



THE CITY OF NEW YORK
INDEPENDENT BUDGET OFFICE

110 WILLIAM STREET, 14TH FLOOR
NEW YORK, NEW YORK 10038
(212) 442-0632 • FAX (212) 442-0350 • EMAIL: iboenews@ibo.nyc.ny.us
<http://www.ibo.nyc.ny.us>

June 15, 2012

Dr. Katherine S. Lobach, MD and Ms. Amy Schwartz
Women's City Club of New York
Physical Education Task Force
307 Seventh Avenue, Suite 1403
New York, NY 10001

Dear Dr. Lobach and Ms. Schwartz:

At your request, the Independent Budget Office has provided citywide summaries of the existence and use of physical education space in Department of Education (DOE) buildings as well as the number of teachers assigned to physical education and the number who are licensed to do so for the 2010-2011 school year. Your original request also included questions for which we do not have data: questions relating to the size of physical education classes and other data regarding principal programming of those classes. Along with the data we have provided, we hope that these summaries will provide useful statistical information that, combined with your own interviews with principals and teachers at the school level, will inform the discussion at the special WCC program on physical education this fall.

Building-level Analysis: Space per Student

IBO analyzed the School Construction Authority's (SCA) two main space allocation and use datasets for the 2010-2011 school year: the Annual Facilities Survey and the Enrollment, Capacity, and Utilization data (commonly referred to as the Blue Book). Table 1 provides the distribution of physical education space (including gymnasiums, dance rooms, playground/play areas, swimming pools, and weight rooms) at the building level—elementary, middle, and high—as assigned by SCA. Please note the distinction between buildings and schools. Since there are often multiple schools housed in each building, we take the aggregate enrollment of schools in the building to calculate a building-level enrollment from the Blue Book. We present the distribution of square foot of physical education space per student across buildings citywide in Table 1.

For elementary, middle, and high school buildings, there is quite a bit of variation across buildings, especially considering those at the 10th and 90th percentiles. Across all three building types, the mean square foot per student is greater than the median. This suggests that in each case, there are a few instances of buildings with much greater physical education space per student than most other buildings in that category. The square foot per student for buildings at the 90th and 99th percentile of the distribution also supports this notion. There is greater variation among elementary and high school buildings compared with middle school buildings.

School-level Analysis: Space Use

Table 2 summarizes data on individual schools' use of physical education space in buildings where those spaces are shared among multiple schools. The Annual Facilities Survey provides a breakdown of the percent of time each school uses shared space in the building and the Blue Book provides school-level

and building-level enrollment data. From these two data sources, IBO computes the following ratio for each school: the percent of time the school uses a shared physical education space divided by the school's share of the building's total enrollment. By scaling the school's use of physical education space by its relative share of enrollment, we can summarize usage across schools since we are taking two factors into account. First, schools vary in terms of their size. Second, the number of other schools they share the space with will affect the amount of time they are allowed to use the shared space.

According to the distribution, the median elementary, middle, and high school uses physical education space on par with its share of building enrollment. However, there is a greater degree of variation among middle and high schools than there is among elementary schools.

Physical Education Teacher Staffing

Turning to teacher staffing, Table 3 provides the distributions of teachers assigned to physical education and teachers licensed to teach physical education at the school level. It is important to note that we unfortunately cannot match individual teacher assignments obtained from DOE's detailed school budget data with individual teacher licenses obtained from DOE's Human Resources database. Therefore, we cannot be certain that those teachers licensed to teach physical education are in fact the same ones assigned to teach physical education. Instead, we can only match the aggregate number of assignments and licenses at the school-level. IBO considered the following license descriptions as qualifying as a physical education license: "A P Supv Hlth & Phys Ed", "Perfor Arts Dance Clas Ba", "Performing Arts Dance", "Performing Arts Dance Mod", "Physical Education", "Swimming", and "Swimming And Physical Edu."

