Wisconsin’s Public School Enrollment: Past, Present, & Future

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Executive Summary

Between 2001 and 2006, 69% of Wisconsin’s school districts experienced enrollment decline. However, enrollment decline has not occurred uniformly across the state. Several school districts (mostly suburban, exurban, or small city) have seen substantial increases in enrollment over the last several years. Districts experiencing growth and decline balance one another out, so that statewide school enrollment has seen relatively slight decline (1.4% decline in K-12 students between 2001 and 2006). Will enrollment decline continue for the majority of Wisconsin’s school districts? This brief examines the demographic trends behind recent enrollment changes and presents projected future scenarios for public school enrollment over the next ten years. Based on cohort component models, we generate projections for statewide K-12 public school enrollment by race/ethnicity and by urban/suburban/rural locale.

Due to the aging of the Baby Boom generation out of prime childbearing years, the number of births in Wisconsin was relatively few in the 1990s compared to the 1980s. Subsequently, the number of kindergarteners enrolling in school in recent years has not been enough to replace the number of graduating high school seniors. Our models suggest that enrollment decline at the state level will continue for another 2-3 years. Beginning in about 2010, enrollment should begin to increase, due mostly to recent increases and projected increases in births and the growing Hispanic population. Rural and urban districts are projected to decline for another 3-4 years, then to rebound to current levels. Suburban districts, on the other hand, are projected to experience continued enrollment growth over the next several years. Projections by race/ethnicity point to the growing influence of the Hispanic population on Wisconsin’s schools. Non-Hispanic white enrollment is projected to decline significantly over the next five years, then to level off, while Hispanic enrollment is projected to continue to increase rapidly over the next decade.

Despite a somewhat optimistic outlook presented here, it is important to note that we have not accounted for all types of school districts in this report. Districts that are particularly white, older, rural, remote, and/or built out with housing units may see more severe and prolonged enrollment decline. Even if state public school enrollment and enrollment in urban, suburban, and rural districts generally increases over the next ten years, many districts may still face decline.

Background

The Applied Population Lab (APL) is a group of research and outreach professionals within the University of Wisconsin-Madison specializing in population studies and geographically referenced data analysis. For over ten years, the APL has been working with Wisconsin’s school districts on demographic analyses and school enrollment projections. In 2006, we conducted the first round of an annual research project examining statewide school enrollment changes with respect to Wisconsin’s broader demographic trends. We undertook this project with a goal of providing school administrators, regional planners, and state officials with information regarding the past, current, and future direction of public school enrollment in Wisconsin. This brief presents the results of our 2007 study.

1 Unless otherwise noted, data on enrollment counts in this report come from the Wisconsin Department of Public Instruction (DPI) enrollment counts from the third Friday in September.
The following charts show recent enrollment histories for Wisconsin’s public schools by race/ethnicity and by urban/suburban/rural locale. Statewide enrollment was at its historical peak in the 1960’s and 1970’s when the Baby Boom generation was in school. Similarly, enrollment was again high in the 1990’s when the children of the Boomers were in school. Since reaching its recent peak in 1997/98, statewide enrollment has declined somewhat, with particularly marked decline in the last three years. It is important to note, however, that these trends are not uniform across space or across different racial/ethnic groups. For instance, urban and rural school districts have seen steady decline, while suburban school districts have been growing. In terms of racial and ethnic differences, the number of non-Hispanic white students has been declining since 2000/01, while the number of minority students (particularly Hispanics) has increased.

2 Note: Due to transition to a new data collection system at DPI, data for the 2004/05 school year are not complete.
Demographic Trends

Because public school enrollment reflects broader demographic trends, it is important to consider the shifting age structure of the general population and trends in births and migration that impact the number of school age children present in the public school system. As the Baby Boom generation has aged, fertility has been postponed until later in life, and overall age specific fertility rates have declined; the number of births in Wisconsin has declined over the last 25 years. On the other hand, net in-migration to the state and a growing minority population have contributed to growth in the number of school age children in some areas of the state and may rejuvenate school enrollment counts over the next several years in more school districts.

