New York City Independent Budget Office

IMPLEMENTING UNIVERSAL PREKINDERGARTEN IN NEW YORK CITY

New York City is participating in a New York State initiative to make free prekindergarten available to all 4-year-old children. The universal prekindergarten program is being phased in over four years and began with the 1998-1999 school year. This report analyzes the potential impact of the program on the city's operating and capital budgets and discusses several obstacles to implementing universal pre-k in New York City.

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IBO's principal findings include:

- Enrollment in universal pre-k will grow more than fivefold, from less than 14,000 in 1998-1999 to between 70,000 and 90,000 children when the program is fully implemented in 2001-2002.
- State funding has covered only part of the program's annual operating costs in its first two years and future funding is uncertain.
  - The New York City Board of Education (BOE) has estimated the annual cost of providing pre-k in NYC at $3,700 per child. State aid for pre-k is expected to fund $67 million of the program's $106 million operating cost this school year, with BOE contributing $39 million.
  - At $3,700 per child, enrolling between 70,000 and 90,000 children would cost a total of $265 million to $334 million a year when the program is fully implemented.
  - An initial multi-year funding agreement provided a statewide total of $500 million annually once the program is fully implemented and accompanying legislation set a minimum grant to NYC of $2,000 per child. Funding is not guaranteed, however, because the state's total pre-k aid and the formula to set local funding levels are determined through the state's annual budget adoption process.
  - If BOE receives $2,000 per child in state aid—a lower level of per pupil funding than provided in either of the first two years of the program—BOE would need to contribute $1,700 per child, or between $122 million and $153 million annually for 70,000 to 90,000 pupils.
- The city will likely face a shortage of classroom space to house universal pre-k. Moreover, there are no new capital funds specifically earmarked for the program.
  - BOE has reported that it plans to contract with private and non-profit providers to provide three-quarters of the program's classroom space needs. Housing one-quarter of pre-k in BOE facilities would require an additional 300 public school classrooms in 2001-2002, even if the Board dedicates available space to the program.
  - Space needs for universal pre-k compete with an initiative to reduce class sizes to an average of 20 students in grades K-3. In order to fully implement class size reduction and accommodate one-quarter of universal pre-k, 18 of the city's 32 community school districts would need over 100 classrooms each. IBO estimates that the cost of providing space for both programs would be over $3 billion.
  - Finding sufficient private and non-profit space to implement universal pre-k will be a challenge in many community school districts. To contract out 75 percent of pre-k, the city would need to identify enough space to place between 49,000 and 63,000 children in 2001-2002. For comparison, this is much greater than the 29,000 4-year-olds currently enrolled in Head Start, ACD-funded child-care centers, and private programs licensed by the NYC Department of Health.

Introduction

New York State established a program in 1997 to assist local school districts in providing free prekindergarten to 4-year-olds. This universal prekindergarten program is funded with state grants and, in some instances, local contributions. Although participation is voluntary, localities choosing to take part in the program must make pre-k available to all 4-year-olds in their respective districts.

In New York City, the Board of Education (BOE) has decided to participate in the pre-k program in each of its 32 community school districts. Universal pre-k is being phased in over four years following a schedule that began in school year 1998-1999. In the first year of the program, the city served nearly 14,000 children. IBO estimates that number will grow to between 70,000 and 90,000 children by full implementation in school year 2001-2002.

One of the benefits cited for prekindergarten programs is their potential to raise academic achievement by providing children more instructional time in school, particularly at an age when they are actively acquiring language skills. With more than 35,000 children currently on waiting lists for subsidized child care in New York City, the new program may meet a substantial portion of that demand. In addition, advocates of universal pre-k believe that it will bridge public education and the city's system of early childhood education and care, thereby promoting a more integrated educational network for communities and families.

In this report, IBO assesses New York City's capacity to fully implement universal pre-k. Our work shows the city is facing two formidable obstacles to implementation. First, substantial funding uncertainties exist at the state level. For the first two years of the program, the NYC Board of Education has contributed its own funds to get the program off the ground but significantly more local funds will likely be needed in the future to achieve full implementation.

Second, most of the city's public schools have insufficient classroom space to house universal pre-k classes; nearly three-fifths of the city's schoolchildren currently attend overcrowded schools. Moreover, demands for universal pre-k space will have to compete with concurrent demands from BOE's goal of reducing average class sizes to 20 students in kindergarten and grades one to three. For the current school year, the space shortage is partially being addressed by contracting 60 percent of universal pre-k with community-based providers. Looking ahead, identifying a sufficient number of qualified community-based providers poses a major challenge as the program moves towards full implementation because the universal pre-k program will be so large compared with existing preschool and child care programs.

This report provides IBO's estimates of universal pre-k eligibility and enrollment, operating and capital costs, and classroom needs. We begin with an overview of the universal pre-k program, followed by a discussion of the program's funding. To determine the impact of full implementation of universal pre-k on the city's budget and facilities, we estimate the number of children that will qualify for universal pre-k and then develop two scenarios to project the number of children likely to require places in the program once it is fully phased in. We then estimate the city's operating and capital costs to implement the program. The need for additional classroom space is projected by comparing demand for universal pre-k classrooms with space available in the city's public schools and other child education and care programs. We next estimate the cost of providing additional classrooms, either through new construction or the leasing of additional space. The report concludes with a breakout of enrollment and classroom needs for each of the city's 32 community school districts.

Background

Program description. The universal pre-k program was enacted in 1997 through an amendment to the New York State Education Law.[1] In proposing the program, the state Assembly sought to create "a high quality preschool program [that] helps children develop social and pre-academic skills that will help

them succeed in kindergarten and throughout their educational experiences…and develop to their full potential."[2] The program provides for early childhood education that promotes cognitive, linguistic, physical, cultural, emotional, and social development. It is optional for localities to participate in offering the program; however, districts such as New York City choosing to participate must make pre-k available free of charge to all 4-year-olds.

State regulations governing the program require that universal pre-k take place at least 2.5 hours per day, 5 days per week, 180 days per year, with no more than 20 students per class. The regulations specify teacher certification, curriculum, and accessibility requirements. Classes are required to have at least one teacher and one paraprofessional for classes with up to 18 students and at least one teacher and two paraprofessionals for classes with 19 or 20 children.[3]

The program is scheduled to be phased in over four years, beginning last year with the 1998-1999 school year. During the second and third years of the phase-in period, each of New York City's 32 individual community school districts (CSDs) must give priority to enrolling children based on economic need.

Contracting with community providers to deliver universal pre-k. The law establishing the program mandates community involvement and specifies that at least 10 percent of program funds be used to contract for universal pre-k classes in eligible community agencies and non-public schools. According to BOE data, about 37 percent of city children who participated in the first year of universal pre-k were served by community-based organizations.[4] BOE awarded 125 contracts to non-public school entities to provide universal pre-k classes. Due to public school classroom space constraints, the Board plans to contract out 60 percent of the program in the 1999-2000 school year and about 75 percent once the program is fully implemented.[5,6] While parochial schools are eligible to provide universal pre-k, publicly funded classes are required to be secular.

Early childhood education and care programs in New York City include those provided through the Board of Education such as SuperStart and SuperStart Plus; child care and Head Start programs contracted with the city's Agency for Child Development (ACD); and private child care and preschools. See Figure 1 for a brief description of each type of these programs.

According to BOE, many community organizations are well prepared to offer universal pre-k because nonprofit and private early childhood centers were created in part to address an historical scarcity of prekindergarten classes in the public schools. Center-based early childhood programs are similar to prekindergarten, combining child care services with preschool instruction. Many center- and school-based programs meet the criteria for delivery of universal pre-k, such as offering a developmentally appropriate educational curriculum, responding to parent involvement, offering children hands-on learning experiences, maintaining minimum staffing ratios with certified teachers, and providing health and nutrition services. In addition, contracting with community organizations may increase the feasibility of combining universal pre-k with other programs to offer full/extended-day classes.

Funding. Universal pre-k is funded through a categorical state grant that may be supplemented by optional local contributions. A multi-year spending agreement accompanying the 1997 legislation establishing the program stipulated that the state would allocate $50 million for school year 1998-1999 (the state ultimately spent $57 million), $100 million for 1999-2000, $225 million in 2000-2001, and $500 million each year thereafter. Those funding levels are not guaranteed, however, because education aid is determined in the state's annual budget adoption process.

