



K-3 CLASS SIZES IN QUEENS, NEW YORK

Prepared for Rep. Joseph Crowley

**Minority Staff Report
Special Investigations Division
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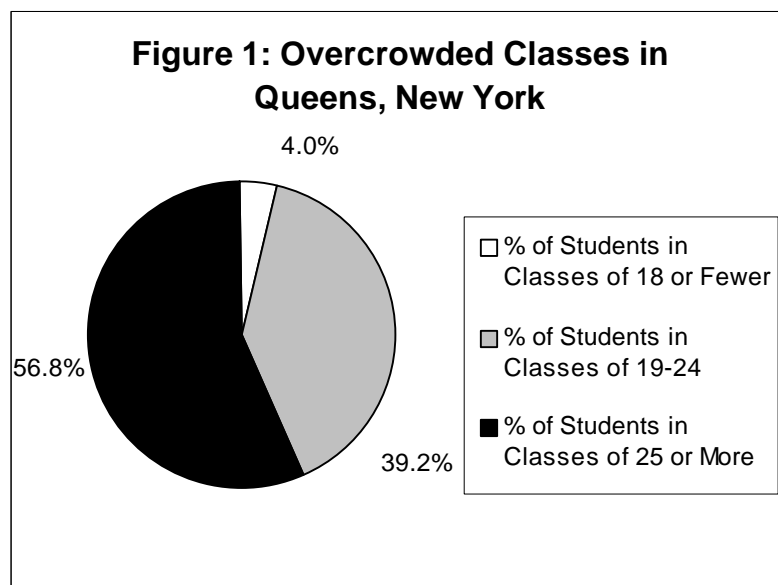
EXECUTIVE SUMMARY

This report on class sizes was prepared at the request of Rep. Joseph Crowley of the 7th Congressional District of New York. It analyzes the number of children in kindergarten through third-grade classrooms in Queens, New York. It finds that during the 1999-2000 school year, fewer than one out of every twenty K-3 students in Queens were taught in classes that met the national goal of 18 students per classroom.

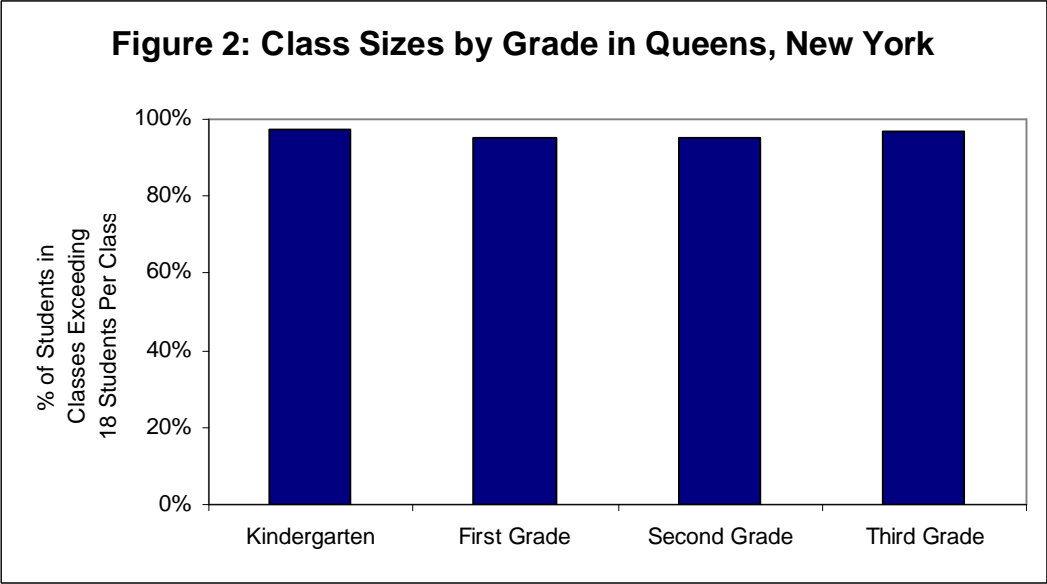
A growing body of research indicates that class size in the younger grades has a direct and substantial impact on learning. Studies in several states, including Tennessee, Wisconsin, North Carolina, and California, indicate that reducing class size to 18 students or less in grades K-3 can significantly improve student achievement. According to the federal Department of Education, "class size reduction in the early grades is one of the most direct and effective ways to boost children's academic achievement." For this reason, the Department has established a national objective to "reduce class size in the early grades to a nationwide average of 18."

