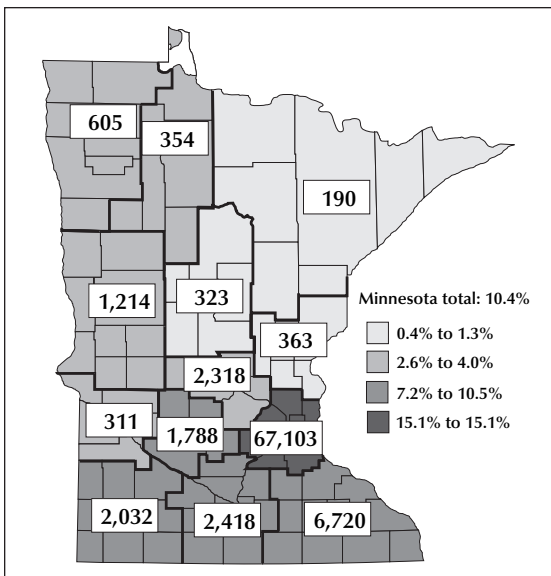
Figure 14: Hmong speakers are concentrated in the most urban districts.



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

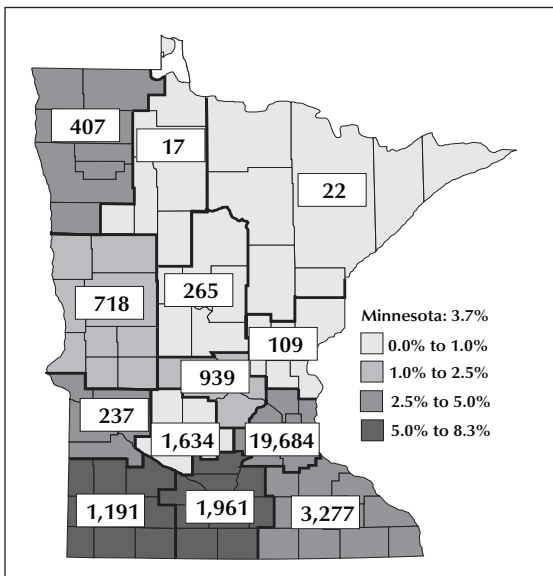
Chippewa, Serbo-Croatian, German, South Asian languages, Arabic, Nuer (Sudanese language), Kurdish and Korean all have more than 100 student speakers in Greater Minnesota.

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.