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This article discusses how a medium-sized school district in Wisconsin was able to reallocate resources to reduce class sizes in grades K-5 without spending more money or increasing its tax rate. Previous research on resource reallocation found that the bulk of reallocated resources were those supporting categorical program services. This district was able to use a different strategy. As a growing district, its marginal costs of adding an extra class of students were much less than its average expenditures per pupil, which were reimbursed by the state school finance formula. As the district grew, therefore, it acquired excess revenues. Also, by implementing full-day kindergarten, the district acquired more excess revenues because this added (0.5 pupil) X (Number of kindergartners) to its current enrollment, and the cost of educating these students was less than the amount they received from the state funding formula. It then used these revenues to reduce class sizes to between 15 and 20 in all Kindergarten through grade 3 classrooms and to between 15 and 22 for grades 4-5.

## **Keywords**

Wisconsin, Tax Rate, Reallocation of Resources, Money, School Finance, Formula, Full Day Kindergarten, Classroom, Costs

## **Disciplines**

Elementary and Middle and Secondary Education Administration

## **Comments**

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## **Committing to Class-Size Reduction and Finding the Resources to Implement It: A Case Study of Resource Reallocation**

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### **Abstract**

This article discusses how a medium-sized school district in Wisconsin was able to reallocate resources to reduce class sizes in grades K-5 without spending more money or increasing its tax rate. Previous research on resource reallocation found that the bulk of reallocated resources were those supporting categorical program services. This district was able to use a different strategy. As a growing district, its marginal costs of adding an extra class of students were much less than its average expenditures per pupil, which were reimbursed by the state school finance formula. As the district grew, therefore, it acquired excess revenues. Also, by implementing full-day kindergarten, the district

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## **Introduction**

Like most districts, the Kenosha Public School District in Southeastern Wisconsin faced a number of different educational and fiscal challenges as the new millennium approached. A medium-sized urban district in the Midwest, Kenosha served a population of approximately 20,000 students in the 2000-01 school year. Demographically, its student population was 77 percent white with 11 percent Hispanic, 9 percent African American, and 2 percent other. Hispanics represented the largest and fastest growing minority group. About 30 percent of Kenosha's students lived in families with incomes below the poverty level, as indicated by eligibility for the federal free and reduced-price lunch program. Over the past decade, the percentage of students from low-income backgrounds continued to grow.

But, rather than being evenly distributed across all schools, many of the district's low-income, minority and limited-English-speaking students were concentrated in a small number of its schools. Several years ago, it became obvious that the growing concentration of educational challenges that usually accompany these demographic characteristics was making it more difficult for students in these schools to achieve the high standards set for them by the state and the district. Although a growing student population, combined with a generous state education aid program, helped ensure budget stability, the district nevertheless struggled more and more to find the fiscal resources required to deploy programs successful in boosting the performance of its students, particularly its low income and minority students.

In an effort to meet the achievement goals for all students over the 1990s, the district implemented a number of education reform initiatives. A new out-of-state superintendent who arrived in 1996 stimulated these reforms, plus, as will be shown, a number of related management and fiscal changes. At the district level, the school system shifted from a junior high to a middle school approach to ease the transition into high school; opened three new charter schools to help foster innovation and new educational approaches; and most recently, implemented a full-day kindergarten program, in part to help low-income children learn to read in the early elementary grades. At the site level, many schools began to adopt new, structured literacy programs as well as comprehensive school reform designs, such as Direct Instruction, Success For All, the Literacy Collaborative, Marva Collins and Accelerated Schools.

Although these reforms helped the district and its schools make progress toward their student achievement goals, teachers as well as district and school leaders wanted to see even greater progress. One additional reform that teachers and administrators alike believed would provide a greater boost in student achievement was class-size reduction.

Indeed, class size reduction, particularly in the early grades, was an education reform sweeping the country during this time. Odden and Picus (2000) found that 19 states and scores of districts enacted various versions of this education policy in the

1990s, believing that despite the high cost, it was a policy that research showed could dramatically raise student performance (Grissmer, 1999).

