

Despite Free Space in Some Middle Schools, Many Packed Classrooms

Additional table...

Middle School Class Size and Overcrowding by District and Region

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Over the past four years, the city's initiative to lower class size in kindergarten through third grade has made steady progress. Relying primarily on state and federal funds, the effort has succeeded in lowering the average size of classes in the early grades from nearly 25 students in the 1999-2000 school year to just under 22 students last school year. These smaller class sizes have been achieved thanks not only to the additional resources but also to a decline in elementary school overcrowding in many areas of the city.

But as kindergarten through third grade class sizes have dropped, large classes remain common in the city's middle schools. Last school year (2002-2003), 147,000 students—or more than 60 percent of all students in middle school grades—were in classes of 28 kids or more. Nearly half of the city's 220,000 sixth through eighth graders sat in classes of 30 or more students.

For this report, IBO has analyzed sixth through eighth grade class enrollment and middle school building utilization data from last school year, which is the most recent official data available. We found that class sizes in these grades fell slightly in the last school year, despite a small increase in the number of students. The data also indicate that while large classes are often found in overcrowded buildings, overcrowding alone does not account for the high number of large classes in these grades. Historically, other factors such as a lack of funding for new teachers, inefficient use of space, and unexpected enrollment changes have played a role.

To begin to address the issue of middle school class size, Mayor Bloomberg proposed and the City Council adopted as part of the city's current budget a \$14 million initiative reducing class size in grades five through eight (eligibility for the funds also depends on the grade levels within a specific school building). This new allocation, made at a time when spending was being reduced in many other parts of the city budget, enabled the Department of Education to hire 272 new teachers for this school year. IBO estimates that if the city were to cap all middle school classes at 28, the school system would need an additional 410 teachers beyond those hired under this year's initiative. The expanded effort would cost about \$20 million more than what was added to the budget this year.

But any effort to lower class size by hiring teachers and creating new classes eventually runs up against another barrier: space. Many city schools simply do not have the space available to add more classrooms. For example, in Community School District 29 in Queens, the middle school "utilization rate" is 106 percent of capacity and the average class size is over 30. To significantly lower class size in districts where many school buildings are overcrowded will

likely require more classrooms either through new construction or other means such as split sessions or year-round schooling. The education department is planning to release a new five-year capital plan for school construction and renovation next week.

Demographic Bulge. Enrollment, which is closely linked to class sizes and overcrowding of school buildings, has surged and slackened over the last decade as the public schools absorbed an influx of new students. Education department enrollment growth averaged 20,400 annually from the 1992-1993 through 1996-1997 school years. In the six years since then, annual enrollment growth has slowed, with total enrollment actually falling in the last three years (1999-2000 through 2002-2003). As this demographic bulge has moved through the city's school system, it has intensified the problems of school overcrowding and large class sizes first in the elementary schools, then in the middle grades, and most recently in the early high school years.

Kindergartners entering in the fall of 1994, which was the largest group starting school in the past decade, are generally in ninth grade now. This slowdown in enrollment—along with funding to add classrooms—has played an important role in the decline in class size in grades K-3. Similarly, even without additional funding, middle school class size may decrease and the number of overcrowded buildings fall over the next few years as the demographic bulge makes its way into the high schools and enrollment continues to shrink.

Average Class Size and Distribution. From the 2001-2002 to 2002-2003 school years, the sixth through eighth grades experienced small declines in citywide average class size, from 27.7 students to 27.5 students. This decline occurred despite a small increase in middle school enrollment. The number of classes for these grades has increased at a faster rate than the number of students registered.

Citywide class-size averages only provide part of the story. A more complete picture can be seen by looking at how many middle schoolers are in classes larger than the citywide average. Last year, 67 percent of students in sixth through

eighth grade—147,000 middle schoolers—were in classes with 28 or more pupils. Nearly 32,900 middle schoolers were in classes with 33 or more students.

Percentage of Middle School Students in Larger than Average Classes		
Grades 6-8	2001-2002	2002-2003
<i>Percent of students in classes with</i>		
28 or more students	69%	67%
30 or more students	51%	49%
33 or more students	16%	15%

SOURCES: IBO; Department of Education C-Form Audited Registers for October 31, 2001 & 2002.
NOTE: Data does not include a small number of specialized classes.

Looking at individual districts, last year average class size in middle schools varied from 22.3 in District 1 in lower Manhattan to 32 in District 26 in Queens. These districts had, respectively, the smallest and largest average class sizes in both the 2001-2002 and 2002-2003 school years. Average class size decreased in 18 of the 32 community school districts as well as the Chancellor's district for poorly performing schools and another special governance district, with the largest decrease occurring in District 23 in Brooklyn where the average class size fell from 27 to 23.5. While average class size remained unchanged in three districts, the average increased in nine others, with the largest increase occurring in District 8 in the Bronx where the average class grew from 26.4 students to 27.5 students.

The variation in average middle school class size was smaller when looked at in terms of the new regional boundaries created as part of the Mayor's reorganization of the school system. Among the 10 new regions that incorporate the city's community school districts, average middle school class size ranged from 25.6 in Region 8 in Brooklyn to 29.4 pupils per class in Region 3 in Queens. Of the five boroughs, Staten Island had the largest middle school class size of 30.8 in 2002-2003. Manhattan and Brooklyn had the smallest average class size at 26.9 students.