A key concern from the city's perspective involves the uncertainty regarding the future level of state support for universal pre-k. The Governor's executive budget for 1999-2000 proposed to eliminate categorical grants for universal pre-k, class size reduction, and minor maintenance aid and

Figure 1.
Early Childhood Education and Care Programs in New York City

Program	Description	Primary Funding Sources	4-yr-olds enrolled 1998-99
Publicly subsidized child care	Full-day and part-day programs administered by the NYC Agency for Child Development (ACD). Includes center-based child care and family day care (in homes). Low-income families with children below age 13 are eligible.	• City funds • State Child Care Block Grant (CCBG) • Federal Temporary Assistance to Needy Families (TANF) • Federal Social Services Block Grant, Title XX	10,661[(a)]
Head Start	Preschool primarily for 3- and 4-year-olds, usually part day. Families with income below the poverty line are eligible.	• Federal Head Start	9,002
Head Start and ACD collaboration	Full- and extended-day program combining Head Start services and ACD child care.	• Federal Head Start • Child care funding sources (see above)	1,665
Private child care and preschool	Early childhood education and care offered through nonprofit and for-profit agencies, including religious institutions. Facilities licensed by NYC Dept. of Health.	• Tuition • Private donations • ACD vouchers (publicly subsidized)	7,956[(b)]
Special education	Public education program for children with disabilities as early as need is identified. Mostly offered through contract agencies.	• City funds[(d)] • State aid for preschool special education	8,225
SuperStart and SuperStart Plus	Pre-k in Board of Education facilities for 4-year-olds, primarily part day. SuperStart Plus integrates non-disabled and disabled 3- and 4-year-olds in the same classes.	• City funds[(d)] • State aid for experimental pre-k • Federal Elementary and Secondary Education Act (ESEA), Title I • State/city tuition reimbursement (SuperStart Plus only)	11,878[(c)]
Universal pre-k	Preschool administered through the Board of Education for all eligible 4-year-olds. A four-year phase in began in the 1998-1999 school year.	• City funds[(d)] • State aid for universal pre-k	13,625

SOURCES: IBO; NYC Agency for Child Development; NYC Board of Education.

NOTES: [(a)]Excludes children occupying seats funded by ACD vouchers. [(b)]Includes some, but not all, recipients of ACD vouchers. [(c)]1997-1998 enrollment. [(d)]BOE city funds include unrestricted state education aid.

replace them with a smaller block grant. While categorical funding for those programs was restored in the adopted budget, continuing uncertainty over the level of state support for universal pre-k interferes with resource allocation and planning for school districts. For example, universal pre-k funding for 1999-2000 was not determined until August 1999, several months after BOE had allocated funds to its community school districts so they could prepare for the upcoming school year.

The funding provided by the state to NYC in a given year depends on the total level of state aid, the number of other districts participating in the program, and the speed at which districts phase in the program. The adopted state budget not only includes the level of universal pre-k appropriations for the upcoming school year but also the funding formula for universal pre-k grants.

As shown in Figure 2, the state grant allocated to NYC is determined through a two-step process. First, the State Education Department (SED) estimates grantable pupils—the maximum number of pupils for which the city is eligible for state funds. Specifically, the SED prorates the total qualifying population to a smaller number of grantable pupils, so that grants to localities do not exceed the amount the state plans to spend.[7] In the first four years of the program, phased-in participation targets also affect the number of grantable pupils. The state set participation targets for NYC of 16 percent of eligible children in the first year (1998-1999), 30 percent in the second year (1999-2000), 66 percent in the third year (2000-2001), and 100 percent in the fourth year (2001-2002). In the second step of the grant-making process, the number of grantable pupils is multiplied by a formula-driven level of per pupil funding to set the level of the state grant. If the actual pre-k enrollment in NYC falls short of the state's estimate of grantable pupils in any year, the state's grant for that year is reduced to reflect actual enrollment.

Adjusting the number of grantable pupils. By prorating the qualifying universe of students, the state's number of grantable pupils may be less than the number of children actually enrolled in the program. When this is the case—as it is for NYC in the current fiscal year—BOE is forced to either bridge the funding gap (the current practice) or exclude some children from the program.

Changing the formula that determines per pupil funding. The original law stipulates that participating districts receive a minimum of $2,000 per grantable pupil, with the precise amount determined by a complex formula. The formula uses measures of district wealth (including income and property tax base) and measures of district need (including proportion of students living in poverty, having

Figure 2.
Two-Step Process for Determining NYC's Grant for Universal Pre-K

STEP 1		Number of NYC qualifying pupils[(a)]
	multiplied by	State proration factor
	multiplied by	Annual phase-in target
	equals	**Number of NYC grantable pupils**
STEP 2	*the lesser of*	NYC grantable pupils *and* NYC actual enrollment
	multiplied by	Formula-determined per pupil allocation
	equals	**State categorical grant to NYC**

SOURCE: IBO.
NOTE: [(a)]Qualifying pupils exclude 4-year-olds served by other state programs (see also note 7).

limited English proficiency, and requiring special education). However, during the state budget deliberations in both 1998 and 1999, the formula was changed so that districts received more generous per pupil funding. In both 1998-1999 and 1999-2000, no district received less than $2,700 per pupil. The original funding formula with the $2000 per pupil minimum, though subject to change, is still in effect for 2000-2001 and beyond.

The next section of this report discusses the funding situation that has existed in NYC for years one and two of universal pre-k. We then consider two scenarios to assess the prospects for the program in the future; those scenarios include estimates of state and city costs for delivering the program once it is fully implemented in 2001-2002.

Implementing Universal Prekindergarten in NYC: The First Two Years

Year One: 1998-1999. In its first year, universal pre-k served 13,625 New York City children, including 6,296 in morning sessions, 4,899 in afternoon sessions, 2,231 in full-day sessions and 199 in extended-day sessions.[8] The state provided a total of $57 million statewide for the program in 1998-1999, an increase from the $50 million contained in the original multi-year agreement.[9]

As discussed above, the State Education Department (SED) calculates the number of grantable pupils in New York City to determine the size of the grant to the city. Figure 3 shows that the number of grantable pupils for 1998-1999 was much lower than the total qualifying population because of the proration and phase-in rates applied to the program.

Based on the funding formula for year one, NYC received roughly $3,110 for each of the 13,625 children enrolled in the program, for a total state grant of about $42 million (74 percent of the statewide disbursement).[10] While no local funding match is required, BOE supplemented state funds with an additional $8 million, roughly $590 per pupil. Taken together, the state and city spent a total of about $50 million to provide pre-k in 1998-1999, at a cost of $3,700 per child.

Year Two: 1999-2000. Consistent with the multi-year agreement, the adopted state budget funds universal pre-k statewide at $100 million in 1999-2000. Although that funding level represents a substantial increase from 1998-1999—with New York City expecting an additional $25 million—the amount available for each pupil in the city will decrease.

Unlike year one, the Board's planned enrollment of 28,756 for year two significantly exceeds the number of grantable pupils calculated by the state.[11] As a result, per child funding from the state is expected to fall from $3,110 in 1998-1999 to $2,325 for the current year.

BOE expects to contribute about $1,375 per child in 1999-2000—more than double the city's per pupil contribution in 1998-1999—to maintain average per pupil spending at $3,700. Consequently, BOE's share of funding for universal pre-k is expected to total $39 million this year, nearly five times greater than the $8 million it contributed in the first year of the program.

Implementing Universal Prekindergarten in NYC: Prospects for the Future

Aside from uncertainty about the level of the categorical aid and the need to supplement state grants with BOE funds, the legislation creating universal pre-k did not appropriate new capital (construction) funds to renovate or expand school or contract agency facilities, other than the standard building aid reimbursement.[12]

The capital needs of the city's public schools are daunting even without universal pre-k. The system has been struggling to absorb more than 130,000 additional students since 1990. During the past school year, 63 percent of elementary school children attended schools with enrollment exceeding capacity.[13] The Board's need to reduce crowding is made even more urgent by recent state and federal

Figure 3.
New York State and New York City Funding for Universal Prekindergarten

	1998-1999 Actual	1999-2000 Planned
State calculation of grantable pupils in NYC		
Total qualifying population	115,500	115,300
State proration factor	75.8%	58.4%
Prorated population	87,500	67,340
Phase-in rate for NYC	16%	29.9%
Grantable pupils in NYC	14,002	20,135
NYC enrollment in universal pre-k	13,625	28,756
Funding for program costs		
Total state funding (millions)	$57	$100
Percent to NYC	74%	67%
State funds to NYC (millions)	$42	$67
NYC BOE funds[(a)] (millions)	$8	$39
Program cost in NYC (millions)	$50	$106
Funding per pupil		
State funds	$3,110	$2,325[(b)]
NYC BOE funds[(a)]	$590	$1,375
Cost per pupil in NYC	$3,700	$3,700

SOURCES: IBO; NYS Division of Budget; NYS Education Department; BOE.
NOTES: [(a)]NYC BOE funds include unrestricted state education aid. [(b)]State funding for 1999-2000 is $3,320 per pupil for 20,135 grantable pupils; however, since BOE plans to serve 28,756 pupils, the state grant of $66.85 million is effectively $2,325 per pupil.

initiatives to reduce early grade class sizes.[14] Moreover, many buildings are outdated—the majority were constructed before 1950—and in a poor state of repair, placing additional demands on capital funds.