Further, Wisconsin had adopted a targeted class size reduction program in 1995 as part of a statewide approach to improve student performance, particularly the performance of its low-income and minority students. Called the Student Achievement Guarantee in Education or SAGE program, it was initially limited to schools that had 50 percent or more of its students eligible for free and reduced price lunch, i.e., from a family with a poverty level income. In the 1996-97 school year, this included 30 elementary schools in 21 districts, including one school in Kenosha. For the 2000-01 school year, the program expanded its eligibility and had a dramatic increase in funding; in 2001, it helped hundreds of schools afford smaller classes around Wisconsin.

Although there was strong support for a district-wide class-size-reduction program, there was still the issue of how to finance it. The expansion of the SAGE program provided one source. But two additional factors helped the district frame a strategy for how they could come up with the money to fund such a high-cost education reform. First, a 1994 legislative change in the federal Title I program allowed schools with at least 50 percent of its students in poverty to use their Title I funds for school-wide programs, rather than programs targeted to just its low-income students. The school-wide programs selected had to be research-based, and class-size reduction was a strategy that qualified. Second, prior to the opening of the 1998-99 school year, district administrators heard a presentation on resource reallocation in education; one of the major ideas discussed was school use of Title I funds for schoolwide programs, including both class-size reduction and comprehensive school design models (see, for example, Odden & Archibald, 2000).

The notion of resource reallocation for “whole school reform” triggered thoughts about additional programmatic and fiscal changes among many district and school leaders. The general notion was that the district could redesign schools from “the ground up” and use all of a site's resources to finance a new, research-based educational strategy, which could include small classes in at least Kindergarten through grade three. Further, a few elementary schools had access to other funds that could help reduce class sizes. In addition to Title I and the possibility of SAGE money, some elementary schools qualified for a small state program, called P5, that provided extra resources to schools with high poverty concentrations (schools could either receive P5 or SAGE money, but not both). In addition, the district knew that at the federal level, Title VI of the reauthorized Elementary and Secondary Education Act (ESEA) would provide an additional pot of money to help fund class-size reduction.

A combination of the above ideas convinced the school board in July 1998 that it could begin immediately to reduce class size in a selected number of its high-poverty elementary schools just by reallocating Title I (mainly to school-wide programs) and P-5, and using SAGE and Title VI funds where possible. They did so, and in the first year they saw a positive impact on student academic performance as measured by state and district tests.

In light of the positive results at these elementary schools, as well as even firmer belief in research supporting smaller classes (Finn & Achilles, 1999; Molnar, Smith, Zahorik, Palmer, Halbach & Ehrle, 1999, see also <http://www.uwm.edu/Dept/CERAI>), the district decided to find the money to reduce class sizes for Kindergarten through grade three in *all* elementary schools the following school year. Whether this was the reform that would best help all students is beyond the scope of this study. Instead, this case study tells the story of how the district was able to fund this ambitious class-size reduction initiative.

## Finding the Money

Previous research on resource reallocation (Achilles, 1999; Odden & Archibald, 2000) showed that categorical program dollars—Title I, special education, programs for limited- English proficient students, etc.—comprised the bulk of funds that were reallocated, whether the goal was class- size reduction or implementing a specific whole school design, such as Roots and Wings/Success for All. Kenosha initially used this strategy as well, as it was primarily federal Title I, Title VI, and state SAGE and P5 money that allowed the highest poverty schools to begin to reduce class sizes. Studies have shown that reduced class sizes are especially beneficial for low-income and minority students (Finn and Achilles, 1999).

Believing these benefits would extend to all students, the district decided to reduce class sizes in all elementary schools, including those that were not eligible for categorical program funds, but to do so it needed a new, larger source of funding. This challenge sent the district back to analyze the workings of its overall budget as well as the state of Wisconsin's school finance equalization formula. These analyses also prompted the district to consider implementing a full-day kindergarten program. Although they had been considering this step for a long time, this decision, combined with the reality of rising student enrollments, helped the district generate the resources that would enable it to fund a larger class-size reduction strategy.