On average in Wisconsin, 87% of the number of children born in the state enroll in Kindergarten in the state’s public school system five years later. The remaining 13% attend private elementary school, receive home schooling, or otherwise do not attend public Kindergarten in the state. Wisconsin tends to see net in-migration of children at all ages, ruling out an important loss due to out-migration.

The most significant reason why many of Wisconsin’s school districts are currently experiencing declining enrollment is due to the relatively few number of births in the state in the late 1990s. Numbers of births in Wisconsin were relatively high in the 1980’s when the Baby Boom generation was in their prime child-bearing years. This created large cohorts of children who moved through the school system in the 1990’s. Between 1993 and 2004, few children were born in comparison to the previous decade. However, births to Wisconsin mothers have been increasing since 1997, and they are projected to continue to increase through 2011, at which time birth numbers should be similar to the high numbers experienced in the 1980s.

1990-2006 and the number of births to non-Hispanic white mothers. The difference between these lines is the number of births to minority mothers. Births to white mothers decreased steadily between 1990 and 1997, then remained steady between 1997 and 2006. Births to Black, Asian, and American Indian mothers have been increasing moderately, while births to Hispanics have increased dramatically in the last ten years. The number of Hispanic births grew from 3,206 in 1997 to 6,861 in 2006 (an increase of 3,655, or 114%). Overall, 63% of the upturn in total births (1997-2006) can be attributed to increases in Hispanic births alone; while 15% is due to increases in Asian births, 11% to Blacks, and 6% to American Indians.

The chart at left shows trends in Kindergarten enrollment 1995-2006 for the State of Wisconsin compared to trends in the number of graduating seniors the year before. The gap between the two trend lines represents the growing disparity over the past several years between the large graduating cohorts and the smaller replacement cohorts of kindergarteners. As the children of Baby Boomers move through the school system and graduate, the incoming cohorts of younger children who are currently at the elementary level have been too small to replace the large cohorts who came before.

While the total number of births in Wisconsin has been increasing, trends vary by race/ethnicity. The chart below shows the total number of births to Wisconsin mothers

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3 Birth data are from Wisconsin Department of Health and Family Services
Because fertility is limited to specific age ranges, the age structure of the population serves as an important indicator of the number of births. Populations with large cohorts in their childbearing years tend to have higher numbers of births than populations with relatively few people at childbearing age. The following chart shows population by age, sex, and race/ethnicity in the form of a population pyramid, where each bar represents the proportion of people at each age 0-85.

The population pyramid for persons of color (shown in dark outline) contrasts starkly with the one for non-Hispanic Whites (shown in plum). The minority pyramid is typical of a growing population, where the most people are concentrated in the younger age groups. The minority population is much younger than the non-Hispanic White population and the number of people at childbearing age is continually increasing. Subsequently, minorities can be expected to make up a growing proportion of the number of births in the state and of the number of children in Wisconsin’s schools.

Populations change through natural increase (births - deaths) and/or net migration (incoming - outgoing). Between 2000 and 2006 urban, suburban, and rural areas all saw overall population increase; however, the components of population change varied between these different areas of the state. Rural Wisconsin grew fastest proportionally, increasing by 5.4%. This growth was almost entirely due to net in-migration (4.5%). Due to the older age structure of the population, rural areas have experienced little natural increase. Net in-migration to rural areas has kept the population growing, but young adults tend to out-migrate from rural areas, and a large portion of the in-migrants have been of retirement age, exacerbating the aging of the population. Urban areas, on the other hand, experienced population decline due to net migration (more out-migration than in-migration), but increase due to more births than deaths. Finally, suburban areas grew due to both natural increase and net migration.

In sum, Wisconsin as a whole is growing older. The aging of the Baby Boom generation contributed to a declining number of births in the 1990’s and Kindergarteners in the late 1990s and early 2000s. The Baby Boomlet generation was age 13-27 in 2006, and the bulk of this generation is just beginning to enter its prime childbearing years. There is some potential for increasing numbers of births over the next 5 to 10 years as more women come into their childbearing years. It is unlikely that we can expect to have a second Baby Boom, or even a second Boomlet, because women today are having fewer children and having them later in life than they were over the past several years. Still, some increase due to the structure of the population might be expected. Because of the age structure of the minority population, a relatively large proportion of these future births might be born to persons of color. Rural areas, particularly in the north and southwest, are the least likely to experience this growth.