While the importance of class size to student achievement is widely accepted, few reports have investigated the actual class sizes in public schools in the United States. For this reason, Rep. Crowley asked the minority staff of the Committee on Government Reform to investigate elementary school class sizes in his congressional district. The data summarized in this report consists of classroom-by-classroom statistics reported by the five elementary school districts in Queens. Over 59,000 K-3 students in over 2,400 classes are covered by this report.

The report finds that there is a serious problem of overcrowding in classrooms in Queens. Only 4% of children in grades K-3 were taught in classrooms that meet the national goal of 18 students per class. In contrast, 96% of the borough's students were taught in classes exceeding the optimal class size of 18. In addition, more than half of the borough's K-3 students (56.8%) were taught in especially large classes of 25 or more students. These findings are summarized in Figure 1.



The report also analyzes class size statistics on a grade-by-grade basis. It finds that overcrowded classrooms were a problem at each grade level. In each grade, 95% or more of students were taught in overcrowded classes of 19 or more (see Figure 2).



I. THE IMPORTANCE OF SMALL CLASS SIZE

There is substantial evidence that reducing class size to 18 or fewer in grades K-3 can have a substantial positive impact on student achievement. This research -- and the national program to reduce class size to 18 or fewer in these grades -- is summarized below.

A. The Findings of the U.S. Department of Education

The U.S. Department of Education has extensively studied the impact of class size on student achievement. In a series of reports, the Department reviewed the large body of research on class size and concluded that smaller class sizes lead to improved student achievement. According to the Department, "research has shown that class size reduction in the early grades is one of the most direct and effective ways to boost children's academic achievement."¹

Researchers with the Department have concluded that "a consensus of research indicates that class size reduction in the early grades leads to higher student achievement."² The researchers reached this conclusion after reviewing over 20 years of studies employing varying methodologies. They found that "the significant effects of class size reduction on student achievement appear when class size is reduced to a point somewhere between 15 and 20 students."³ They also noted that the research indicated that there were greater small-class advantages for minority and low-income students.⁴

In another report, Department researchers reviewed several recent studies on class size and found that they "provide compelling evidence that small classes in the primary grades are academically superior to regular-size classes."⁵ The report concluded that "this research leaves no doubt that small classes have an advantage over larger classes in student performance in the

¹U.S. Department of Education, *A National Effort to Ensure Smaller Classes with Well-Prepared Teachers* (1999).

²Pritchard, Ivor, National Institute on Student Achievement, Curriculum and Assessment, Office of Educational Research and Improvement, U.S. Department of Education, *Reducing Class Size: What Do We Know?* (1999).

³*Id.*

⁴*Id.*

⁵Finn, Jeremy, National Institute on the Education of At-Risk Students, Office of Education Research and Improvement, U.S. Department of Education, *Class Size and Students at Risk* (1998).

early primary grades."⁶

B. The Tennessee “STAR” Study

The most comprehensive and scientific study to date on the impact of class size on student achievements is Tennessee's Student-Teacher Achievement Ratio (STAR) study. Initiated in 1985, STAR was a multi-year class size study conducted by the state of Tennessee. The study encompassed more than 7,000 students in 79 elementary schools. Within each school, kindergarten students were randomly assigned to one of three types of classes: small (13-17 students), regular (22-26 students), or regular with full-time aide (22-26 students taught by one teacher and one full-time teaching aide). The students were kept in classes with these assigned sizes for four years (from grades K-3) and were given standardized tests yearly. Teachers were randomly assigned to classes on a yearly basis. In effect, the STAR study was designed as a controlled scientific experiment on the question of whether class size is a significant factor in a student's academic achievement.

The STAR study found that the benefits of small classes in grades K-3 are both significant and long-lasting. First, it found that when compared to their counterparts in larger classes, students in classes with fewer than 18 students reached more advanced levels of achievement in math, reading, and word study skills.⁷ This was true even when students in small classes were compared to students in larger classes with a teaching aide. Researchers reported statistically significant improvements in student achievement at each grade level. When translated into months of schooling completed, these results showed that at each grade level, students in small classes were ahead of their peers in their school work by several months.⁸

The study found that the benefits of smaller classes are sustained through later grades. Students who spent four years in small classes continued to demonstrate greater achievement levels as they progressed through school, even after they were returned to regular-size classrooms.⁹ By the eighth grade, they were ahead of their peers in core subjects by more than a year of schooling, as depicted in Table 1.

