Availability and Distribution of Selected Program Resources in New York City High Schools

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Background

- New York City public high schools have experienced a significant reorganization over the last 11 years. The Department of Education (DOE) has closed many schools–particularly large high schools–and new, generally smaller, schools have been opened to replace them. The new schools are designed to serve smaller enrollments and buildings have been reconfigured to house multiple schools.
- Advocates have raised questions about the availability of course offerings beyond those necessary to attain the minimum standard for graduation in New York State, as well as the availability of specialized rooms and nonclassroom support services in different types of schools and for different types of students.
- This presentation, produced at the request of the Alliance for Quality Education answers many of those questions within the constraints of data availability.
- It documents the availability of:
  - Advanced Placement (AP) courses, science subjects, and music and art subjects. (Other subject areas are of interest, but could not be readily extracted from the data for this report.)
  - Budgets for school counselors, school psychologists, social workers, arts teachers, and librarians.
  - Specialized facilities including gymnasia, science labs, art/music rooms, libraries, and medical offices.

Data Sources

- This report is based on data maintained by the Department of Education and provided to the Independent Budget Office. It relies primarily on three sources:
  - *Course and Credit Data*–each course taken by each student.
  - *School Level Budgets*–detailed accounting of spending decisions within each school.
  - *Annual Facilities Survey*–identifies the use of each room in every school.
- All data is from the 2011-2012 school year.
- Data based on 353 schools serving 273,940 students in grades 9-12. Transfer and charter schools, schools in administrative Districts 75 and 79, and those in the process of phasing in or out were excluded.
- Some schools that serve grades 9-12 also serve other grades. In this report, course data for those schools have been limited to grades 9-12. We assume that facilities at such schools are available to high school students, even if shared with other grades.
- Data on school budgets is limited to the 286 schools that serve *only* grades 9-12 (248,620 students).

Organization of Report

In addition to a citywide summary, we display results for:

- Different Student Groups[1]:
  - Racial and ethnic groups.
  - English language learners (ELL) and non-ELL
  - Student eligibility for meal subsidy[2]
  - Males and Females
  - It was not possible to fairly compare data for special needs and nonspecial needs students for this presentation; IBO plans to continue to work with that data to make such comparisons possible in the future.

- Different Types of Schools:
  - Small, medium, and large schools
  - Schools opened prior to 2002 and those opened more recently
  - Schools with different progress report grades
  - Schools that have more selective admissions and those that are less selective.

[1]Our analysis of budget data is limited to the various types of schools; We do not present budget data for different groups of students. Because many funding streams are based on the characteristics of a school's student body, differences by student group may well be intentional.

[2]Students who are missing lunch subsidy forms for any reason pay full price.

Notes on Methods

Course Availability:

- Data are based on courses and subjects that were available at each students' school during the 2011-2012 school year *and do not reflect actual enrollment in those courses and subjects.*
- Advanced Placement courses are those that prepare students for exams offered by the College Board. AP courses are not a requirement for graduation.[1]
- Science subjects include the core Regents subjects, along with electives categorized into four broad groups defined by IBO. Students must earn six credits in science in order to graduate.
- Arts subjects were divided into nine broad groups, defined by IBO to capture the variety of coursework available in New York City schools. Students must earn two credits in visual arts, music, dance, and/or drama in order to graduate.

Facilities Data:

- Many schools in New York City are "co-located," meaning that two or more schools share a building. In these buildings, some rooms are assigned to a particular school, others are shared by all the schools in the building. Data provided to us by the DOE includes self-reporting of shared space by each school in the system. When more than one school in a building reports usage of a single space, we count each school as having use of that space. When a school has not indicated usage of a space, we report that school as not having that space. For libraries, gyms, and medical offices, we also report whether or not that space is available *within* the building, as distinguished from *in the* school. These room types are often considered common space available to all; whether or not the principals have indicated usage of that space.

[1]Advanced Placement course data were cross-checked against a school-level dataset from the College Board. The College Board data was broadly consistent with IBO's analysis of course records, with the exception of four schools enrolling a total of 1,774 students. These schools had no record of any AP exams in the course data, but the College Board reported small numbers of students taking AP exams. Although students can take AP exams independently without enrolling in a course, IBO excluded these schools and students to avoid any potential downward bias in the AP course analysis.

Budget Data:

- Certain support services are intended to assess and serve only students with individualized educational plans (IEPs).
- We calculate these *mandated* services per pupil using enrollment of students with IEPs at each school.
- We calculate *nonmandated* support services per pupil using total enrollment within a school since these services are available to all students.
- Librarian and arts teacher salaries can be shared across schools with each school's budget covering a portion of the total salary.

Availability and Distribution Of Selected Program Resources in New York City High Schools

Citywide Overview

English Is the Most Common Advanced Placement Subject, Offered at Over 60 Percent of NYC High Schools Enrolling 79 Percent of Students

Advanced Placement Course	Percent of Schools	Number of Schools	Percent of Students	Number of Students	Advanced Placement Course	Percent of Schools	Number of Schools	Percent of Students	Number of Students
English	61.3	214	78.8	219,989	European History	6.3	22	15.9	44,413
U.S. History	38.1	133	59.6	166,427	Chinese	6.0	21	20.3	56,824
Calculus AB	35.8	125	60.1	167,991	Art Studio	4.9	17	10.1	28,321
Spanish	31.2	109	52.7	147,165	Art History	4.0	14	8.5	23,625
Biology	25.5	89	51.1	142,789	Computer Science	3.7	13	12.1	33,863
U.S. Government	22.1	77	47.2	131,932	Music Theory	3.4	12	7.4	20,674
World History	20.1	70	40.8	113,885	French	3.2	11	11.6	32,260
Chemistry	14.9	52	36.3	101,503	Human Geography	2.9	10	7.0	19,643
Psychology	11.8	41	25.1	70,207	Comparative Government	2.3	8	5.0	13,986
Physics	11.5	40	27.7	77,468	Microeconomics	2.3	8	8.0	22,343
General or Macroeconomics	11.2	39	30.8	86,090	Japanese	1.4	5	5.1	14,373
Statistics	11.2	39	29.2	81,510	Latin	1.4	5	4.3	12,071
Calculus BC	10.9	38	33.8	94,406	Italian	1.2	4	4.6	12,974
Environmental Science	10.3	36	23.8	66,514	German	0.3	1	0.2	406

Living Environment (Biology) Offered to All Students; Chemistry or Earth Science Offered to 90 Percent or More

Science Subjects	Percent of Schools	Number of Schools	Percent of Students	Number of Students
Living Environment (Biology)	100.0	353	100.0	281,134
Chemistry	90.4	319	95.3	267,857
Earth Science	85.0	300	89.6	251,928
Physics	68.3	241	82.1	230,734
Psychology & Forensic Science	50.4	178	65.5	184,169
Medical Sciences	49.9	176	64.1	180,284
Ecology & Agriculture	32.6	115	45.1	126,700
Astronomy & Meteorology	15.3	54	27.5	77,436