Funding for the larger class-size reduction initiative came from two sources: rising enrollment and the implementation of full-day kindergarten. In the next few paragraphs, these funding sources will be addressed in turn. First, Kenosha was able to generate resources from rising enrollments in the following way: In Wisconsin, districts receive aid on the basis of a three tiered, guaranteed tax base, school finance formula. The state aid formula functions so that in any one year, for each additional student Kenosha gains (or loses), the district receives (or loses) approximately \$7000. Since the district has experienced rising enrollments in the past few years, its budget has constantly grown. And because each new student costs less than \$7000 to educate, the marginal cost of educating each new student is less than the average per pupil expenditure of the district. To illustrate this point, assume the district enrolls 25 new students. The district's budget would rise by \$175,000 (25 x \$7000). But the district would have to hire only one additional teacher for a new class of 25 kids. This would require one teacher at an average cost of \$50,000, plus the cost of 20 percent of another teacher for the first teacher's planning and preparation time, and some additional costs for materials, supplies and operations and maintenance. Assume these costs totaled \$75,000. That would leave the district with excess revenues of \$100,000, which would be sufficient for the district to hire close to two additional teachers, at an average cost of \$50,000 each. The marginal costs for the additional 25 students were only \$3000 per student (\$75,000 divided by 25 students), while the average additional dollars were \$7000 a child, for a possible difference between average and marginal costs of about \$4000 a child.

To be sure, the above is a simplified analysis. For the numbers to work exactly, all students would need to be in the same grade level and in the same school. But since the district enrollment grew by approximately 500 students between 1999-2000 and 2000-01, a rise of 25 per grade was possible, though maybe not in each school. For these reasons, it may be true that the difference between average and marginal costs for each additional student is not precisely \$4000. Even so, because of the high level of the school finance equalization formula and the phenomenon of rising enrollments, the

district was in the enviable position of generating substantial excess revenues for each new student in the district. This situation was further strengthened by the fact that the district had some excess classroom space, so it did not need to build new classrooms because of enrollment growth or because of class size reductions. How the district found the space for the extra classes will be discussed later in this case study.

Another complication for the above example is that Wisconsin's education aid formula does not use the current student count in determining each district's aid, but uses the average of the number of students from the past three years. Initially, this was implemented to limit state aid losses for declining enrollment districts, but for growing enrollment districts it limits the increase in revenues as well. Thus, for Kenosha to enjoy the full measure of the excess of average over marginal cost increases, it needed a full three years. If this were the only source of new funding, the district would have had to phase in its class size reduction strategy over several years.

However, as previously mentioned, the district found another way to raise revenue for the small class-size policy that further aided all its students, but particularly its students from low-income backgrounds, which was the implementation of full-day kindergarten. In the mid-1990s, the district provided only a half-day kindergarten program. But it knew that full day kindergarten was desired by many families and also was a research-based strategy to help students from low-income backgrounds learn reading and writing in the first three years of elementary school (Slavin and Madden, 1996). Therefore, the district decided to change from a half-day to a full-day kindergarten program. This move generated more funds for class-size reduction for the same reason identified with new enrollments: having kindergartners for an extra half day gave the district additional revenues because of excess average over marginal costs. Because the state allowed the district to count the child as a 1.0 student for a full-day program as compared to 0.5 for a half-day program, the shift to a full day program essentially allowed the district to "increase" enrollments on its own. For every two students who shifted from a half- to a full-day kindergarten program, the district was able to add 1.0 ( $2 \times 0.5$ ) students to its pupil count. It received the full \$7000 for this "extra" student, but again its marginal costs were much lower than this \$7000 figure.

Another example helps illustrate this point. When a school has 20 students for morning kindergarten and 20 students for afternoon kindergarten, the school receives  $40 \times 0.5 \times \$7000$ , or \$140,000. Assuming that the same teacher is working in the morning and the afternoon, the school will spend approximately \$50,000 of that amount on the teacher's salary and benefits, plus planning and preparation time, materials, etc. which might total \$65,000 - 70,000, leaving an upper-bound estimate of \$70,000 ( $\$140,000 - 70,000$ ) in excess revenues.