Two scenarios for the future. IBO estimates that 112,700 4-year-olds would qualify for universal pre-k once it is fully implemented in school year 2001-2002.[15] We use two scenarios to estimate a range for the number of qualifying pre-schoolers expected to enroll in universal pre-k—one estimating the low end of the range and one the high end. We employ these two scenarios to analyze the number of additional classrooms that would be needed and the operating and capital costs for implementing universal pre-k. Figures 4 through 8 summarize the findings.

Scenario 1. The first scenario provides a low-end estimate of the number of children that would enroll and the number of classrooms needed to implement universal pre-k. In this scenario, IBO assumes that all seats currently used for 4-year-olds in public or private child care and preschool would remain filled with 4-year-olds. Only those children not currently enrolled in a program would enroll in universal pre-k.

Scenario 2. The second scenario provides a

high-end estimate of enrollment and classroom need. In this scenario, IBO assumes that slots for 4-year-olds in SuperStart, Head Start, and Head Start/ ACD collaborative care—center-based publicly subsidized pre-school programs—would remain filled with 4-year-olds. All other 4-year-olds would move out of ACD center-based and family day care, private programs, and non-institutional arrangements into universal pre-k. IBO assumes that seats in ACD and private programs previously occupied with 4-year-olds would be filled by children of other ages.

Operating costs: Under scenario 1, IBO estimates that a total of 71,500 children would attend universal pre-k in school year 2001-2002, the first year of full implementation. Under scenario 2, the number increases to 90,200 children. (See Figure 4 and Appendix A, Tables 2 and 4.) Using these two scenarios, we project that between 63 percent and 80 percent of qualifying children in NYC would participate in universal pre-k.[16]

As shown in Figure 4, the state and city would need to allocate $265 million in operating funds to serve 71,500 pupils at $3,700 per child under the lower enrollment estimate from scenario 1. If the state provides only the legal minimum of $2,000 per child, the state grant would be $143 million and the local share would be $122 million. Under scenario 2, the state and city would have to provide $334 million to serve 90,200 pupils at the $3,700 level; the state grant would be $180 million and the local share $153 million.

If total state funding reaches the $500 million contained in the multiyear spending agreement, New York City's grant would likely be considerably greater than $2,000 per pupil in 2001-2002. How much greater, however, would depend on the state funding formula employed at that time and on statewide participation in the program.

Given the fluctuations in state funding, it should be noted that if the state continues to provide the 1999-2000 effective rate of $2,325 per child, the state grant under scenario 1 would be $166 million and the remaining BOE share $98 million. Using the higher enrollment estimate of 90,200 pupils provided by scenario 2, operating costs would amount to $334 million for 2001-2002, with the state grant totaling $210 million and the remaining BOE share at $124 million. Alternatively, if the state eliminated the categorical grant and replaced it with a smaller block grant, BOE would have to fund a much larger share to continue implementing universal prekindergarten.

One factor not accounted for in the estimates of program costs is the potential that a tight labor market

Figure 4.
Summary of Annual Operating Costs for Full Implementation of Universal Prekindergarten, 2001-2002

	Scenario 1	Scenario 2
Enrollment	71,500	90,200
Program operating costs[(a)] (millions of dollars)		
State funds at $2,000/pupil minimum	$143	$180
NYC BOE funds at $1,700/pupil[(b)]	$122	$153
Cost at $3,700/pupil[(c)]	$265	$334

SOURCE: IBO.

NOTES: [(a)]Assumes continuation of NYC's first-year cost of $3,700 per pupil, and minimum state funding of $2,000 per pupil. [(b)]NYC BOE funds include unrestricted state education aid. [(c)]Total for scenario 2 does not add due to rounding.

for certified teachers could increase operating costs. Beginning in the 2001-2002 school year, all universal prekindergarten teachers including those employed by community-based providers must be certified in early childhood education. This is a higher standard of teacher qualification than currently exists for grades K-12. BOE projects hiring 41,000 teachers over the next five years, due to impending retirements, attrition, class size reduction, universal prekindergarten, and other initiatives.[17] The public school system's increased demand for teachers is likely to put upward pressure on personnel costs, thereby boosting the cost of providing universal pre-k.

Capital needs. The need for universal pre-k classrooms will grow over the next three years as children phase into the program. IBO analyzed the demand for classroom space once the program is fully implemented in school year 2001-2002. Under scenario 1, about 57,700 children (not including those already in universal pre-k classrooms in the first year) would require nearly 1,600 classrooms for double session universal pre-k (two sessions per day lasting 2.5 hours each and serving different children). Under scenario 2, with 76,400 children needing seats (not including first year participants), 2,100 universal pre-k classrooms would be needed. (See Figure 5 and Appendix A, Tables 2 and 4.)

The amount of space for pre-k expansion in BOE facilities is limited. More than three-fifths of elementary school children currently attend schools where enrollment exceeds capacity. Some of the remaining schools have excess rooms not currently being used for instruction that could potentially be used for pre-k, but these fall far short of demand. BOE is planning to add over 1,200 classrooms between 1999-2002 through new construction, leasing, building additions, temporary units, and room partitioning.[18] However, most new space is being built in areas that are already overcrowded and therefore would not be available for pre-k expansion.

IBO estimates that BOE school buildings with excess capacity have nearly 600 classrooms that could potentially be used for pre-k expansion by 2002. In March 1998, ACD published a survey that measured the capacity of licensed child-care centers across the city.[19] Based on that survey, IBO estimates that ACD-funded centers have less than 100 existing rooms that could potentially be used for pre-k expansion.[20] Since many of the potentially available BOE and ACD rooms are located in less populous districts, some districts would have more space for pre-k than they need. IBO assumes that these surpluses would not be available to remedy shortages in other districts. If all potentially available BOE and ACD space were dedicated to universal pre-k—as opposed to class-size reduction—there would still be a shortage of 1,200 rooms under scenario 1 and 1,700 rooms under scenario 2. (See Figure 5 and Appendix A, Tables 1 and 6.)

State and federal initiatives to reduce class sizes in early grades beginning in school year 1999-2000 will compete with universal pre-k for the limited available space in public schools. In 1998-1999, nearly 89 percent of K-3 classes citywide exceeded 20 students.[21] Reducing all class sizes in kindergarten through third grade to an average of 20 students or less would require over 3,100 classrooms.[22] IBO estimates that if BOE implements both universal pre-k and class size reduction and uses all potentially available space for these programs, the city would need at least 4,159 additional classrooms under scenario 1, and at least 4,645 additional classrooms (either in BOE facilities or contracted out) under scenario 2. (See Figure 6 and Appendix A, Tables 3 and 5.)

For 1998-1999 and the upcoming 1999-2000 school year, BOE has dealt with the lack of available classroom space by aggressively seeking seats with community-based organizations (CBOs). Although the state requires that only 10 percent of universal pre-k funds be used for students attending programs run by CBOs, BOE contracted out 37 percent of pupils with CBOs in the first year, and plans to contract out 60 percent in the current year. Increasing the contracted share of universal pre-k to 75 percent at full implementation would mean that CBOs would be serving between 49,000 and 63,000 pupils by 2002.

Finding a sufficient number of qualified

Figure 5.
Summary of Classroom Needs and Capital Costs for Full Implementation of Universal Prekindergarten, 2001-2002

	25% of universal pre-k expansion in BOE facilities[a]	100% of universal pre-k expansion in BOE facilities
SCENARIO 1: Enrollment=71,500 (57,700 above 1998-1999 level)		
Classroom need		
Minimum number of classrooms needed for universal pre-k expansion[b]	397	1,579
Need reduced by available BOE & ACD space[c]	-130	-336
Minimum net classroom need[d]	267	1,243
Capital cost to meet net classroom need[e]	$285 million	$1,325 million
SCENARIO 2: Enrollment=90,200 (76,400 above 1998-1999 level)		
Classroom need		
Minimum number of classrooms needed for universal pre-k expansion[b]	526	2,091
Need reduced by available BOE & ACD space[c]	-196	-431
Minimum net classroom need[d]	330	1,660
Capital cost to meet net classroom need[e]	$352 million	$1,769 million

SOURCE: IBO.