New Middle School Class Size Initiative. In January of this year, Mayor Bloomberg announced a new initiative to reduce middle school classes to 28 pupils. For the 2003-2004 school year, the initiative provided \$13.8 million for 272 new full-time teachers. Only grades five through eight are eligible for this additional funding and eligibility also depends on the type of school in which the class is housed; only seventh and eighth grades are eligible in elementary schools that include grades K-7 or K-8, while fifth through eighth grades in middle schools are eligible, and sixth through eighth grades are eligible in K-12 and 6-12 schools.

Citywide Average Middle School Class Size		
Grades 6-8	2001-2002	2002-2003
Student Register	217,799	219,198
Number of Classes	7,874	7,980
Average Class Size	27.7	27.5

SOURCES: IBO; Department of Education C-Form Audited Registers for October 31, 2001 & 2002.
NOTE: Data does not include a small number of specialized classes.

Even though average class sizes for sixth through eighth graders are below the Mayor's stated goal of 28 and well below the limit under the teachers' union contract and existing class-size regulations, the number of students sitting in classrooms with more than 28 pupils indicates that there are significant barriers to reaching these goals for the entire student body. To expand this initiative for all middle school classes would require substantially more resources to hire teachers than were allocated this year. The number of students in these grades in classes with more than 28 students was approximately 147,400 in 2002-2003. To ensure that all middle schoolers were in classes of 28 or less, 5,264 classes would be needed. In 2002-2003 these students occupied 4,777 classes, leaving a difference of 487 classes. At an approximate rate of 1.4 teachers per class as contractually required for middle school classes, roughly 410 teachers more than those included in the Mayor's initiative would be needed. Using the same cost-per-teacher as in the Mayor's plan to expand the effort would roughly cost an additional \$20 million a year (not including potential capital costs for construction or renovation to create new classroom space).

Overcrowded Schools and Class Size. While intuitively it is often assumed that larger than average class sizes are the result of overcrowded school buildings, this is not always the case. A large number of middle schoolers sit in classes with more than 28 students despite the fact that many middle schools are under capacity.

In order to determine capacity needs of the schools, the Department of Education reports utilization data, the enrollment of a school divided by its capacity (or seats). A utilization rate below 100 percent implies that there are more than sufficient seats to accommodate the enrolled students. Conversely, a utilization rate of greater than 100 percent implies that the school's estimated capacity is insufficient to accommodate the number of enrolled students. The data is reported for an entire school rather than by grade. For this report, we have only analyzed schools identified as middle schools in the utilization data. While these schools incorporate the vast majority of seventh and eighth grade classes, almost 30 percent of sixth grade classes are housed in elementary schools.

Last school year, the citywide utilization for middle schools was 88 percent—in other words, 88 percent of the total seats in these schools were occupied. On an aggregate level, there appears to be some additional space in these schools. Excess capacity, however, may be geographically limited and extra seats in Brooklyn mean little for potentially overcrowded schools in Staten Island. Although on a citywide basis middle

schools are underutilized, 80,000 sixth to eighth graders attend schools that are overcrowded—operating beyond 100 percent of capacity.

Overcrowding and Class Size at the District Level. The individual districts with the largest average class size in middle schools are not necessarily those with the highest utilization rates. Last school year, of the 10 districts with the largest average class sizes, only

three had utilization rates greater than 100 percent and three had utilization rates between 95 percent and 100 percent. The remaining four districts had utilization rates of between 75 percent and 88 percent. (See our Web site for average class size and overcrowding by district.)

Conclusion. The new middle school class size initiative is the first to directly address this group of students and provides funding for enough teachers for anywhere from 194 to 227 new classes, depending on the grade range of the school where the classes are housed. If the Mayor's program were expanded to provide at least all sixth through eighth graders with classes containing no more than 28 students, significant additional funds are needed. But the amount needed will likely change because of shifting demographics. Much like what has happened with the K-3 class size initiative, a combination of shrinking enrollment and investment in more teachers and the addition of new classroom space will help lower middle school class size.

Written by Matina Madrick

Ten Community School Districts with Largest Class Size 2002-2003		
District	Average Class Size	Utilization
26	32.0	99.7%
31	30.8	96.3%
29	30.2	106.2%
17	30.1	87.7%
2	29.5	75.6%
21	29.2	84.4%
27	29.0	96.2%
11	28.7	101.7%
25	28.5	78.4%
6	28.4	103.2%

SOURCES: IBO; Department of Education C-Form Audited Registers for October 31, 2001 & 2002; DOE Enrollment, Capacity & Utilization Reports for 2001-2002 & 2002-2003.

NOTE: Data does not include a small number of specialized classes.

END NOTES

¹ Any calculations made on a geographic basis excluded the Chancellor's and the special governance district.
² This is a rough estimate; the calculation excludes fifth graders who are eligible for the additional teachers, while at the same time including some sixth graders who are not eligible because their classes are housed in elementary schools.