95 Percent of High School Students Are in Schools Offering a General Arts Course; 87 Percent in Schools Offering Music

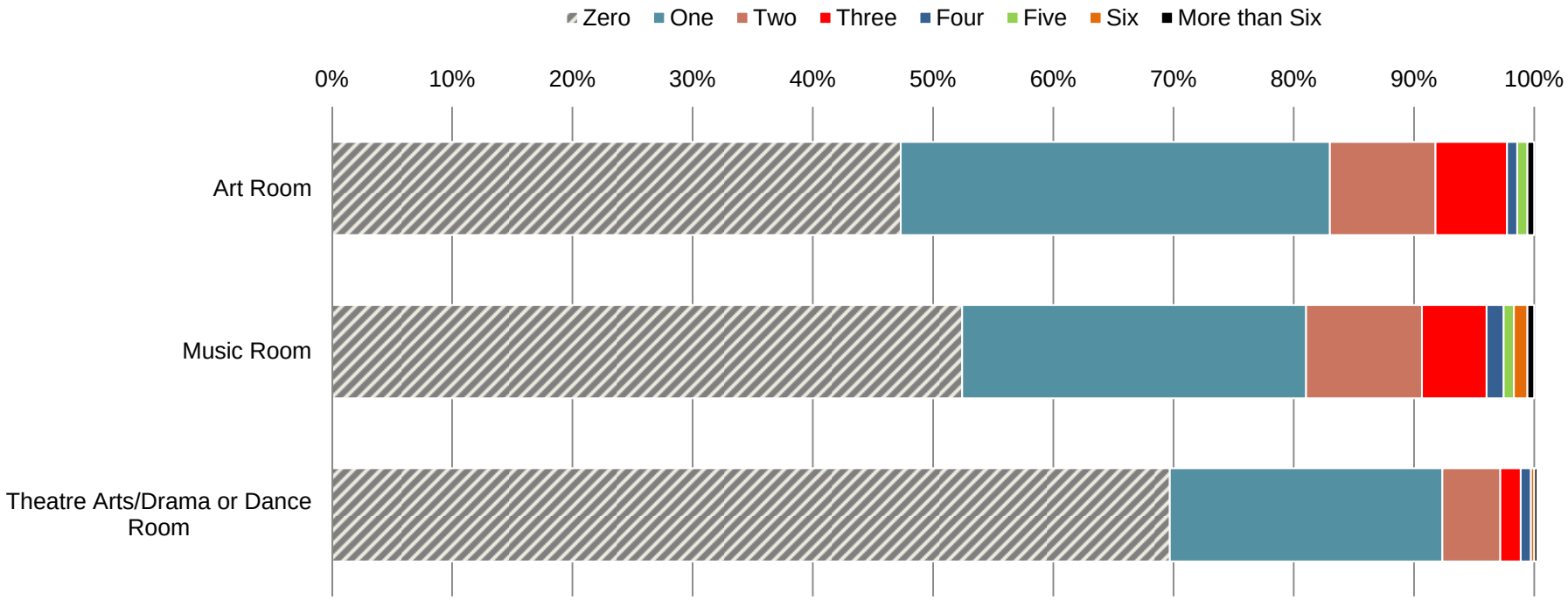
Arts Subjects	Percent of Schools	Number of Schools	Percent of Students	Number of Students
General Nonspecific Arts	93.5	330	94.6	265,829
Music	77.1	272	86.7	243,609
Design, Computer, and Professional Arts	49.6	175	67	188,330
Drama	45.9	162	48.9	137,539
Photography, Film, Television	35.1	124	44.4	124,731
Historical & Cultural Art	32.3	114	36.2	101,644
Drawing & Illustration	32	113	51.9	145,867
Dance	25.8	91	28.6	80,370
Sculpture	14.5	51	29.1	81,931

Nearly 30 Percent of City High School Students Do Not Have Access to an Art or Music Room; Over 90 Percent Have at Least One Science Lab Available

	High Schools With at Least One:		Students in Schools With at Least One:	
	Number	Share	Number	Share
Arts Space*				
Art Room	186	52.7%	200,462	69.2%
Music Room	168	47.6%	201,605	69.5%
Theatre Arts/Drama or Dance	107	30.3%	126,564	43.7%
Science Labs/Spaces				
Science Lab	298	84.4%	266,310	91.9%
Science Demo Room	147	41.6%	141,080	48.7%
Science Prep Room	194	55.0%	209,121	72.1%

NOTE: *Courses in these subject areas can be taught in spaces not specifically designed or designated as arts spaces.

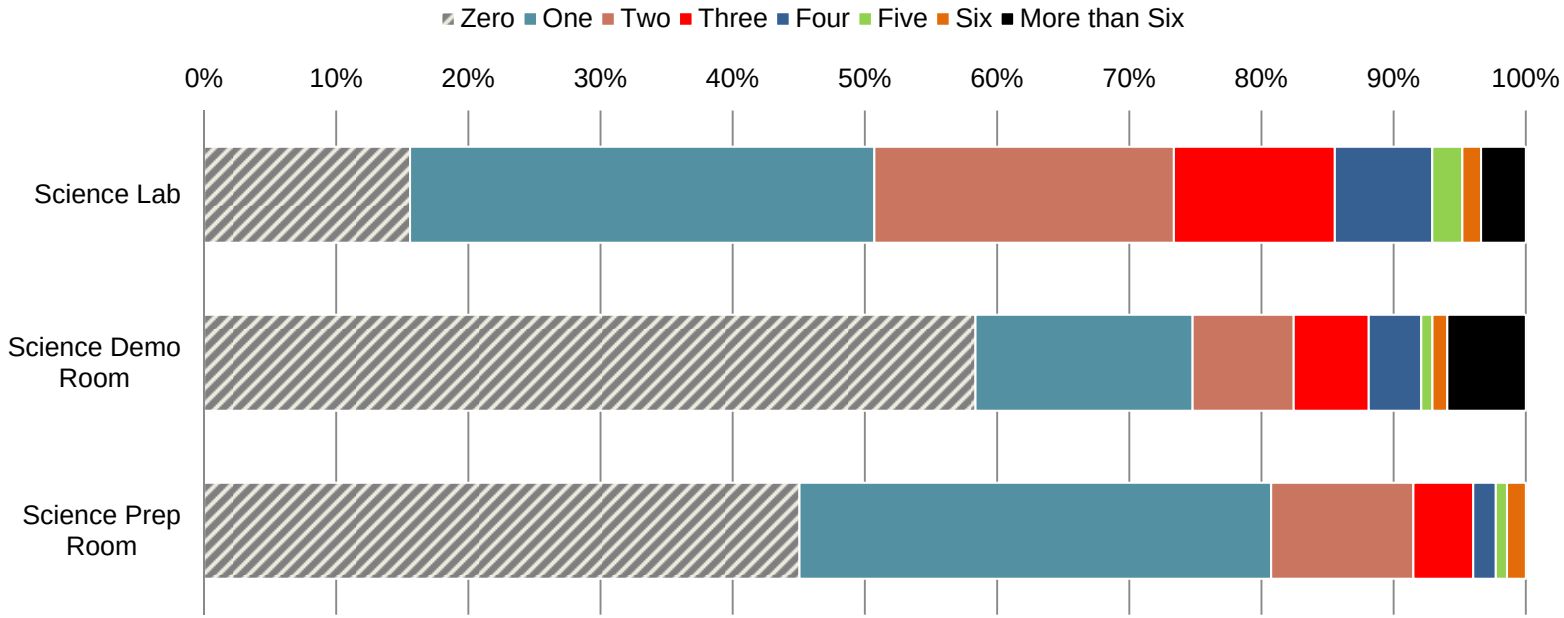
Roughly Half of High Schools Do Not Have an Art Room; A Similar Share Have No Music Rooms



	Art Room	Music Room	Theatre Arts/ Drama or Dance Room
Zero*	47.3%	52.4%	69.7%
One	35.7%	28.6%	22.7%
Two	8.8%	9.6%	4.8%
Three	6.0%	5.4%	1.7%
Four	0.9%	1.4%	0.9%
Five	0.9%	0.9%	0.0%
Six	0.0%	1.1%	0.3%
More than Six	0.6%	0.6%	0.3%

NOTE: Shares may not sum to 100% due to rounding.