Schools are classified according to the DOE as one of seven types depending on the grades served. The three main types of school are: elementary schools that generally serve kindergarten through fifth grade; junior high-intermediate-middle schools that generally serve sixth through eighth grades; and high schools that generally serve ninth through twelfth grades. Early childhood schools serve pre-kindergarten and kindergarten and may expand up to fifth grade. Secondary schools generally serve sixth through twelfth grades.

From the citywide distribution of 1,280 schools in Table 3, there are 2,254 teachers licensed to teach physical education while the number of teachers assigned to physical education is 2,605, which means that the number of teachers with physical education licenses is roughly 87 percent of the physical education assignments. By school type, elementary schools tend to have fewer teachers licensed to teach physical education relative to the number of teachers assigned to physical education. Since IBO does not have the data to explain why this phenomenon exists, perhaps principals in elementary schools can shed light on what types of licenses those teachers hold.

Physical Education Class Size

While IBO does not have data on the class size of physical education classes, we can summarize the current UFT contractual class size limits for those classes as well as the SCA's provisions for the maximum capacity for those classes when designing and constructing schools. The most current UFT contract for instructional pedagogues, which expired in 2009, specifies the following maximum class sizes for physical education classes based on grade: pre-kindergarten at 18 students; kindergarten at 25 students; elementary school grades at 32 students; and junior and senior high school grades at 50 students. The contract also includes exceptions to these rules for circumstances such as lack of space to maintain the class size or if the change would necessitate half classes or short time schedules. Finally, all physical education classes should serve students in the same grade, or in the case of special education

students in the same functional level. In its capacity calculations in the Blue Book, SCA sets maximum capacities for physical education space at middle and high schools even though they are excluded from capacity calculations at all school levels. At middle schools, the maximum capacity for gymnasiums is 56 students for Title I schools and 60 students for non-Title I schools. At high schools, the maximum capacity for gymnasiums is 45 students and for dance studios and weight rooms the maximum is 30-34 students. There are no specific maximum capacities mentioned for primary schools.

If you have any further questions regarding this request, please do not hesitate to contact me at 212-442-8640 or saritas@ibo.nyc.ny.us.

Sincerely,

A handwritten signature in black ink, appearing to read "Sarita", with a long horizontal flourish extending to the right.

Sarita Subramanian
Education Budget and Policy Analyst

Building Level	Number of Buildings	Minimum	1st Percentile	10th Percentile	25th Percentile	50th Percentile (Median)	75th Percentile	90th Percentile	99th Percentile	Maximum	Mean	Standard Deviation
ELEMENTARY	676	0.50	0.81	2.79	4.23	6.00	8.85	13.25	36.57	88.19	7.61	6.98
MIDDLE	181	0.44	0.73	3.60	4.96	6.37	8.35	11.82	23.00	31.11	7.26	4.03
HIGH	190	0.76	1.08	3.57	4.84	7.06	11.03	16.62	37.61	54.81	9.00	7.00

Building Level	Number of Schools	Minimum	1st Percentile	10th Percentile	25th Percentile	50th Percentile (Median)	75th Percentile	90th Percentile	99th Percentile	Maximum	Mean	Standard Deviation
ELEMENTARY	61	0.39	0.39	0.77	0.89	1.00	1.16	1.65	2.52	2.52	1.09	0.41
MIDDLE	87	0.50	0.50	0.73	0.89	1.00	1.28	1.88	10.91	10.91	1.31	1.20
HIGH	168	0.31	0.31	0.79	0.89	1.04	1.38	2.65	5.51	18.28	1.48	1.59

Table 3: 2010-2011 Distribution of Physical Education Teachers Citywide

School Type	Number of Schools	Number of Phys Ed Teachers	Number of Licensed Phys Ed Teachers	Percent of Teachers who are Licensed
Early Childhood	17	18	15	83%
Elementary	484	636	276	43%
Junior High-Intermediate-Middle	248	486	502	103%
K-8	122	189	162	86%
Secondary School	67	129	133	103%
High school	340	1,138	1,156	102%
K-12 all grades	2	9	10	111%
TOTAL	1,280	2,605	2,254	87%