When those 40 students change to spending a full day at school, the school receives \$7000 for each student, or a total of \$280,000. The school will now need to hire two teachers, who will each have a class of 20 students, which will cost about \$140,000 (\$100,000 for salary and benefits plus additional money for planning time and materials). This leaves \$140,000 ( $\$280,000 - 140,000$ ) for other purposes, compared to the \$70,000 that was left when the 40 students only attended for half a day. Because Kenosha had most of the necessary classroom space, the district primarily needed only to build in the cost of operating those rooms all day to cover the expenses of essentially doubling the number of kindergarten classes by moving to full-day kindergarten. As is true with the growing number of students enrolled, the marginal cost of educating kindergartners for a full day was less than the average amount that they received via the state equalization program, resulting in a net fiscal gain for the district. Again, because of the three-year average pupil count, these excess revenue numbers took three years to

be fully realized.

So the district was able to take advantage of two rising enrollment phenomena to produce the revenues to help fund a district-wide class-size reduction program—first, excess revenues from naturally occurring enrollment increases, and second, excess revenues from shifting from a half-day to a full-day kindergarten program. When combined with the initial categorical dollars that were used to reduce class sizes first in the highest poverty-concentration schools, Kenosha was able to fund dramatic class size reductions without increasing taxes, eliminating other programs, or increasing its average expenditure per pupil.

## **Implementing the Class Size Reduction Policy**

The two “new” revenue sources discussed in the previous section made it possible for the district to help fund reduced class sizes at all of its elementary schools, but implementing this initiative was complicated. First, because the excess revenues from shifting to a full-day kindergarten program would be phased-in over a three-year period, the superintendent initially advised the district to slowly implement the class-size reduction policy, making sure that the resources were there before putting the plan into action. However, the board voted to move ahead immediately because it felt that when their strategy for finding the money to do so became public information, there could be many other claims for its use—including other programs as well as teacher salary increases. Although class-size reduction was very popular with teachers, the policy would be to reduce class size for just kindergarten through grade 5, so teachers of other grades could very well have had different ideas about how to spend those dollars. Though the superintendent initially was skeptical about moving so fast, he eventually came around because he saw the wisdom of quickly implementing a popular policy—class size reduction—and avoiding a lengthy debate over alternative uses of the “found” dollars.

In order to avoid the potential delay, district and board leaders acted quickly. In July of 1999, the Kenosha school board accepted the district proposal to fund 22 new teaching positions to reduce class sizes for the following school year. This meant that the district had just over a month to hire all of these teachers plus the normal new hires for the year. It managed to accomplish this task, hiring 37 new teachers (22 for class-size reduction) in the one month before school began in September. This was one of the difficulties with trying to implement this initiative so quickly.

The 22 new teachers were awarded centrally—schools had to request these extra teachers from the office of the superintendent and explain how they would be used to reduce class sizes and what space they would use. Because the district had staffed each elementary school on a 24 students to 1 teacher basis, each school was required to use the new teachers for class sizes below that level. Some schools had the extra space, especially the high-poverty elementary schools that had declining enrollment. Other schools had to give up their art, music, or multipurpose rooms, which some schools were reluctant to do. Some sacrifices had to be made to implement this policy, but the district had made the decision to reduce class size, and to do so they needed classroom space. These initial new teacher positions helped bring down class sizes somewhat, but district leaders had begun to make long-term plans for formally reducing class sizes even further, to specific target levels.

Over the course of the 1999-2000 school year, district leaders had more time to plan the further reduction of elementary class sizes in the Kenosha School District. This time, they decided to reduce the staffing ratios for grades K-5 rather than centrally award



“extra” teachers to the sites, which had produced a variety of different but lower class sizes. This district-wide policy change made the class-size reduction policy explicit for all elementary schools.