Almost 16 Percent of High Schools Lack a Science Lab; 27 Percent Have Three or More



	Science Lab	Science Demo Room	Science Prep Room
Zero	15.6%	58.4%	45.0%
One	35.1%	16.4%	35.7%
Two	22.7%	7.7%	10.8%
Three	12.2%	5.7%	4.5%
Four	7.4%	4.0%	1.7%
Five	2.3%	0.9%	0.9%
Six	1.4%	1.1%	1.4%
More than Six	3.4%	5.9%	0.0%

NOTES: *Some of these schools may well be in buildings that contain science labs. However on the facilities survey for 2011-2012, provided to us by DOE, they did not indicate that they have shared use of those labs.
Shares may not sum to 100% due to rounding.

Over 60 Percent of High Schools Have Their Own Gym, Somewhat Smaller Shares Have Libraries or Medical Offices

- Most schools lacking dedicated libraries, medical offices, and gyms share these facilities with other schools co-located in the same building.

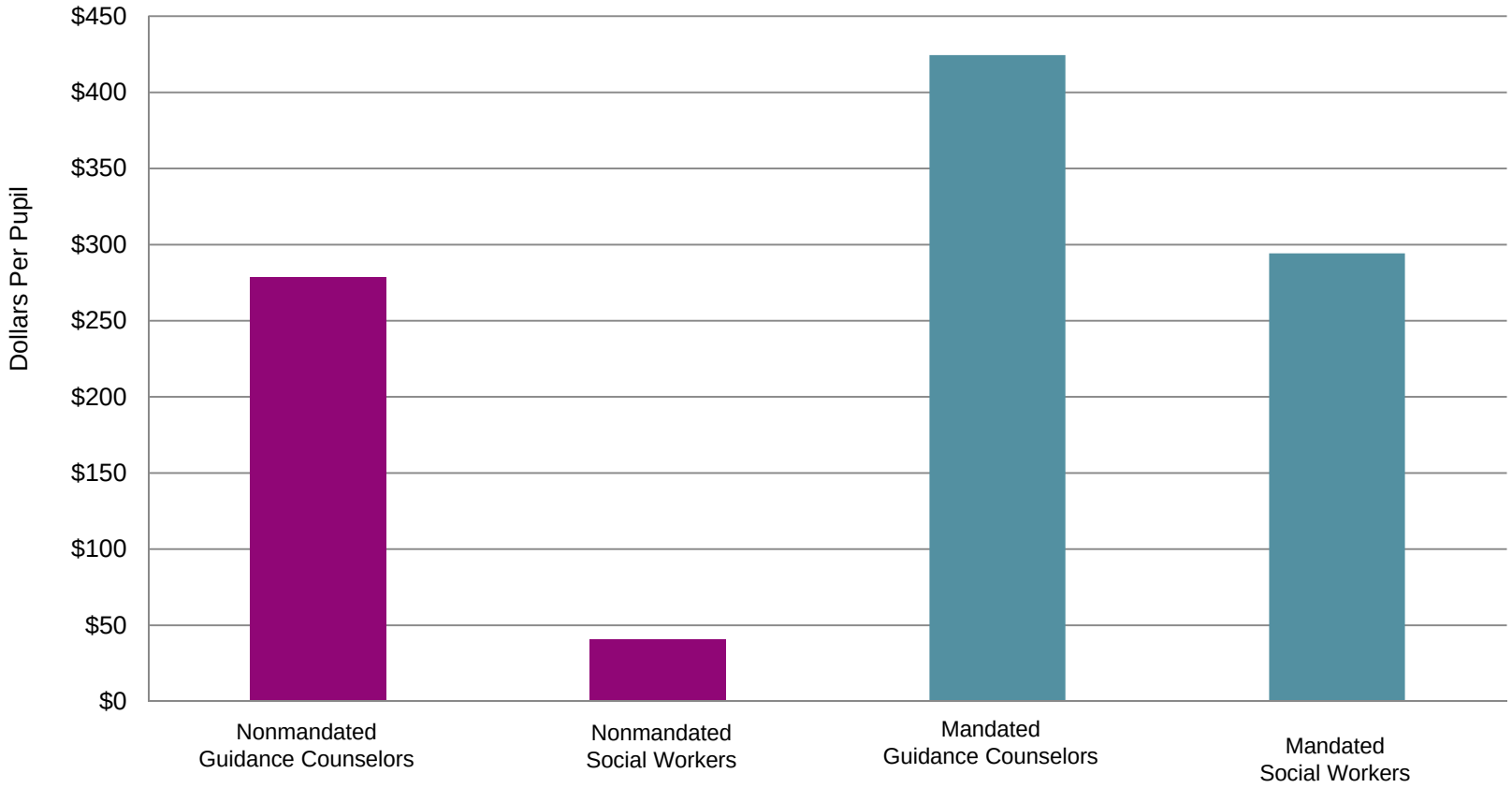
Library		Medical Office		Gymnasium	
In School	In Building	In School	In Building	In School	In Building
55.0%	88.7%	48.4%	79.0%	61.2%	91.2%

Citywide Per Pupil Budgets for Support Services, Librarians, and Arts Teachers

	High Schools Citywide
Number	**286**
Services For All students	
Nonmandated Guidance Counselors	
Mean	$279
Median	$264
Nonmandated Social Workers	
Mean	$41
Median	$0
Librarians	
Mean	$45
Median	$41
Arts Teachers	
Mean	$208
Median	$169
Services for Students with Individualized Education Programs	
Mandated Guidance Counselors	
Mean	$424
Median	$444
Mandated Social Workers	
Mean	$294
Median	$193