NOTES: [a]Assumes BOE contracts with community-based organizations to provide 75 percent of pre-k expansion seats. [b]Expansion refers to classroom need beyond the amount of classroom space used for first year of implementation (1998-1999). [c]Appendix A, Table 1 shows that an estimated 684 classrooms would potentially be available for pre-k expansion in BOE facilities and ACD-funded centers. The number of these classrooms that would be usable to reduce classroom need under different scenarios varies depending upon whether available space is located where it is needed. See Appendix A, Table 6. [d]See Appendix A, Tables 3, 5 and 6. [e]Calculated at an average cost of $1,065,850 per BOE classroom.

contractors to meet this level of demand would be challenging because the pre-k program is so large compared to the existing preschool and child care infrastructure. The combined enrollment of 4-year-olds in center-based ACD, Head Start, and private programs licensed by the NYC Department of Health is currently about 29,000. The 1998 ACD survey of child-care providers in each community school district documented the lack of available capacity in existing licensed facilities. In preparing for the 1999-2000 school year, BOE sent a Notice of Solicitation to 3,550 vendors identified by the Department of Health and advertised in community newspapers. Out of that pool, 456 proposals were received. As school opened, BOE had lined up 27,200 seats, including 16,400 in CBOs, but was still searching for 1,500 additional spaces.[23] While some providers may have been wary of participation

Figure 6.
Summary of Classroom Needs and Capital Costs for Full Implementation of Universal Prekindergarten and K-3 Class Size Reduction, 2001-2002

	25% of universal pre-k expansion in BOE facilities[a]	100% of universal pre-k expansion in BOE facilities
SCENARIO 1: Enrollment=71,500 (57,700 above 1998-1999 level)		
Classroom need		
Minimum number of classrooms needed for:		
Universal pre-k expansion[b]	397	1,579
K-3 class size reduction[c]	3,144	3,144
Subtotal	3,541	4,723
Need reduced by available BOE & ACD space [d]	-562	-564
Minimum net classroom need[e]	2,979	4,159
Capital cost to meet net classroom need[f]	$3.2 billion	$4.4 billion
SCENARIO 2: Enrollment=90,200 (76,400 above 1998-1999 level)		
Classroom need		
Minimum number of classrooms needed for:		
universal pre-k expansion[b]	526	2,091
K-3 class size reduction[c]	3,144	3,144
Subtotal	3,670	5,235
Need reduced by available BOE & ACD space [d]	-569	-590
Minimum net classroom need[e]	3,101	4,645
Capital cost to meet net classroom need[f]	$3.3 billion	$4.9 billion

SOURCE: IBO.

NOTES: [a]Assumes BOE contracts with community-based organizations to provide 75 percent of pre-k expansion seats. [b]Expansion refers to classroom need beyond the amount of classroom space used for first year of implementation (1998-1999). [c]Minimum number of classes needed to reduce class sizes to a district-wide average of 20 students in grades K-3. [d]Appendix A, Table 1 shows that an estimated 684 classrooms would potentially be available for pre-k expansion (and class size reduction) in BOE facilities and ACD-funded centers. The number of these classrooms that would be usable to reduce classroom need under different scenarios varies depending upon the geographical alignment of classrooms with the available space. See Appendix A, Table 6. [e]See Appendix A, Tables 3 and 5. [f]Calculated at an average cost of $1,065,850 per BOE classroom.

because of the Governor's proposed elimination of the program, it is also possible that many potential providers do not believe participation would be feasible. For example, the city's largest provider of private prekindergarten, the Archdiocese of New York, has announced that it will not be a contract provider.

Capital costs. The shortage of classroom space will need to be addressed through construction, leasing and/or contracting out to fully implement universal pre-k. The greater the share of universal pre-k that is contracted out, the lower the capital costs. If BOE were to house 25 percent of universal pre-k expansion, IBO estimates that under scenario 1, about $280 million would be needed to build roughly 250 additional classrooms. If BOE facilities were used to house 25 percent of universal pre-k expansion and all of the K-3 class size reduction, the capital cost would increase to about $3.2 billion to create roughly 3,000 classrooms. Under scenario 2, capital costs would be $350 million for about 300 additional classrooms for 25 percent of universal pre-k expansion, or $3.3 billion to create about 3,100 classrooms for 25 percent of universal pre-k expansion and all of the K-3 class size reduction. These estimates are based on an average cost of $1,065,850 per classroom ($42,634 per seat), reflecting the mix of new construction and leasing included in the Chancellor's proposed five-year capital plan for 2000-2004.[24]

Since the city funds capital projects by selling tax-exempt municipal bonds, capital costs are generally amortized over many years. IBO has projected debt service requirements for the universal pre-k program under scenarios 1 and 2 using a 30-year amortization at 6 percent interest. As shown in Figure 7, annual debt service costs to house 25 percent of pre-k expansion in BOE facilities would cost between $21 million and $25 million (pre-k expansion only).

The Board incurs both capital and operating costs when it leases buildings and uses them as schools. BOE spends capital funds to retrofit the buildings and spends operating funds to pay rent to the owners of the buildings. While the above capital cost estimates include retrofitting leased buildings, they do not include the cost of renting the buildings. Primarily due to rent, new leased facilities cost approximately $25,000 per classroom ($1,000 per seat) more per year to operate than newly constructed schools. If 25 percent of pre-k expansion occurs in BOE facilities, leasing would increase annual operating costs by about $3 million. If all pre-k expansion occurs in BOE facilities, leasing would increase annual operating costs by $8 million to $10 million.[25]

Conversely, the greater the share of the program housed in BOE facilities, the greater the capital costs. If BOE facilities were used to absorb the full expansion of universal pre-k, IBO estimates that under scenario 1 about $1.3 billion would be needed to build roughly 1,200 additional classrooms and under scenario 2 about $1.8 billion would be needed for 1,700 additional classrooms. Annual debt service for these capital costs would be between $96 million and $129 million. Similarly, if BOE facilities were used to fully implement universal pre-k and class size reduction, the combined capital cost under scenario 1 would increase to about $4.4 billion to create 4,200 classrooms and under scenario 2 would increase to about $5.0 billion for 4,600 additional classrooms.

One approach to meeting the demand for pre-k and K-3 classrooms may be through the construction of Early Childhood Centers (ECCs), which offer some savings over constructing standard BOE facilities. ECCs are new facilities, often built in collaboration with ACD, that house prekindergarten to third grade. Five such centers are currently in use in the Bronx and Queens and four others in Manhattan and Queens are in the construction pipeline. Because dimensions for space such as gymnasiums and cafeterias are smaller than standard schools, ECCs are generally less expensive to build than new buildings serving a wider range of elementary grades. ECCs cost $44,000 to $47,000 per seat, while new elementary buildings cost $47,000 to $53,000 per seat.[27] While the Chancellor's proposed BOE capital plan for 2000-2004 recommended up to 12 additional ECCs

Figure 7.
Annual Operating Costs for Building and Leasing Space for Full Implementation of Universal Prekindergarten, 2001-2002[a] (millions of dollars)

	25% of universal pre-k expansion in BOE facilities[b]		100% of universal pre-k expansion in BOE facilities	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2
Debt service[c]	$21	$25	$96	$129
Extra cost of operating leased facilities[d]	$3	$3	$8	$10
Total:	$24	$28	$104	$139

SOURCE: IBO.

NOTES: [a]Pre-k classroom need only (not including the class size reduction initiative). See Figure 5 for more detail on classroom need and capital costs for pre-k. [b]Assumes capital costs are minimized by BOE contracting with community-based organizations to provide 75 percent of classrooms needed to expand pre-k. [c]Debt service based on 30-year amortization at 6 percent. [d]Assumes annual operating costs for leased facilities is $25,000 per classroom more than other BOE facilities, primarily due to rent.

Figure 8.
Summary of Annual Costs for Full Implementation of Universal Prekindergarten, 2001-2002

	25% of universal pre-k expansion in BOE facilities		100% of universal pre-k expansion in BOE facilities	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2
Enrollment	71,500	90,200	71,500	90,200
Annual Costs (millions of dollars)				
Program operating costs[a]				
State funds at $2,000/pupil	$143	$180	$143	$180
NYC BOE funds at $1,700/pupil[b]	$122	$153	$122	$153
Subtotal at $3,700/pupil:	$265	$334	$265	$334
NYC BOE's costs for building and leasing space[c]	$24	$28	$104	$139
Total annual costs:	$289	$362	$369	$473

SOURCE: IBO.

NOTES: [a]See Figure 5 for assumptions. [b]NYC BOE funds include unrestricted state education aid. [c]See Figure 7 for assumptions.

in nine districts across the city, the plan approved by the Board includes only one additional ECC to be located in Manhattan.

Community school districts. New York City's 32 community school districts (CSDs) vary widely in their capacity to meet the needs for additional classroom space required by universal pre-k and class size reduction. Based on the combined needs of universal pre-k and reduced class sizes, scenario 1 shows that 29 of the 32 districts need additional space to fully implement the programs, with 18 of those districts each needing more than 100 additional classrooms. Scenario 2 finds that 30 of 32 districts need space, with 20 districts each needing more than 100 additional classrooms. Not surprisingly, districts with the greatest need for additional K-3 classrooms also have disproportionately large numbers of 4-year-olds in the district qualifying for universal pre-k. Moreover, some educators are concerned that many of the neighborhoods most in need of prekindergarten—communities with long waiting lists for subsidized child care—will have great difficulty finding classroom space in either BOE or community facilities.