As previously mentioned, the ratio that had been in place was one teacher for every 24 students in grades K-5. In the 2000-2001 school year, with the new class-size reduction policy in place, the ratios became 20 to 1 for K-3 and 23 to 1 for grades 4-5. These ratios were set in part according to how many extra classrooms were available at the schools; although district leaders would have liked to have even lower class sizes, this was the level at which they felt schools had the appropriate extra space to accommodate the additional classrooms. The class size maximums also changed. Previously, the maximums were 27 for kindergarten through grade 3, and 29 for grades 4-6; under the new allocation formula, maximums were set at 22 for kindergarten through grade 3, and 25 for grades 4-5.

Further, in the past, when a class exceeded its maximum, an instructional aide was placed in the classroom to provide assistance. More specifically, if the class size was above 26 but not above 30, a half-time instructional aide was provided; a full-time aide was provided if the actual class size was over 30. But under the new, 2000-2001 class-size- reduction policy and class-size maximums, most of the resources for instructional aides were reallocated for the additional classroom teachers that were necessary to keep class sizes lower. The Assistant Superintendent of Instruction stressed that the district had adopted an overall value that, whenever possible, resources would be used to employ fully trained and licensed teachers rather than instructional aides. This decision was bolstered by the fact that the same research that documented the effectiveness of small classes also showed that adding an instructional aide to a larger class provided no effect on student performance (Achilles, 1999). Indeed, many of the elementary schools that received Title I funds eliminated instructional aides and used their Title I funds to hire teachers instead. In Kenosha, it takes the resources for about two full-time aides for a school to hire a licensed teacher.

For the low-performing schools in Kenosha, class size targets were set even lower than at the other elementary schools. Kenosha defined low-performing by student performance on the Wisconsin Knowledge and Concepts Examination, a statewide testing system using the Terra Nova commercial test. All schools with an average WSAS score below the state average were categorized as “low- performing.” Even before the district changed its staffing allocation formula, these schools, because they had the highest poverty concentrations, had access to all of the previously mentioned categorical program dollars that could be used to help fund class-size reduction: Title I, Title VI, P-5 and SAGE.

The district class-size goal for low-performing, high- poverty schools was set at 15, with a maximum of 18. This maximum was set because schools receiving Title VI funds, the federal class-size reduction program, had to reduce class sizes to 18 or lower. Thus, the district class-size goal for the low performing schools is lower than the federal requirement. The extra funding from SAGE, Title I, Title VI and P-5 that these schools received was used to enable the district to reduce class sizes to 15 in many of its low-performing schools. However, because there are more low-performing elementary schools in the Kenosha School District than resources to reduce class sizes to those target levels, the district focused on reducing class size to these low levels at the lowest performing schools first.

As of late 2000, the district had made significant progress in reaching its lower class size goals. Of the 24 elementary schools in the district, one had class sizes of 15 or lower, eight more had class sizes of 18 or lower, 11 had class sizes of 20 or lower, and

four had class sizes of 22 or lower. Thus, all elementary school class sizes were below the maximum of 22 for grades K-3, and well below the maximum of 25 for grades 4-5. Further, while only one high-poverty school had an average class size of 15 or lower, all elementary schools at which the majority of students are low-income had class sizes of 20 or lower.

For many elementary schools, the combination of the new, lower staffing ratio and the reallocation of categorical funds has meant a dramatic reduction in class size and a feeling of optimism about the subsequent effect on student achievement. For example, at Wilson Elementary School, where 86 percent of the students qualify for free or reduced-price lunch, class sizes have been reduced from an average of 21.9 in 1998-99 to an average of 16.4 in 2000-01. In order to reduce class sizes that far, the school needed a total of nine more classroom teachers in 2000-01 than it had in 1998-99. The reduction in class size was possible because of the change in the staffing formula and the allocation of categorical funds for class-size reduction. Enrollment growth does not explain any of the new teachers for 2000-2001; Wilson had only 10 more students in that year than in 1998-99. The school received three additional teachers for 2000-01 because of the new staffing allocation formula. The other six teachers were paid for with categorical funds: one with other district funds for class-size reduction, two with federal Title VI funds, 2.5 with SAGE funds, and 0.5 from Title I. The district funds for class-size reduction were the result of a board decision that 30 new teachers would be hired for the 2000-2001 school year; Wilson got one of those teachers. It is also interesting to note that this had formerly been a P-5 school, but they traded in that status in order to qualify for SAGE since they were able to hire more teachers with those funds.