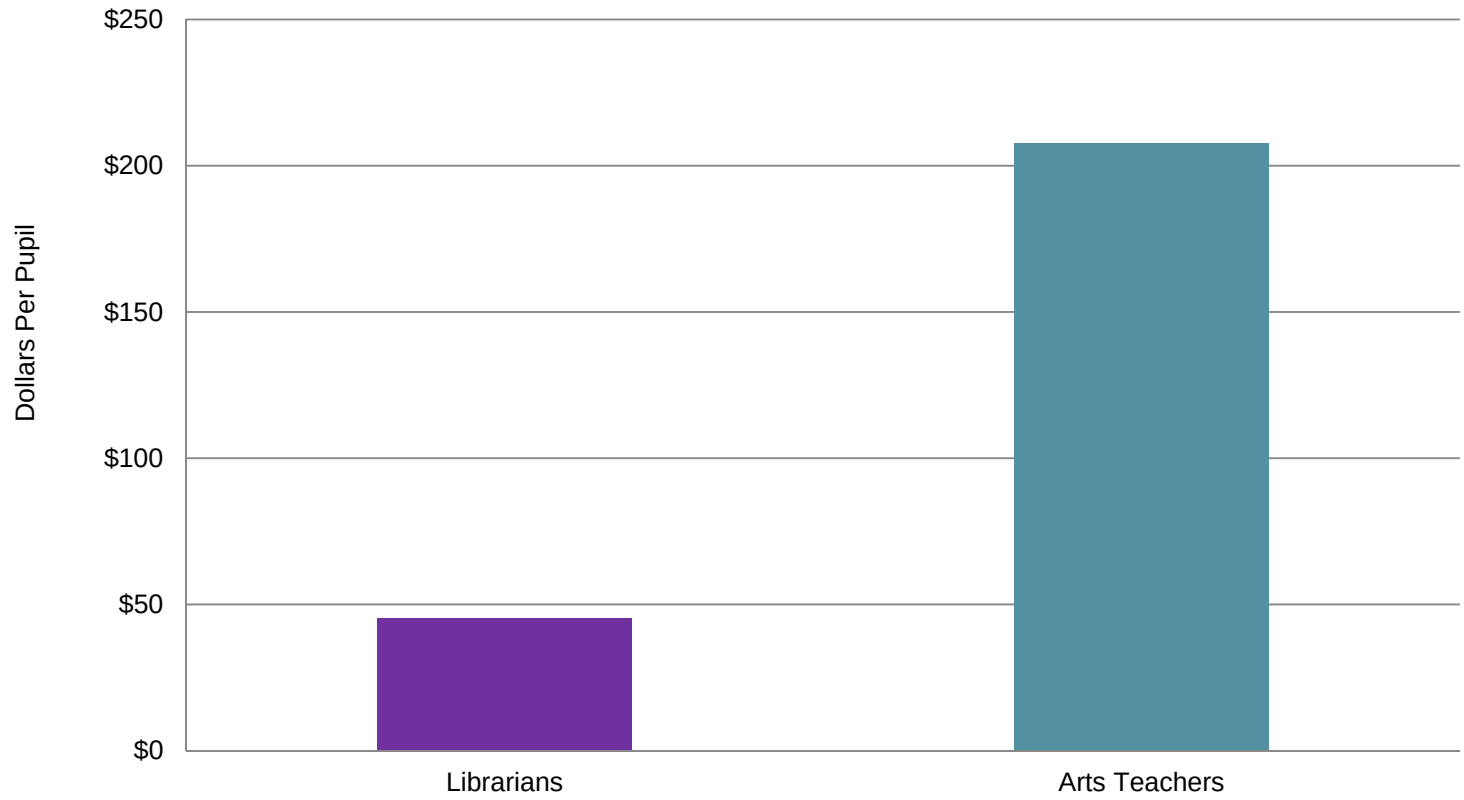
NOTE: Per pupil mandated services amounts are calculated using enrollment of students with an Individualized Education Program. Other per pupil amounts are calculated using total enrollment.

Citywide Per Pupil Budgets for Mandated Support Services Tend to be Higher Than for Nonmandated Services



For comparison, citywide spending on teachers at these schools is $4,044 per pupil.

Citywide Per Pupil Funding for Arts Teachers Tends To Be Higher Than for Librarians



For comparison, citywide spending on teachers at these schools is $4,044 per pupil.

Differences for Student Groups*

- Ethnic/Racial Group
- Eligibility for Meal Subsidy
- Gender
- ELL Status

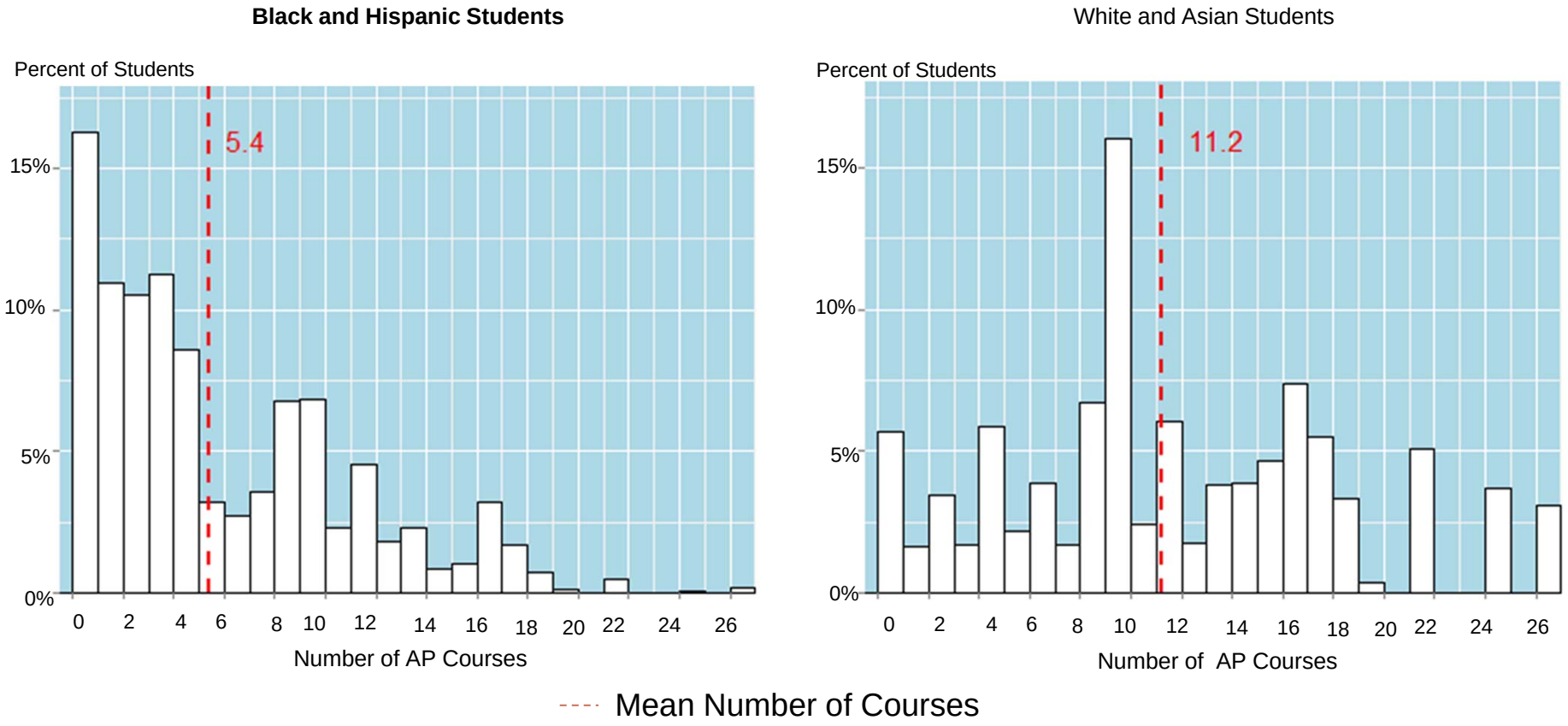
*For course and facilities data only. We do not disaggregate budget allocations by student subgroup because many funding streams are tied to the characteristics of students in a particular school.