A related concern is that some children may be unable to attend prekindergarten due to a lack of transportation. Some community school districts span relatively large areas that cross highways and bridges. It is possible that space for pre-k classes might become available in areas within community school districts that are relatively far from the areas where the children live. BOE is not providing transportation to universal pre-k students because the program is not eligible for state transportation aid.

Figures 9 and 10 show the distribution of classroom need in the city's 32 districts. See also Appendix A, Tables 3 and 5.

Conclusions

In a collaborative effort, the Board of Education, community school districts, parents, and early childhood education providers successfully implemented the first phase of universal prekindergarten in New York City. The Board of Education is continuing with plans to fully implement universal pre-k in NYC. BOE reports that it plans to serve nearly 29,000 students in the current year and provide more than one-third of the $106 million in pre-k operating funds. Although space in BOE facilities to house universal pre-k is limited, the city has found classroom space for the majority of pupils in the current year by contracting with community-based organizations.

Potential problems loom, however, concerning the city's capacity to meet the funding and space needs to fully implement universal pre-k. Funding uncertainties for the program persist: the share of per pupil spending funded by the state for 2000-2001 and beyond is unclear, and although the state budget for 1999-2000 preserved universal pre-k for the second year of the phase-in, debate throughout budget negotiations left the future of the program in question.

Finding room for universal pre-k in districts already stretched for space may pose one of the most challenging obstacles to full implementation. The program will compete for any available space with the objectives of relieving existing overcrowding and reducing K-3 class sizes. The program faces serious constraints on the city's ability to provide capital funds for new BOE space to house universal pre-k. The state is not providing new capital funding for universal pre-k. Moreover, our analysis shows that unevenly distributed space needs across districts will heighten the implementation challenge, particularly as many of the districts with the most severe overcrowding are likely to face the greatest demand for universal pre-k classes. While the city can take advantage of the existing infrastructure of early childhood education programs, some districts' ability to contract with community based organizations may be compromised due to a shortage of eligible facilities.

Fig. 9 - Universal Pre-K (Scenario 1) and Class-Size Reduction

Map illustrates effect of class-size reduction and universal pre-k under Scenario 1. This pre-k scenario is a low-end estimate of enrollment (71,500) when universal pre-k is fully implemented. In calculating the shortfall, IBO accounts for BOE and ACD space that will be available by 2002 and classroom space provided to implement the first year of universal pre-k. See Appendix A, Tables 1, 2, and 3.

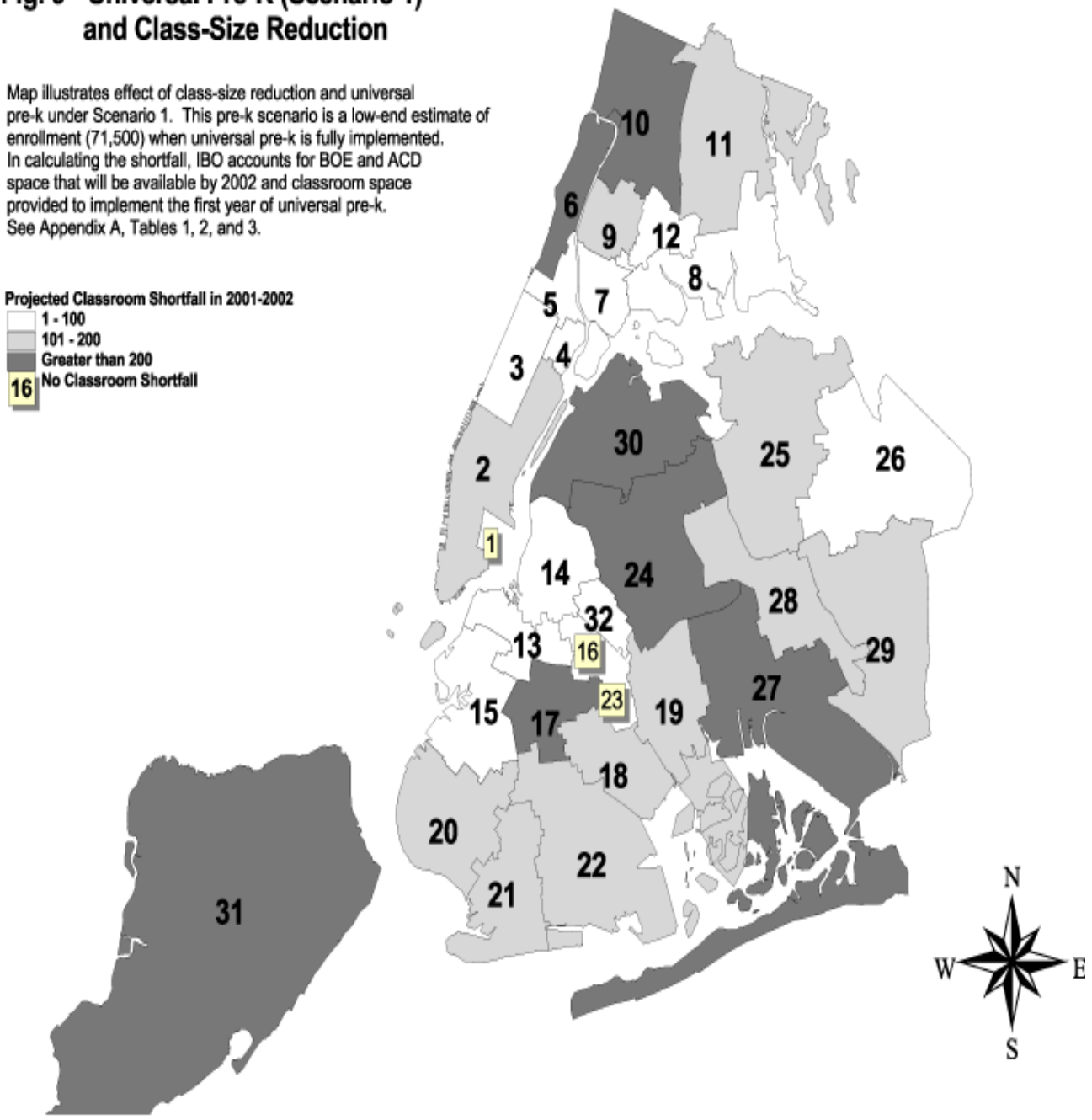
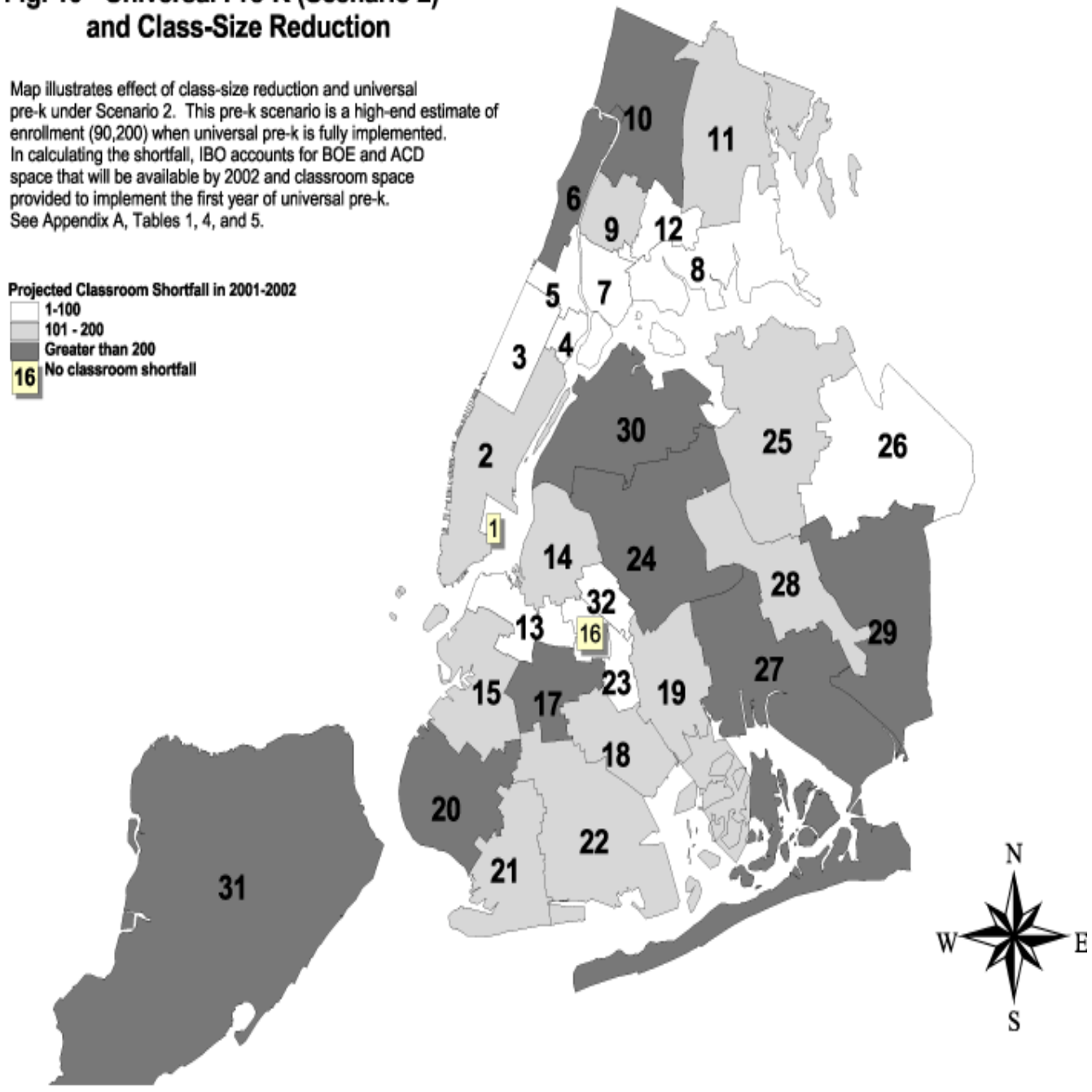