By concentrating many of its resources on class-size reduction, Wilson was able to lower class sizes to an average of 16 students. This is noteworthy because it is within the range of 13-17 identified by the Tennessee STAR study as being especially effective at raising student achievement levels and producing other favorable outcomes (Finn & Achilles, 1999; Grissmer, 1999).

Class sizes have also been significantly reduced at Vernon Elementary School, where 36 percent of students qualify for the free and reduced-price lunch program. Although this is a significantly lower percentage than at Wilson, Vernon still receives substantial categorical funding. As was true at Wilson, it is this funding in combination with the district's lower staffing allocation formula that has allowed Vernon to reduce class sizes from an average of 27 in 1998-99 to an average of 18 in 2000-01. Enrollment has stayed virtually the same over this time period; 468 students attended Vernon in 2000-01 as compared to 472 in 1998-99. Therefore, none of the 10 additional teachers on staff at Vernon in 2000-01 can be explained by enrollment growth. Instead, four of the teachers were a result of the change in the staffing ratio from 24 to 1 to 20 to 1; one was paid for using the additional district funds for class-size reduction; one was paid for with federal Title VI funds; three were paid for with Title I; and one with P-5 funds. By concentrating its funding sources on class-size reduction, Vernon was able to reduce class sizes by a remarkable nine students per classroom.

## **Initiatives Supporting Class Size Reduction**

In addition to getting class sizes down to desired levels, part of the implementation process is to provide teachers with professional development that will help them teach their small classes more effectively. Leaders in Kenosha knew that research has shown that teachers can help produce additional achievement gains when professional development in small-class instruction is provided (McRobbie, Finn &

Harman, 1998; Bearl, 1998; U.S. Department of Education, 1998). The Assistant Superintendent of Instruction stressed the importance of this aspect of implementation, and has continued to seek School Board support for substantial investments in professional development in order to help realize the potential of better instruction in the smaller classes. Title VI, the federal funding source for class-size reduction, allowed districts to use 15 percent of its funding for professional development in 1999-2000; although district administrators thought this would be a good idea, the board voted to use all the funds to pay for teachers in the first year. However, for the 2000-2001 school year, districts were allowed to use up to 25 percent of their Title VI funds for professional development, and this time the board agreed, in part because the funding had increased and they were able to hire almost as many teachers and have money leftover for professional development. The district was able to allocate \$137,000, or approximately 25 percent of the federal money they receive for comprehensive school reform, toward professional development programs designed to improve instructional practices in small classrooms. This money made it possible for 700 of the district's 1600 teachers to participate in such professional development activities as Everyday Mathematics training.

Further, the district has continued to encourage all schools to adopt some type of “whole school” educational strategy to accompany both the above professional development and small class sizes. For example, for the 2000-2001 school year, the district provided \$299,000 in grants to schools without P5 or Title I funds to help them afford various school reforms, including comprehensive school reform models. This district's commitment to raising student achievement scores is apparent through the creative use of all of their funds to make changes that they believe will boost student achievement.

## **Monitoring Results**

Although the superintendent and other district leaders have made class-size reduction a priority in Kenosha elementary schools, they recognize that it is just one reform to be used in conjunction with other reforms for a common purpose: to boost student achievement. For that reason, student achievement scores are carefully measured and reported in order to track the success of these reforms. In 2000-01, students at Kenosha elementary schools took the Iowa Test of Basic Skills (ITBS) in grades 2, 3, and 5; the Wisconsin 3rd grade reading test, and the Wisconsin Knowledge and Concepts Examination (WKCE) in 4th grade. The district placed the most emphasis on the 3rd grade reading test and WKCE. Each school had benchmarks that they were working toward, which were set in terms of the percent of students at proficiency level and the percent advanced. Awards were given to schools that increased these percentages by five percent annually.