Clear Differences in the Availability of Advanced Placement Courses for Students of Different Ethnicities and Lunch Subsidy Status

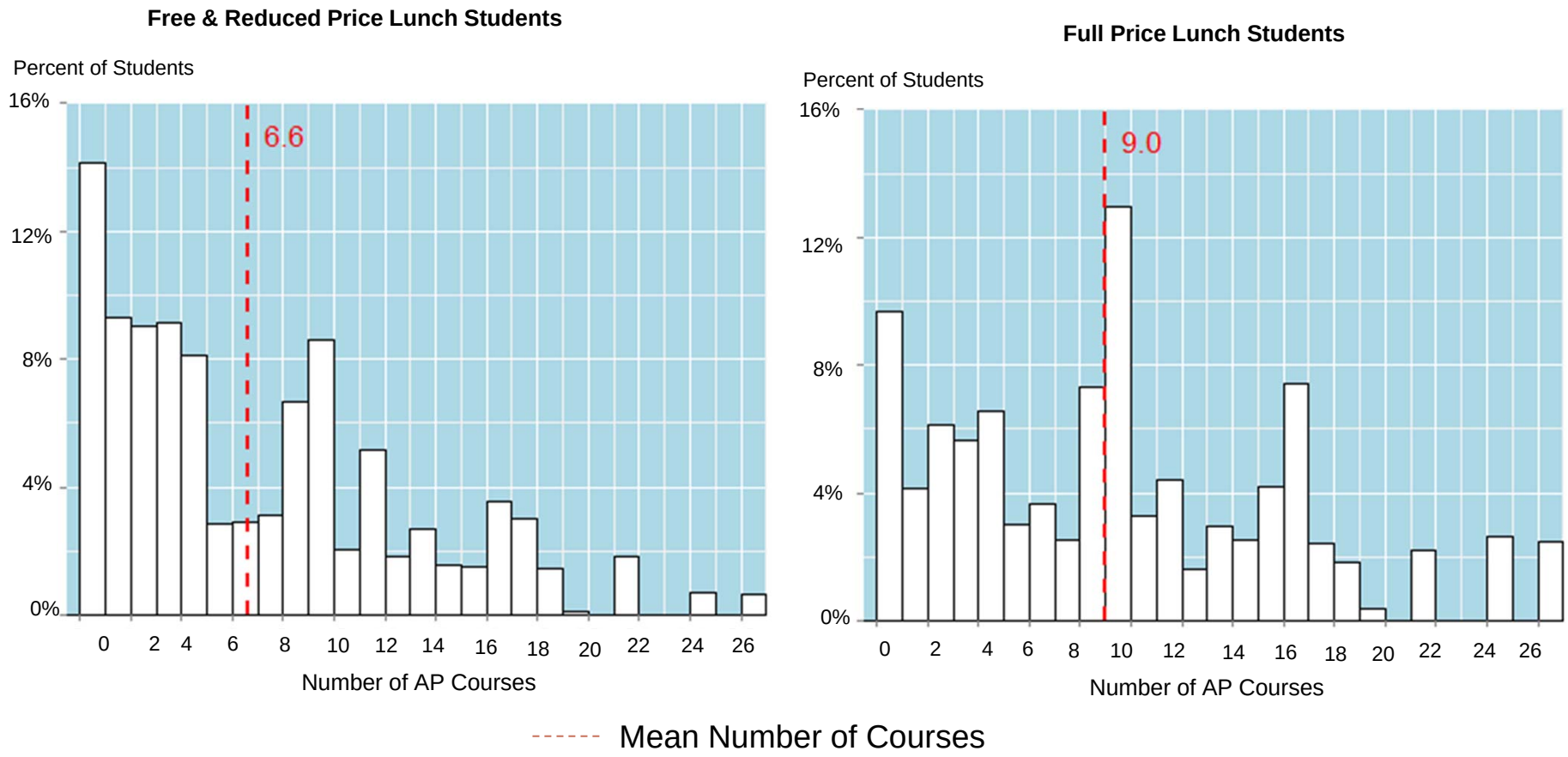
Student Subgroup	Mean AP Courses	Median AP Courses	Number of Students
All Students	**7.2**	**6**	**279,360**
Ethnicity			
Black/Hispanic	5.4	4	191,139
White/Asian	11.2	10	85,652
Lunch Subsidy			
Free/Reduced Price	6.6	5	212,070
Full Price	9.0	9	67,290
Gender [1]			
Female	7.1	6	137,143
Male	7.2	6	142,216
English Proficiency			
ELL	6.0	5	34,805
Not ELL	7.3	6	244,555

NOTE: [1]One student was missing gender data

The Average White or Asian Student Is in a School With More Than Twice as Many Advanced Placement Courses Than the Average Black or Hispanic Student



Students Receiving Free and Reduced Price Lunch Tend to Be in Schools With Fewer Advanced Placement Courses