**Public School Enrollment Projections: Data & Methods**

Our projections are based on state public school enrollment histories and observed and projected births. Enrollment histories are composed of student counts on the third Friday of each September by grade and by race/ethnicity from 1994/95 school year through the 2006/07 school year, as reported by the Wisconsin Department of Public Instruction (DPI). Enrollment data by race/ethnicity are only available for 2000/01 to 2006/07.

Data on past births (1980-2006) are taken from the Wisconsin Department of Health and Family Services. They represent reported births to women from birth certificates, based on the county and municipality of residence and the race/ethnicity of the mother. We estimate projected data on future births (2007-2011) based on past birth trends (trend models) and age specific fertility rates (ASFR model) gleaned by modifying 5-year birth projections provided by the Wisconsin Department of Administration Demographic Services Center. The three different projection models (Long Term Trend, Recent Trend, and Age Specific Fertility Rate (ASFR)) vary in that each takes a somewhat different approach to projecting future births.

For the Long Term Trend model, we simply run a linear regression on trends in births over the last fifteen years (1991-2006) and follow the regression line forward in time. For the Recent Trend model, we perform the linear regression on observed

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4 Wisconsin counties were divided into urban, suburban, or rural categories based on the scheme described below for classifying school districts.
birth counts over the last seven years (2000-2006). The ASFR model is different in that it is not connected to past trends, but rather to the current and expected future age structure of the female population and their fertility rates by age.

Drawing on the U.S. Census Bureau’s locale codes, we classify school districts in large and medium cities as “urban” (19 school districts). Districts in the suburbs of these cities and of large border state cities are classified as “suburbs” (143 districts), and all other districts are classified as “rural” (264 districts). The pie charts show the breakdown of the number of districts classified as urban, suburban, and rural and student enrollment in urban, suburban, and rural districts. About 62% of Wisconsin’s school districts are “rural,” but only about 30% of Wisconsin’s public school students attend rural schools.

Public School Enrollment: Future

We use a cohort component method of projecting school enrollment by grade ten years into the future. Specifically, we use the average ratio of progression from one grade to the next to move cohorts of students through the school system over time, and we use a ratio of births five years previous to Kindergarteners to project Kindergarten enrollment. For instance, we examine the average number of first graders in year (t) compared to the average number of second graders in year (t+1). Because the means of entry and exit are relatively consistent over time at the state level, the grade progression ratios for each grade transition remain relatively stable.

Statewide K-12 enrollment is projected to continue to decline for the next two to three years, then to begin to increase to levels exceeding those of the 1990s by about 2015.

This classification is slightly different than the one used in past years. Stevens Point is now classified as “urban” whereas in the past it was “rural.” In addition, small districts at the outskirts of metropolitan areas (mostly in Marathon, Chippewa, and Portage Counties) are classified as “rural” rather than “suburban.”
Our projections by race/ethnicity indicate that non-Hispanic white enrollment will continue to decline over the next decade, while Hispanic enrollment will increase substantially, and African American enrollment will be relatively flat. Because the Hispanic population is much younger than the general population and tends to have higher birth rates, there is potential for a growing Hispanic population to alleviate declining enrollment in Wisconsin’s public schools. The chart below right demonstrates that Hispanic students (solid lines) are expected to outnumber African American students (dashed lines) by 2010, as the number of Hispanic students is expected to almost triple between 2006 and 2016.

Urban school districts are projected to decline over the next three to five years, then begin to rebound to levels similar to the last three years. It is important to note that urban districts are highly impacted by trends in the Milwaukee Public School District, because this district alone accounts for almost 30% of total enrollment in urban school districts. Enrollment in suburban school districts has been increasing over the last several years, largely due to in-migration of families with children. After adjusting for a slow down in the housing market, we project that enrollment will continue to increase substantially over the next decade in suburban districts. Rural enrollment has declined significantly over the last several years, and we project that decline will continue over the next four to five years. After 2011, we project that enrollment in rural school districts will rebound slightly.

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