⁶*Id.*

⁷Finn, Jeremy, et al., *Short- and Long-term Effects of Small Classes* (1999).

⁸*Id.*

⁹*Id.*

Table 1: Small Classes in the Early Grades Result in Long-Term Academic Benefits.

Subject	Advantage by Grade 8 of Small Class Size (Measured in Years of Additional Schooling)
Mathematics	1 year, 1 month
Reading	1 year, 2 months
Science	1 year, 1 month

STAR researchers also found that the benefits of small classes were substantially greater for minority and low-income students.¹⁰ In the core subjects of math, reading, and word study skills, minority students derived twice as much benefit from smaller classes than white students.¹¹

The STAR study also found a variety of other important benefits to small K-3 classes, including higher high school graduation rates¹² and a greater propensity to take college entrance exams¹³ among students who had been taught in small classes.

C. Other Class Size Research

Other recent studies have reached similar results. For example, a class size reduction program implemented in North Carolina found that first and second grade students who attended small classes outperformed other students on standardized reading and math achievement tests. The study also found that the percentage of classroom time devoted to noninstructional activities such as discipline decreased by 30% compared with larger classes.¹⁴

Similar results have been reported from Wisconsin, which in 1996 began a class size

¹⁰Finn, Jeremy, *Tennessee's Class Size Study: Findings, Implications, Misconceptions* (1999).

¹¹Finn, J. and Achilles, C., *Answers about questions about class size: A statewide experiment* (1990).

¹²Pate-Bain, H., et al., *Effects of Class Size Reduction in the Early Grades (K-3) on High School Performance* (1999).

¹³Krueger, A. and Whitmore, D., *The Effect of Attending a Small Class in the Early Grades on College Attendance Plans* (1998).

¹⁴Egelson, P., et al., *Does Class Size Make a Difference? Recent Findings from State and Districts Initiatives* (1996).

reduction program called the Student Achievement Guarantee in Education (SAGE) program. The program has phased in small classes throughout the last four years in over 75 schools. Researchers studying this program found that first and second grade students in SAGE achieved consistently higher scores in every subject area on standardized tests.¹⁵

Results from a California initiative to reduce class size also confirm the importance of smaller classes. In 1996, the state of California implemented a statewide effort to reduce the class sizes of all classes in grades 1-3 to below 20 students. Due to the speed with which the program was implemented, students were often taught in temporary facilities by hastily recruited teachers without teaching credentials.¹⁶ Despite the difficulties associated with the program, a preliminary study found that after one year in the program, third graders experienced a "small positive achievement gain" on standardized tests.¹⁷ Also, the study found that teachers spent more time working with individual students and less time on discipline in the smaller classes.¹⁸ In the second year of the program, researchers found that third-graders in smaller classes continued to perform better on standardized tests and that these achievement gains persisted even after students were returned to larger classes in the fourth grade.¹⁹

D. Federal Class Size Objectives

The developing scientific consensus on the importance of small class sizes has resulted in a federal effort to reduce K-3 class sizes to 18 across the nation. In his 1998 State of the Union address, President Clinton called for a national effort to reduce class sizes:

Tonight, I propose the first ever national effort to reduce class size in the early grades. . . . My balanced budget will help to hire 100,000 new teachers who have passed a state competency test. Now, with these teachers . . . we will actually be able to reduce class size in the 1st, 2nd, and 3rd grades to an average of 18 students a class, all across

¹⁵Molnar, A., et al., *1997-98 Results of the Student Achievement Guarantee in Education (SAGE) Program* (1998).

¹⁶CSR Research Consortium, *Class Size Reduction in California 1996-98: Early Findings Signal Promise and Concerns* (1999). The California program provided substantial financial incentives for schools to place students in classes of 20 or fewer, giving schools a bonus of \$650-\$800 per student placed in a class of 20 or fewer. Responding to these incentives, "school districts managed to put hundreds of thousands of students in small classes by the time school started, just six weeks after the legislation passed." *Id.*

¹⁷*Id.* Third graders were the only group examined because they were the only grade with enough students not participating in the program to serve as a basis for comparison.