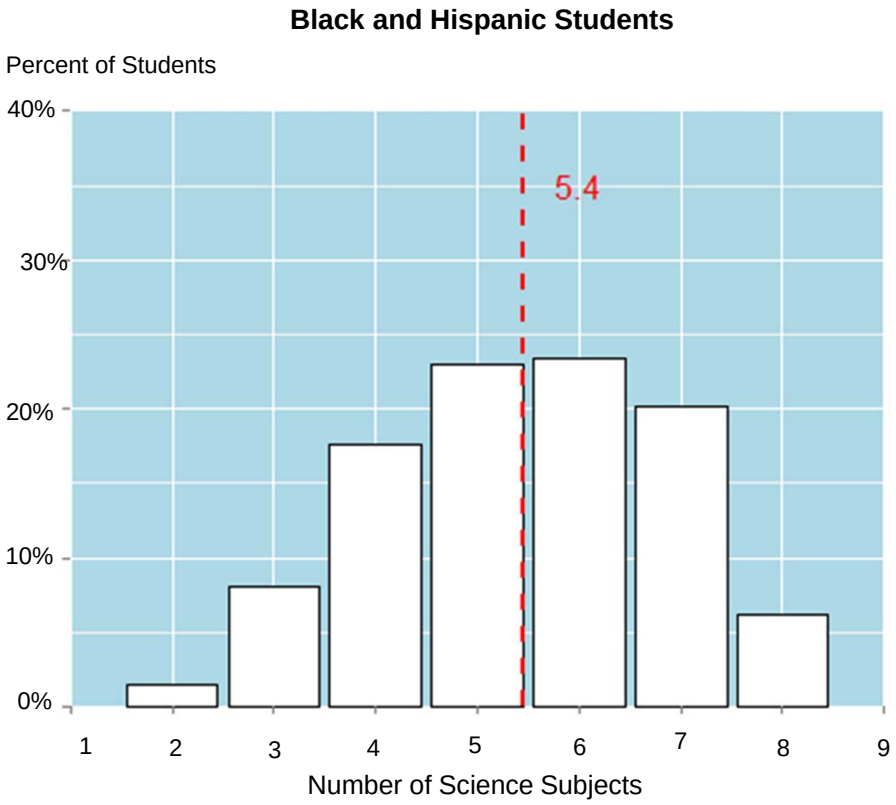


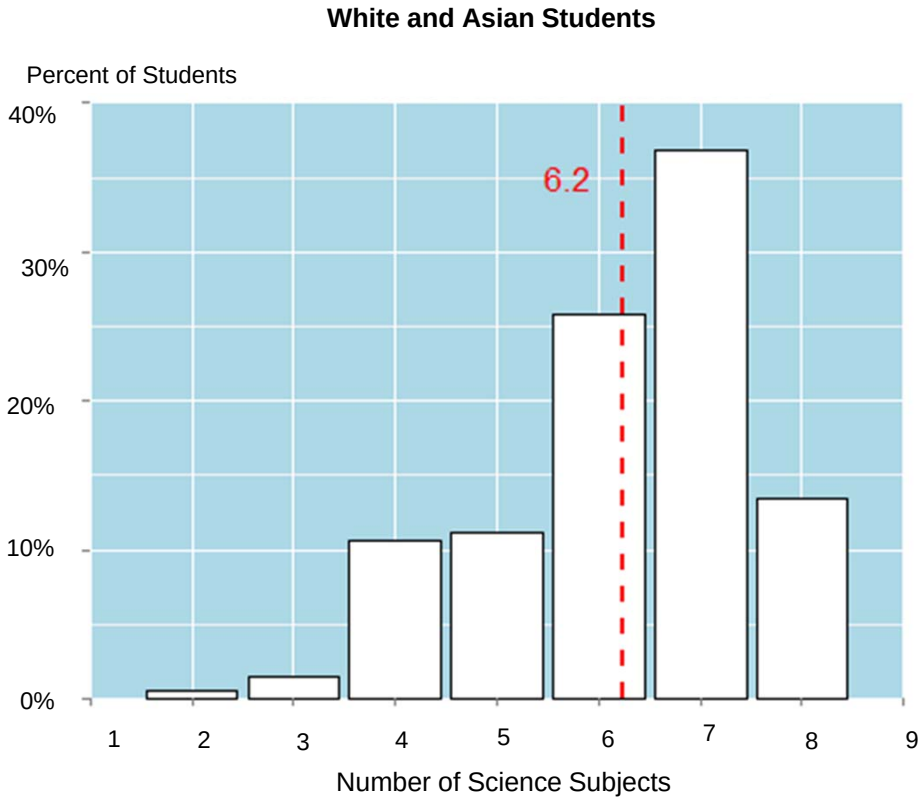
Differences in the Availability of Science Subjects for Students of Different Ethnicities

Student Subgroup	Mean Science Subjects	Median Science Subjects	Number of Students
All Students	**5.7**	**6**	**281,134**
Ethnicity			
Black/Hispanic	5.4	5	192,835
White/Asian	6.2	7	85,723
Lunch Subsidy			
Free/Reduced Price	5.6	6	213,665
Full Price	6.0	6	67,469
Gender[1]			
Female	5.7	6	137,976
Male	5.7	6	143,157
English Proficiency			
ELL	5.4	6	35,795
Not ELL	5.7	6	245,339

NOTE: [1]One student was missing gender data

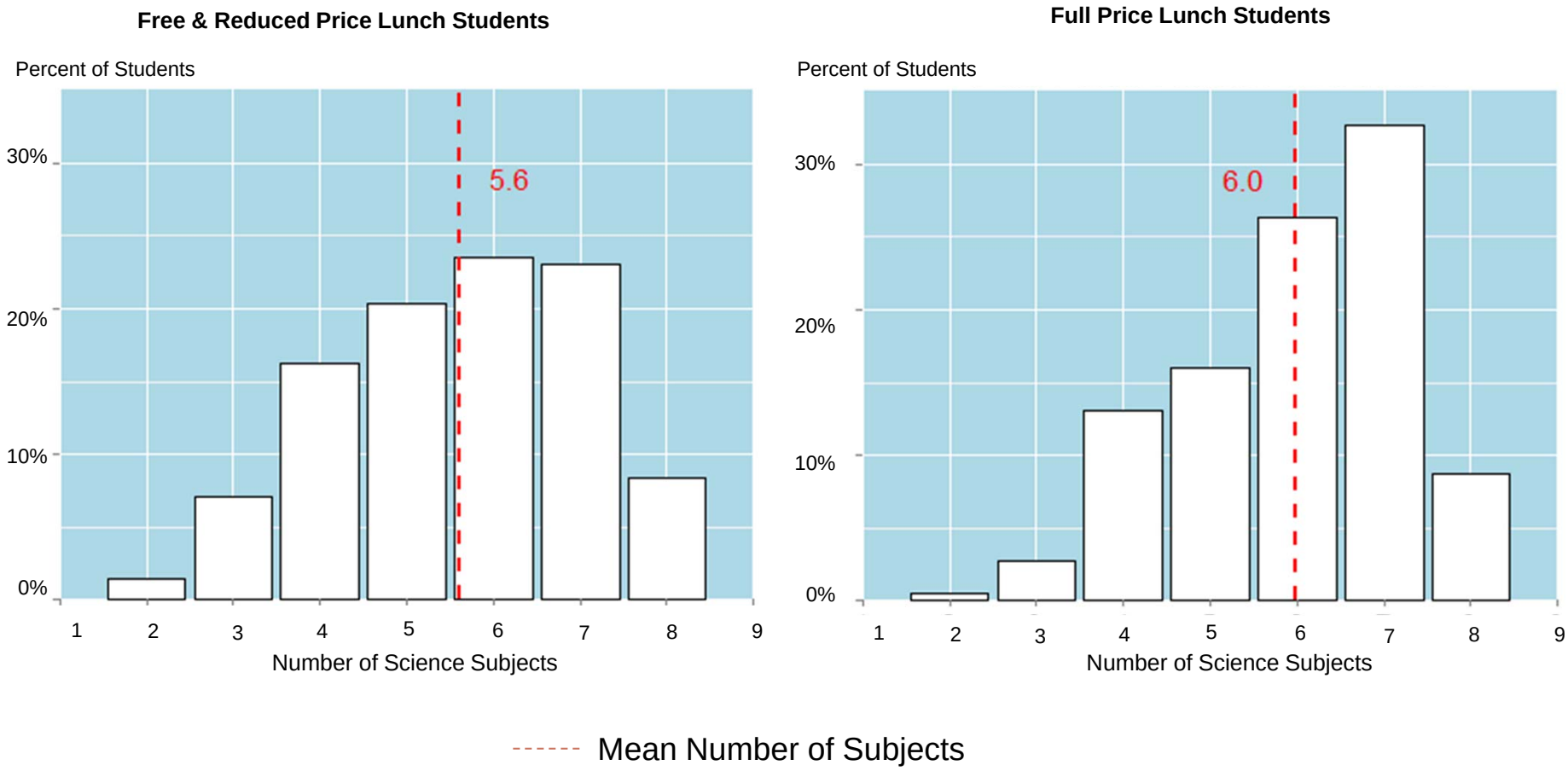
Black and Hispanic Students Have Fewer Science Subjects Available in Their High Schools