Fig. 10 - Universal Pre-K (Scenario 2) and Class-Size Reduction

Map illustrates effect of class-size reduction and universal pre-k under Scenario 2. This pre-k scenario is a high-end estimate of enrollment (90,200) when universal pre-k is fully implemented. In calculating the shortfall, IBO accounts for BOE and ACD space that will be available by 2002 and classroom space provided to implement the first year of universal pre-k. See Appendix A, Tables 1, 4, and 5.



Appendix A, Table 1.
Available Classroom Space: Board of Education (BOE) and Agency for Child Development (ACD)

CSD	Elementary school utilization rate 1998-1999[a]	BOE elementary school classrooms …			Rooms potentially available for pre-k expansion in …		
		available 1998-1999[b]	being added 1999-2002[c]	total available by 2002	BOE facilities[d]	ACD-funded centers[e]	total BOE+ACD
Manhattan							
1	60%	89	0	89	89	6	95
2	89%	41	0	41	41	6	47
3	88%	34	0	34	34	6	40
4	91%	37	0	37	37	6	43
5	85%	31	0	31	31	7	38
6	115%	3	44	47	na	1	1
Bronx							
7	88%	17	0	17	17	0	17
8	93%	31	0	31	31	3	34
9	85%	11	36	47	47	8	55
10	113%	8	119	127	na	6	6
11	114%	2	52	54	na	7	7
12	90%	28	12	40	40	3	43
Brooklyn							
13	81%	29	0	29	29	0	29
14	86%	28	0	28	28	1	29
15	95%	23	0	23	23	5	28
16	83%	68	0	68	68	5	73
17	104%	6	0	6	na	4	4
18	108%	6	86	92	na	1	1
19	100%	3	0	3	na	8	8
20	107%	18	44	62	na	0	0
21	97%	5	0	5	5	0	5
22	104%	5	50	55	na	5	5
23	94%	9	48	57	57	3	60
32	92%	12	0	12	12	2	14
Queens							
24	124%	2	186	188	na	0	0
25	110%	0	90	90	na	0	0
26	101%	10	0	10	na	0	0
27	116%	9	98	107	na	0	0
28	112%	4	71	75	na	0	0
29	116%	2	85	87	na	0	0
30	109%	10	78	88	na	0	0
Staten Island							
31	103%	17	115	132	na	2	2
Total		**598**	**1,214**	**1,812**	**589**	**95**	**684**

SOURCE: IBO.

NOTES: [a]Utilization rates for elementary level buildings from *BOE School Facilities Capacity-Enrollment-Utilization, 1998-1999.* Utilization includes first year implementation of universal pre-k (1998-1999). [b]Space available based on IBO analysis of 1998-99 room usage dataset provided by BOE Division of School Facilities. [c]Space being added based on IBO analysis of *BOE Amended Five-Year Capital Plan 1995-1999.* [d]Districts currently at or above capacity are assumed to use all available/new space to relieve current overcrowding. Districts currently under capacity potentially may use available/new space for universal pre-k. [e]Space in ACD-funded day care centers based on IBO analysis of *ACD Early Childhood Capacity by School District, March 1998.* ACD rooms available may be overestimated since some of these rooms may have already been claimed for pre-k during 1998-1999.

Appendix A, Table 2.
Scenario 1: Universal Pre-K Classroom Need at Full Implementation (2001-2002)

CSD	All eligible 4-year-olds[a]	4-year-olds remaining in other programs[b]	4-year-olds seeking universal pre-k	4-year-olds already served by universal pre-k 1998-99[c]	Net number of 4-year-olds seeking universal pre-k[d]	Need for universal pre-k classrooms[e]
Manhattan						
1	1,249	1,076	173	171	2	0
2	6,131	2,757	3,374	476	2,898	79
3	3,092	1,457	1,635	278	1,357	37
4	1,362	1,160	202	220	0	0
5	2,283	1,447	836	202	634	17
6	5,301	1,192	4,109	390	3,719	102
Bronx						
7	1,855	1,393	462	243	219	6
8	2,845	1,359	1,486	414	1,072	29
9	5,027	2,158	2,869	311	2,558	70
10	6,122	1,272	4,850	644	4,206	115
11	3,886	585	3,301	641	2,660	73
12	2,554	1,514	1,040	356	684	19
Brooklyn						
13	2,619	1,879	740	248	492	13
14	3,490	1,795	1,695	457	1,238	34
15	3,571	2,113	1,458	443	1,015	28
16	1,357	1,035	322	236	86	2
17	4,788	1,280	3,508	535	2,973	81
18	2,265	782	1,483	324	1,159	32
19	3,374	1,499	1,875	391	1,484	41
20	5,207	1,330	3,877	770	3,107	85
21	3,736	1,177	2,559	497	2,062	56
22	4,664	881	3,783	821	2,962	81
23	1,508	1,305	203	165	38	1
32	2,362	1,251	1,111	229	882	24
Queens						
24	5,850	518	5,332	558	4,774	131
25	3,265	660	2,605	447	2,158	59
26	1,194	78	1,116	360	756	21
27	4,138	1,468	2,670	625	2,045	56
28	3,611	1,353	2,258	427	1,831	50
29	3,379	874	2,505	525	1,980	54
30	5,038	1,122	3,916	543	3,373	92
Staten Island						
31	5,577	1,392	4,185	849	3,336	91
Total	**112,700**	**41,162**	**71,538**	**13,796**	**57,760**	**1,579**

SOURCES: IBO; see notes.

NOTES: [a]Eligible population equals all 4-year-olds not already served by state-funded programs. IBO subtracted 4-year-olds in special education or state-funded SuperStart from total district births. [b]Four-year-olds in ACD center based and group and family care, private education and care, SuperStart, Head Start, and Head Start/ ACD collaboration, current use. [c]Unaudited register data from BOE Automate The Schools (ATS) database as of November 13, 1998. [d]Total need minus all current use 1998-99. [e]Assumes all universal pre-k offered in double-sessions (two part-day classes) per day.

Appendix A, Table 3.
Scenario 1: Classrooms Needed for Prekindergarten and Class Size Reduction (2001-2002)

CSD	Classrooms needed			Classrooms	
	universal pre-k expansion[a]	reduced k-3 class sizes[b]	total	potentially available[c]	net need
Manhattan					
1	0	17	17	95	0
2	79	80	159	47	112
3	37	57	94	40	54
4	0	53	53	43	10
5	17	59	76	38	38
6	102	145	247	1	246
Bronx					
7	6	54	60	17	43
8	29	88	117	34	83
9	70	133	203	55	148
10	115	188	303	6	297
11	73	119	192	7	185
12	19	70	89	43	46
Brooklyn					
13	13	59	72	29	43
14	34	76	110	29	81
15	28	82	110	28	82
16	2	40	42	73	0
17	81	146	227	4	223
18	32	93	125	1	124
19	41	100	141	8	133
20	85	100	185	0	185
21	56	74	130	5	125
22	81	116	197	5	192
23	1	48	49	60	0
32	24	60	84	14	70
Queens					
24	131	214	345	0	345
25	59	99	158	0	158
26	21	67	88	0	88
27	56	181	237	0	237
28	50	114	164	0	164
29	54	137	191	0	191
30	92	132	224	0	224
Staten Island					
31	91	143	234	2	232
Total	**1,579**	**3,144**	**4,723**	**684**	**4,159**

SOURCE: IBO.

NOTES: [a]From Table 1; assumes universal pre-k is always offered in double sessions. Students are assumed to attend prekindergarten in their home district. [b]Minimum classes needed to reduce class size to a district-wide average of 20 pupils for each grade level from kindergarten to 3rd grade. Data are based on IBO analysis of BOE classroom registers, October 31, 1998. Excludes citywide special education, classes spanning more than one grade, and outlying values. [c]From Table 2.