¹⁸*Id.*

¹⁹CSR Research Consortium, *Class Size Reduction in California: 1998-99 Evaluation Findings* (2000).

America.²⁰

In 1998, the Congress approved the President's plan to reduce K-3 class size to 18, appropriating \$1.2 billion to hire the first 30,000 new teachers. According to the Department of Education, this was "the first installment of an initiative that is anticipated to provide \$12.4 billion over 7 years to help schools hire 100,000 new teachers and reduce class size in the early grades to a nationwide average of 18."²¹ In 1999, Congress appropriated \$1.3 billion for the class size reduction program for the 2000-2001 school year. In 2000, the last year of the Clinton Administration, Congress appropriated \$1.6 billion to continue the process of reducing K-3 class sizes in the 2001-2002 school year.

The first budget submitted by the Bush Administration contains no dedicated funding for the existing class size reduction program. It folds the funds previously appropriated exclusively for class size reduction into a block grant that can be used for multiple purposes.

II. STUDY OBJECTIVES AND METHODOLOGY

Rep. Joseph Crowley represents the 7th Congressional District of New York, which contains large portions of Queens and the Bronx. Because of the importance of small class size to educational performance, Rep. Crowley requested that the minority staff of the Committee on Government Reform investigate class sizes in grades K-3 in his congressional district. Specifically, he requested that the study compare class sizes in grades K-3 with national goal of 18 students per classroom. This report presents some of the results of this investigation. It focuses on class sizes in the five school districts in Queens.

The report is based on a survey conducted by Rep. Crowley's staff and the minority staff of the Government Reform Committee. The survey obtained 1999-2000 class size data on a classroom-by-classroom basis from the five elementary school districts in Queens.²² These districts taught 59,181 K-3 students in 2,443 classrooms during the 1999-2000 school year.

²⁰1998 State of the Union address available at: www.whitehouse.gov/WH/EOP/OP/html/OP_Speeches.html.

²¹Department of Education website: <http://www.ed.gov/offices/OESE/ClassSize/>.

²²The five districts are Community School Districts 11, 24Q, 25, 26, and 30.

III. FINDINGS

A. Overcrowding in Schools in Queens

The data reveal that overcrowding in K-3 classrooms is a serious problem in Queens. For the 1999-2000 school year, the overwhelming majority of K-3 students in the borough's public schools were taught in classrooms that exceeded the optimal class size of 18 or fewer students. Out of the 55,325 K-3 students reported in the survey, only 2,383 children (4.0%) were taught in classes of 18 or fewer students. In contrast, 56,798 children (96.0%) were taught in classes that exceeded the optimal class size.

In addition, more than half of the borough's K-3 students were taught in especially large classes of 25 or more students. Over 33,000 K-3 students (56.8%) were taught in classes of 25 or more. Table 2 summarizes these results.

Table 2: Distribution of K-3 Students by Class Size

Class Size	# of Students	% of Students
18 or Fewer	2,383	4.0%
19-24	23,183	39.2%
25 or More	33,615	56.8%

The average class size for the borough in the 1999-2000 school year was 24.2.

B. Grade-by-Grade Comparison

The data also indicate that overcrowded classes were a problem at every grade level in Queens. In each grade, 95% or more of students were taught in overcrowded classes of 19 or more.

In addition, a large percentage of students in each grade were taught in excessively crowded classes of 25 or more. The highest percentage of students in excessively large classes was in the third grade, where 70.4% of students were taught in classes of 25 or more. The lowest percentage was in kindergarten, where 40.7% of students were taught in classes of 25 or more.

Average class sizes ranged from 23.3 in kindergarten to 25.1 in the third grade. Table 3 provides grade-by-grade class size statistics.

Table 3: Overcrowded Classes Were a Problem at Every Grade Level

Grade	% of Students in Classes of 18 or Fewer	% of Students in Classes of 19-24	% of Students in Classes of 25 or More	Average Class Size
Kindergarten	2.7%	56.6%	40.7%	23.3
1st Grade	5.0%	37.9%	57.1%	24.3
2nd Grade	4.9%	37.1%	58.0%	24.4
3rd Grade	3.4%	26.2%	70.4%	25.1