Mean Number of Subjects

Difference in Availability of Science Subjects for Students Based on Lunch Subsidy

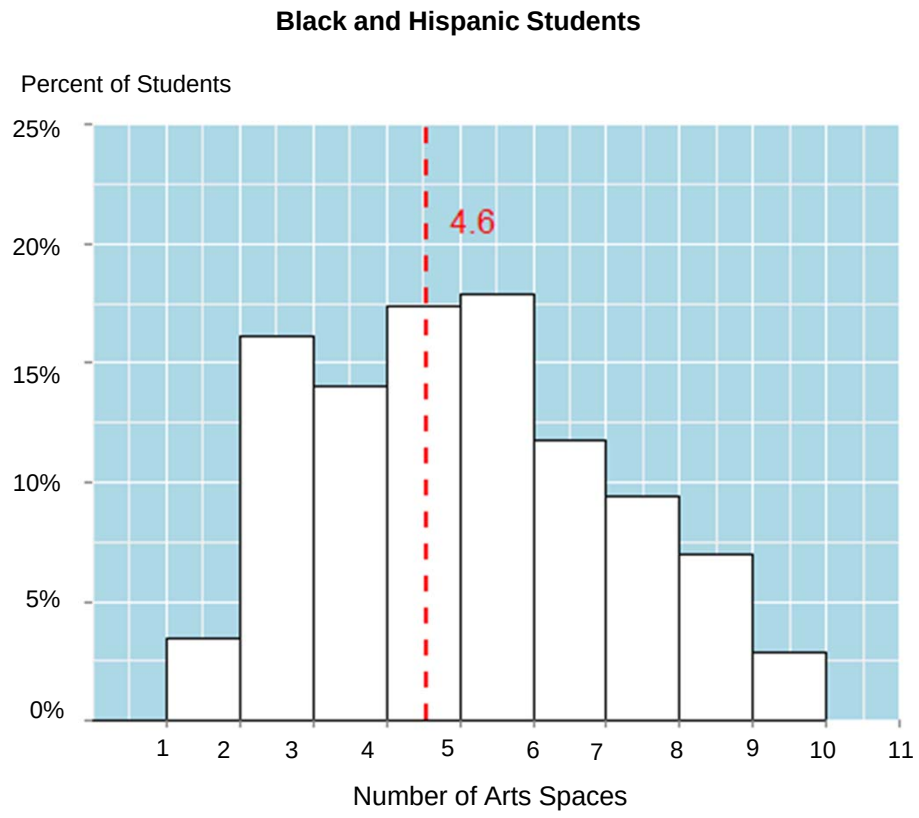


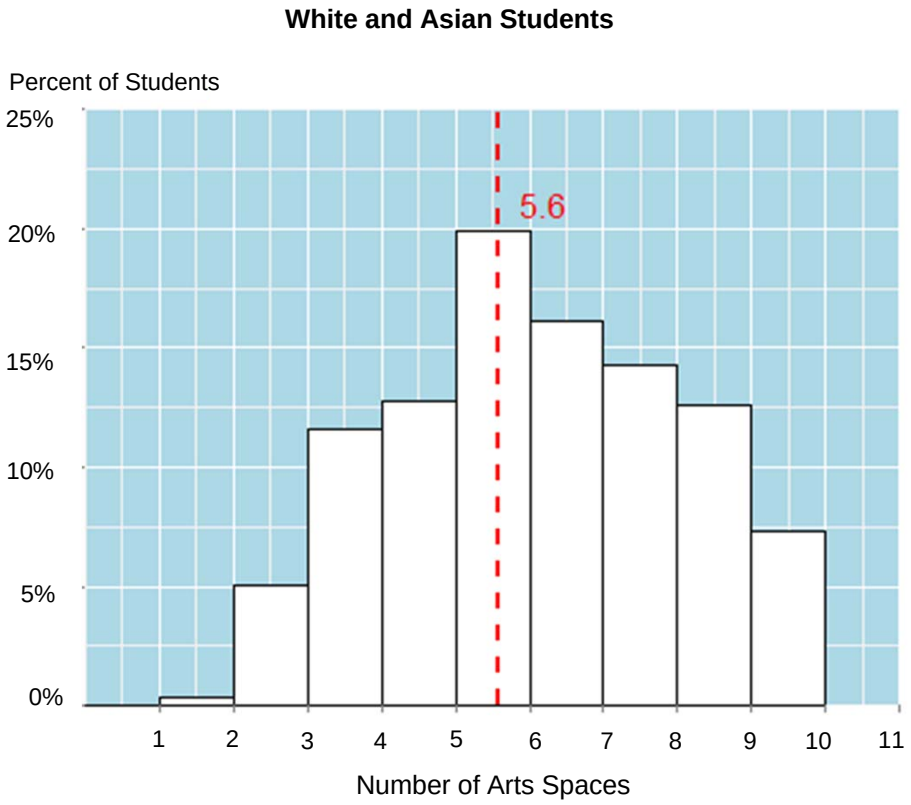
Fewer Arts Subjects Available to Black and Hispanic Students

Student Subgroup	Mean Arts Subjects	Median Subjects	Number of Students
All Students	**4.9**	**5**	**281,134**
Ethnicity			
Black/Hispanic	4.6	4	192,835
White/Asian	5.6	6	85,723
Lunch Subsidy			
Free/Reduced Price	4.7	5	213,665
Full Price	5.3	5	67,469
Gender[1]			
Female	4.9	5	137,976
Male	4.8	5	143,157
English Proficiency			
ELL	4.8	5	35,795
Not ELL	4.9	5	245,339