Appendix A, Table 4.
Scenario 2: Universal Pre-K Classroom Need at Full Implementation (2001-2002)

CSD	All eligible 4-year-olds[a]	4-year-olds remaining in other programs[b]	4-year-olds seeking universal pre-k	4-year-olds already served by universal pre-k 1998-99[c]	Net number of 4-year-olds seeking universal pre-k[d]	Need for universal pre-k classrooms[e]
Manhattan						
1	1,249	731	518	171	347	9
2	6,131	703	5,428	476	4,952	135
3	3,092	831	2,261	278	1,983	54
4	1,362	880	482	220	262	7
5	2,283	948	1,335	202	1,133	31
6	5,301	859	4,442	390	4,052	111
Bronx						
7	1,855	898	957	243	714	20
8	2,845	902	1,943	414	1,529	42
9	5,027	1,651	3,376	311	3,065	84
10	6,122	635	5,487	644	4,843	133
11	3,886	148	3,738	641	3,097	85
12	2,554	1,187	1,367	356	1,011	28
Brooklyn						
13	2,619	773	1,846	248	1,598	44
14	3,490	947	2,543	457	2,086	57
15	3,571	1,187	2,384	443	1,941	53
16	1,357	818	539	236	303	8
17	4,788	232	4,556	535	4,021	110
18	2,265	462	1,803	324	1,479	40
19	3,374	760	2,614	391	2,223	61
20	5,207	681	4,526	770	3,756	103
21	3,736	717	3,019	497	2,522	69
22	4,664	664	4,000	821	3,179	87
23	1,508	774	734	165	569	16
32	2,362	895	1,467	229	1,238	34
Queens						
24	5,850	113	5,737	558	5,179	142
25	3,265	169	3,096	447	2,649	72
26	1,194	78	1,116	360	756	21
27	4,138	780	3,358	625	2,733	75
28	3,611	598	3,013	427	2,586	71
29	3,379	449	2,930	525	2,405	66
30	5,038	547	4,491	543	3,948	108
Staten Island						
31	5,577	528	5,049	849	4,200	115
Total	**112,700**	**22,545**	**90,155**	**13,796**	**76,359**	**2,091**

SOURCE: IBO.

NOTES: [a]Eligible population equals all 4-year-olds not already served by state-funded programs. IBO subtracted 4-year-olds in special education or state-funded SuperStart from total district births. [b]Four-year-olds in SuperStart, Head Start, and Head Start/ACD collaboration, current use. [c]Unaudited register data from BOE Automate The Schools (ATS) database as of November 13, 1998. [d]Total need minus all current use 1998-1999. [e]Assumes all universal pre-k offered in double-sessions (two part-day classes) per day.

Appendix A, Table 5.
Scenario 2: Classrooms Needed for Prekindergarten and Class-Size Reduction (2001-2002)

CSD	Classrooms needed			Classrooms	
	universal pre-k expansion[(a)]	reduced k-3 class sizes[(b)]	total	potentially available[(c)]	net need
Manhattan					
1	9	17	26	95	0
2	135	80	215	47	168
3	54	57	111	40	71
4	7	53	60	43	17
5	31	59	90	38	52
6	111	145	256	1	255
Bronx					
7	20	54	74	17	57
8	42	88	130	34	96
9	84	133	217	55	162
10	133	188	321	6	315
11	85	119	204	7	197
12	28	70	98	43	55
Brooklyn					
13	44	59	103	29	74
14	57	76	133	29	104
15	53	82	135	28	107
16	8	40	48	73	0
17	110	146	256	4	252
18	40	93	133	1	132
19	61	100	161	8	153
20	103	100	203	0	203
21	69	74	143	5	138
22	87	116	203	5	198
23	16	48	64	60	4
32	34	60	94	14	80
Queens					
24	142	214	356	0	356
25	72	99	171	0	171
26	21	67	88	0	88
27	75	181	256	0	256
28	71	114	185	0	185
29	66	137	203	0	203
30	108	132	240	0	240
Staten Island					
31	115	143	258	2	256
Total	**2,091**	**3,144**	**5,235**	**684**	**4,645**

SOURCE: IBO.

NOTES: [(a)]From Table 4; assumes universal pre-k is always offered in double sessions. Students are assumed to attend prekindergarten in their home district. [(b)]Minimum classes needed to reduce class size to a district-wide average of 20 pupils for each grade level from kindergarten to 3rd grade. Data are based on IBO analysis of BOE classroom registers, October 31, 1998. Excludes citywide special education, classes spanning more than one grade, and outlying values. [(c)]From Table 1.

Appendix A, Table 6.
Scenario 1: Classrooms Needed for Universal Prekindergarten Expansion (2001-2002)

CSD	Classrooms required				Classrooms potentially available[d]	Classroom net need			
	Scenario 1		Scenario 2			Scenario 1		Scenario 2	
	100%[a]	25%[b]	100%[c]	25%		100%	25%	100%	25%
Manhattan									
1	0	0	9	2	95	0	0	0	0
2	79	20	135	34	47	32	0	88	0
3	37	9	54	14	40	0	0	14	0
4	0	0	7	2	43	0	0	0	0
5	17	4	31	8	38	0	0	0	0
6	102	26	111	28	1	101	25	110	27
Bronx									
7	6	2	20	5	17	0	0	3	0
8	29	7	42	11	34	0	0	8	0
9	70	18	84	21	55	15	0	29	0
10	115	29	133	33	6	109	23	127	27
11	73	18	85	21	7	66	11	78	14
12	19	5	28	7	43	0	0	0	0
Brooklyn									
13	13	3	44	11	29	0	0	15	0
14	34	9	57	14	29	5	0	28	0
15	28	7	53	13	28	0	0	25	0
16	2	1	8	2	73	0	0	0	0
17	81	20	110	28	4	77	16	106	24
18	32	8	40	10	1	31	7	39	9
19	41	10	61	15	8	33	2	53	7
20	85	21	103	26	0	85	21	103	26
21	56	14	69	17	5	51	9	64	12
22	81	20	87	22	5	76	15	82	17
23	1	0	16	4	60	0	0	0	0
32	24	6	34	9	14	10	0	20	0
Queens									
24	131	33	142	36	0	131	33	142	36
25	59	15	72	18	0	59	15	72	18
26	21	5	21	5	0	21	5	21	5
27	56	14	75	19	0	56	14	75	19
28	50	13	71	18	0	50	13	71	18
29	54	14	66	17	0	54	14	66	17
30	92	23	108	27	0	92	23	108	27
Staten Island									
31	91	23	115	29	2	89	21	113	27
Total	**1,579**	**397**	**2,091**	**526**	**684**	**1,243**	**267**	**1,660**	**330**

SOURCE: IBO.

NOTES: [a]From Table 2; assumes universal pre-k is always offered in double sessions. Students are assumed to attend prekindergarten in their home district. [b]Assumes BOE will contract with community-based organizations to provide 75 percent of classrooms needed to expand pre-k. [c]From Table 4. [d]From Table 1.

Appendix B. Methodological Notes

Estimating the universe of qualifying 4-year-olds. Universal prekindergarten is open to all 4-year-olds unserved by other state-funded prekindergarten programs. Estimates of the qualifying (unserved) universe in NYC vary from 121,000 (cited in the Board's request for proposals sent last year to potential contractors) to 115,300 (used by the state education department in calculating NYC's grant for the current year) to 110,000 (cited by the Early Childhood Strategic Group).

IBO estimates that 112,700 4-year-olds will qualify for universal pre-k at full implementation. To approximate the total number of 4-year-olds in each community school district, IBO started with BOE data published during the 1998-1999 school year on children born in each CSD.[28] We then subtracted an estimate of the population already served by two state-funded programs. First, we subtracted the number of 4-year-olds in special education in the 1998-1999 school year.[29] Second, we subtracted the number of 4-year-olds enrolled in the portion of SuperStart funded by the state.[30] All class and classroom need projections in this report use the IBO estimate of 112,700 as the qualifying universe; no adjustments have been made for possible enrollment changes in later years.

Estimating current participation in other programs. In developing two scenarios for projecting universal pre-k enrollment, IBO needed to estimate current participation in other preschool and child-care programs. For this purpose, we defined participation as those 4-year-olds enrolled in a minimum of one part-time program per day during the school year. It has not been possible to determine the number of children participating in more than one subsidized or private program (for example, one child in two different part-day programs). IBO therefore has assumed that each part-time slot in our data represented one child, even though some 4-year-olds may have been enrolled in two part-time programs. This likely has resulted in some double counting of children, meaning that IBO's part-time participation figures may have overestimated the number of 4-year-olds currently in early childhood programs. Therefore, we may have underestimated the number of children who will enroll in universal pre-k.