Student achievement growth has been substantial at many Kenosha Elementary schools, including Wilson, one of the schools used as an example in the last section. In addition to reduced class sizes, Wilson has used the principles of the Marva Collins school design for the past few years, and has more recently adopted Direct Instruction for reading, and Core Knowledge as a curriculum guide. In the 1997-98 school year, only 17 percent of Wilson students were considered proficient on the third grade reading test. In 1999-2000, 51 percent were at or above proficiency—a dramatic improvement of 34 percentage points.

Columbus Elementary School, a school with 58 percent of students who qualified for free or reduced-price lunch in 2000-01, has also made great strides. Funded by their

categorical dollars, Columbus has had reduced class sizes for three years. The school chose class-size reduction rather than a comprehensive school reform model, and is now listed in the high achievement category for the WKCE in Math. The state average score for percent proficient in math is 52, and 68 percent of Columbus students scored at or above proficiency (Barth, Haycock, Jackson, Mora, Ruiz, Robinson, & Wilkins, 1999). This is the best indication so far that the policy to reduce class sizes in Kenosha will boost student achievement in all schools, as it has at Columbus Elementary. In addition to Columbus and Wilson, student achievement has risen at many other Kenosha schools, in part due to initiatives like class-size reduction and comprehensive school reform models.

## **Conclusion**

Leaders in the Kenosha School District in Wisconsin managed to significantly reduce class size in the majority of their elementary schools—by creative resource reallocation and deployment of all the revenues made possible by student demographic characteristics and the state's school finance system. In the 2000-01 school year, more than one-third of Kenosha's elementary schools had class sizes of 18 or lower, and all 24 schools had class sizes at or below 22. Although individual schools in this district had begun to reduce class size school-by-school by reallocating Title I and P-5 funds and using Title VI and SAGE, the district-wide change to a lower elementary school staffing allocation formula made sure that class sizes were reduced at every elementary school, and to lower levels than the schools could have afforded with just categorical dollar reallocation.

The major revenue source for this expensive policy was excess revenues derived from the combination of growing enrollment and the shift from a half-day to a full-day kindergarten. For every new student, the marginal cost of educating that student was approximately \$3000 but the district received an extra \$7000 via the state school finance formula, or an excess of average over marginal costs of \$4000 per child. The total combined district enrollment growth from these two phenomena—natural growth and kindergarten expansion—was about 500 students a year. This produced excess revenues of nearly \$2,000,000 (500 students times \$4000/student), which was sufficient to hire 40 additional teachers at an individual cost of \$50,000 in salary and benefits. This quite ingenious way to fund smaller class sizes, combined with additional dollars from selected categorical programs—federal Title I and Title VI, and state SAGE and P5—allowed for even lower classes in the highest poverty, lowest performing schools, reaching the level of 18 or lower in nine of the district's 24 elementary schools. District leaders hope that the positive results from Columbus Elementary School, which has had lower class sizes in place for three years, will be replicated in elementary schools district-wide.

This case shows how important it is for district leaders who want to make changes using reallocated dollars to have full knowledge of the district budget and how that budget is derived. In Kenosha, district leaders decided to reallocate categorical dollars to class-size reduction, but they needed an additional source of funding to reduce class sizes to target levels. They were able to find that additional funding source because they understood the principle that “new” students, whether from natural enrollment growth or the shift from half-day to full-day kindergarten, could produce “new” dollars because of the excess of average over marginal costs. These changes enabled the district to provide full-day kindergarten and reduce class sizes in all elementary schools, initiatives that research shows are particularly powerful in helping students from

low-income backgrounds learn to read and do mathematics in the early elementary grades (McRobbie, Finn, & Harman, 1998; Slavin and Madden, 1996; Slavin, Karweit and Madden, 1989).

## Note

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