IBO has used ACD data to estimate the number of 4-year-olds in private education and care programs. In March 1998, ACD used Department of Health records to inventory the capacity of licensed child-care programs.[31] Due to data limitations, IBO has assumed that all private (non-ACD) seats were full-time. If classrooms were empty part of the day, however, this would add to the capacity available to implement universal pre-k.

Due to a lack of information, IBO has not estimated the proportion of children that would stay at home or participate in informal care arrangements instead of attending universal prekindergarten. Parents opting for these alternatives would reduce the number of classrooms needed for universal pre-k.

IBO has not included child-care slots funded by ACD vouchers because these figures overlap in many cases with non-ACD private care figures. (The agencies accepting vouchers are mostly if not always the same agencies providing non-ACD private care.) If non-ACD programs have more seats available than identified in the data, this would add to the capacity and reduce overall need.

The net effect of all these factors on projecting participation seems small since overestimates likely would be cancelled out by underestimates.

Estimating space potentially available. Table 1 in Appendix A presents IBO estimates of classrooms potentially available for universal pre-k expansion. IBO has analyzed 1998-1999 room usage data provided by BOE Division of School Facilities. The dataset includes an inventory of every room in each school building coded by their 1998-1999 usage. IBO has confined its analysis of current room usage to elementary school buildings currently at less than 100 percent capacity. We have assumed that schools at or above 100 capacity would use any available rooms to relieve crowding rather than for pre-k and that middle schools and high schools would generally not house pre-k classes. We also have excluded

rooms less than 500 square feet, since BOE uses 500 square feet as a minimum standard for assigning a room instructional capacity.[32] Four types of school building rooms were counted as potentially available for universal pre-k: 1) vacant rooms; 2) rooms used by non-instructional organizations; 3) rooms used for administrative purposes exceeding the school's allotment; and 4) parent/teacher rooms exceeding the school's allotment. By using only these four categories, no rooms currently used for instruction were counted as potentially available for pre-k.

IBO has also analyzed the *BOE Amended Five-Year Capital Plan, Fiscal Years 1995-1999,* which was released in March 1999 and approved in June 1999. The amended plan updates the status of construction projects in progress. IBO has used the amended plan to tally the elementary school seats BOE plans to add in each district by 2002. BOE plans for increasing capacity by 2002 may be overstated since they do not include seats BOE could lose due to factors such as school closings, lease expirations, and rooms sealed because of hazardous conditions.

In its March 1998 report, ACD assessed the additional space available in every child care, Head Start, and licensed private (non-ACD) facility. In determining net classroom need, IBO has assumed that ACD would use all potentially available space for universal pre-k rather than reduce the lists of children from infants to pre-teens waiting for ACD child care.

Estimating class size reduction need. Using classroom registers from October 31, 1998, IBO has estimated the number of classrooms needed to reduce early grade (K-3) classes in each school district to an average of 20 students per class. See Appendix A, Table 3. For this analysis, we excluded citywide special education classes, "bridge classes" spanning more than one grade, and outlying values with fewer than five or more than 50 students. It is important to recognize that achieving a district-wide average class size of 20 students is less ambitious than achieving an average class size of 20 in every school. Reducing class sizes to an average of 20 at the school level would require hundreds more classrooms, so our estimates should be viewed as a minimum measure of need. The class size reduction estimates reported here update those contained in an earlier IBO report.

In overcrowded schools, BOE already plans an alternate approach for creating smaller class sizes. During 1999-2000, BOE will assign two teachers to a classroom in over 500 instances. IBO has not attempted to estimate the potential for the two teachers per room strategy to lower classroom demand.

Notes

[1] 1997 N.Y. Laws, Ch. 436.

[2] *Learning Achieving Developing by Directing Education Resources (LADDER),* A Report from the New York State Assembly, March 1997.

[3] 8 NYCRR 151-1 [http://www.nysed.gov/universe/newregs398.htm].

[4] NYC Board of Education, *Universal Prekindergarten Status Report*, November 13, 1998. Contains unaudited register data from Automate the Schools (ATS).

[5] NYC Board of Education, *Opening of School: 1999-2000,* press conference, September 1, 1999.

[6] NYC Board of Education, *Proposed Five-Year Capital Plan for Fiscal Years 2000-2004*, draft submitted by the Chancellor, November 1998 is the basis for the 75 percent figure. The adopted capital plan for 2000-2004 includes fewer construction projects than the proposed plan.

[7] The qualifying population of 4-year-olds excludes children served by other state programs, namely those attending the portion of SuperStart funded by the state experimental pre-k grant and those attending preschool special education sessions of at least four hours per day.

[8] NYC Board of Education Net Register, audited S-file, October 31, 1998.

[9] Although statewide appropriations for the 1998-1999 school were increased from $50 million to $67 million, only $57 million in grants were disbursed because some eligible districts in the state did not participate and some participating districts served fewer pupils than anticipated.

[10] New York State Division of Budget, "Preliminary Estimate of 1998-99 and 1999-00 State Aids," August 3, 1999.

[11] See NYC Board of Education, *BOR Allocation*

Memorandum No. 11, FY 2000, September 22, 1999.

[12] State building aid partially reimburses school districts for capital expenditures, including debt service and leasing.

[13] IBO, "School Overcrowding Persists; Average Class Size Declines," *Inside the Budget,* No. 51, September 7, 1999.

[14] See also IBO, *Class Size Reduction,* August 24, 1998, done at the request of Public Advocate Mark Green.

[15] See Appendix B, methodological notes.

[16] The 63 percent to 80 percent range created by IBO's two scenarios is in line with trends in kindergarten enrollment. School is not mandatory in New York State until age 6, but New York City offers public school kindergarten to all 5-year-olds. Roughly 85 percent of 5-year-olds attend some type of kindergarten with 60 percent attending the public schools and another 25 percent choosing non-public schools. Some, but not all, non-public preschools will contract with BOE to provide universal prekindergarten.

[17] NYC Board of Education Division of Human Resources, "Five-Year Recruitment Needs Projection System," March 10, 1999.

[18] Based on IBO analysis of *BOE Amended Five-Year Capital Plan, 1995-1999*. See Appendix B, methodological notes. The BOE's adopted five-year capital plan for 2000-2004 is unlikely to increase capacity by 2002, other than finishing rollover projects from the amended capital plan for 1995-1999.

[19] NYC Agency for Child Development, "Early Childhood Capacity By School District," March 12, 1998.

[20] For discussion of procedures employed to estimate space available, see Appendix B, methodological notes. Appendix A, Table 1 lists potentially available space by district.

[21] IBO, "School Overcrowding Persists; Average Class Size Declines," *Inside the Budget,* No. 51, September 7, 1999.

[22] For discussion of classrooms needed for class size reduction see Appendix B, methodological notes.

[23] NYC Board of Education, *Opening of School Briefing: 1999-2000,* September 1, 1999 reported 27,181 seats. However, the latest allocation for school year 1999-2000 is 28,756 pupils. See NYC Board of Education, *BOR Allocation Memorandum No. 11, FY 2000,* September 22, 1999.

[24] Construction and leasing costs are based on BOE's *Proposed Five-Year Capital Plan for Fiscal Years 2000-2004,* submitted by the Chancellor, May 5, 1999. BOE Division of School Facilities has not yet released details of the *Adopted Five-Year Capital Plan for Fiscal Years 2000-2004*. Mix of types and capital cost per seat for elementary and middle school grades include the construction of 45,850 seats at $49,243 per seat and leasing 11,850 seats at $17,063 per seat. Because some facilities listed in the proposed capital plan would serve elementary and middle school grades, it was not possible to identify a project mix solely for elementary grades. These average costs do not include site acquisition costs.

[25] IBO has analyzed data compiled by the NYC Office of Management and Budget regarding schools leased by BOE. Rent payments for leased facilities cost an estimated $1,184 per seat per year. The added expense of rent is partially offset by reduced custodial costs of $176 to $196 per seat per year.

[26] The per seat costs for ECCs and elementary buildings include new construction only.

[27] NYC Board of Education, *BOR Allocation Memorandum No. 1 FY'99,* May 1998, Table B:6.

[28] Those 4-year-olds attending special education less than four hours per day are eligible for universal pre-k. IBO, however, treated the entire 4-year-old special education population as ineligible due to a lack of information regarding the length of preschool special education sessions.

[29] NYC Board of Education, *BOR Allocation Memorandum No. 1 FY'99,* May 1998, Table R:7.

[30] NYC Agency for Child Development, "Early Childhood Capacity By School District," March 12, 1998.

[31] The NYC Administrative Code section 27-358 requires kindergarten rooms to have 35 square feet per child and BOE is applying the same standard to prekindergarten rooms. Therefore, rooms over 500 sq. ft. but less than 630 sq. ft. may be too small for prekindergarten (35 sq. ft. x 18 pupils = 630 sq. ft.). This factor should have little impact on the accuracy of our analysis since most classrooms in the room usage dataset exceed 630 sq. ft.

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