NOTE: [1]One student was missing gender data

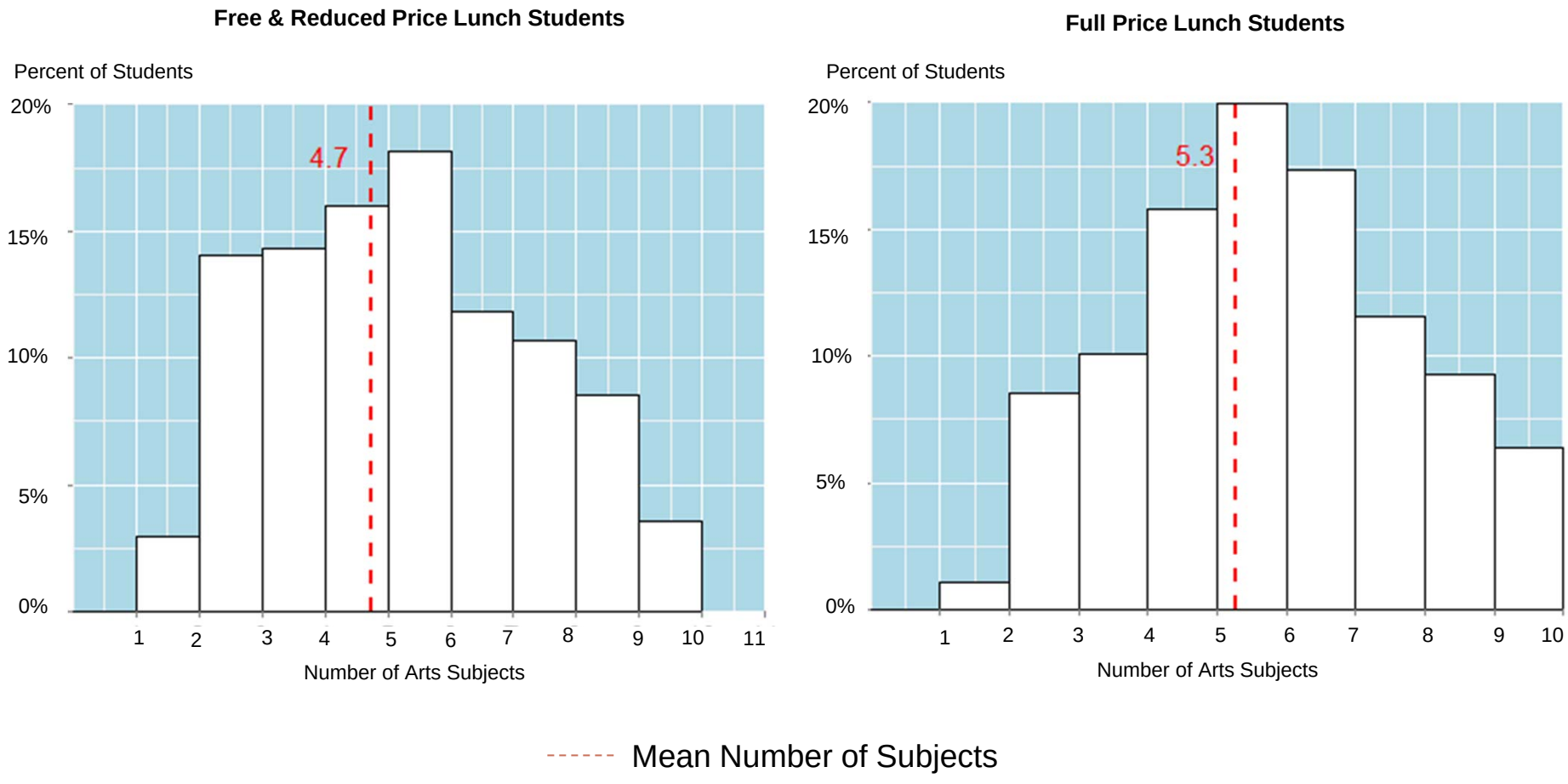
Black and Hispanic Students in Schools With One Fewer Arts Subject Available, on Average





Mean Number of Subjects

Students Receiving Free and Reduced Price Lunch Tend to Be in Schools With Fewer Arts Subjects

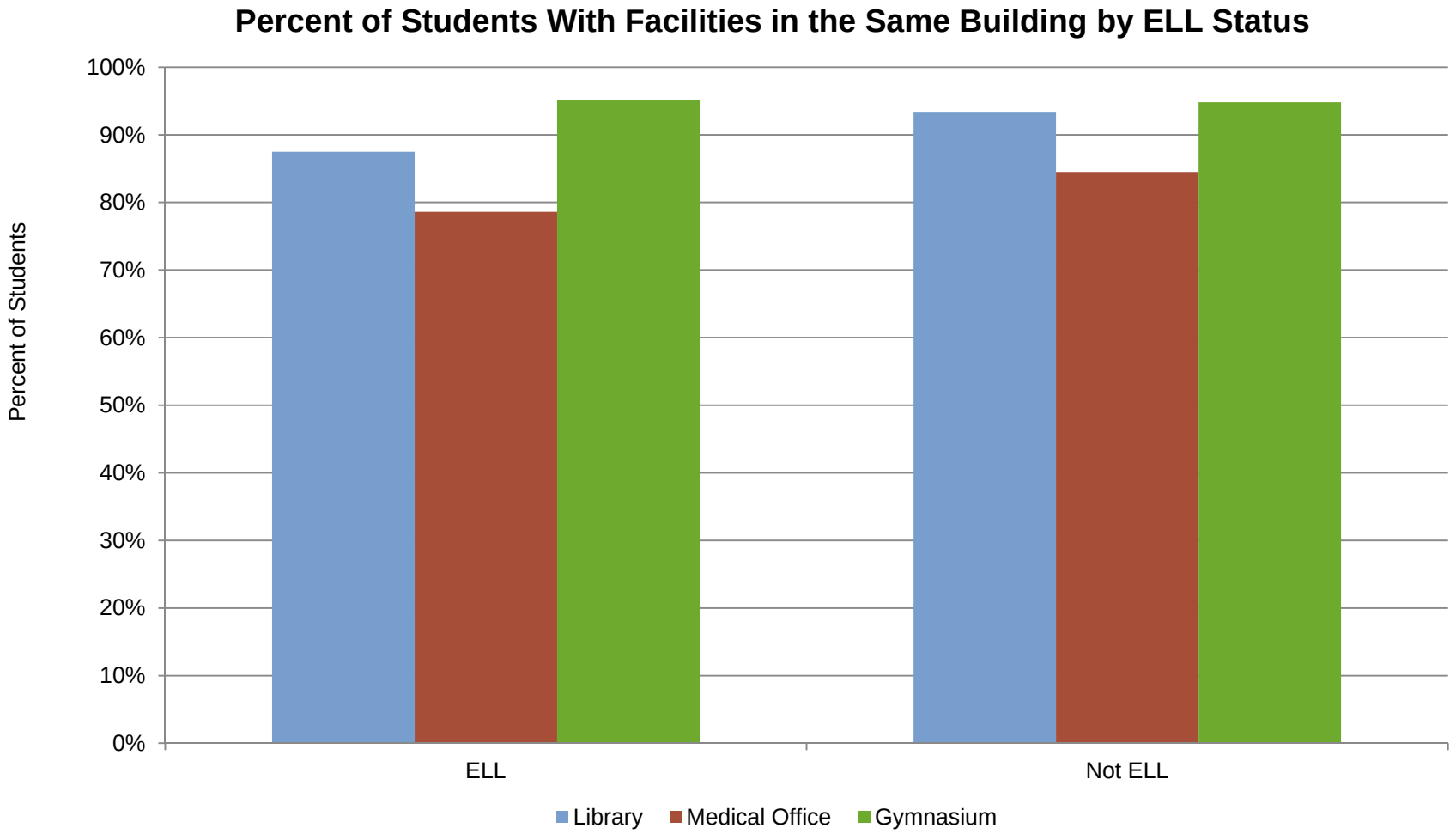


Availability of Library, Medical Office, and Gym in Building Varies by Student Subgroup

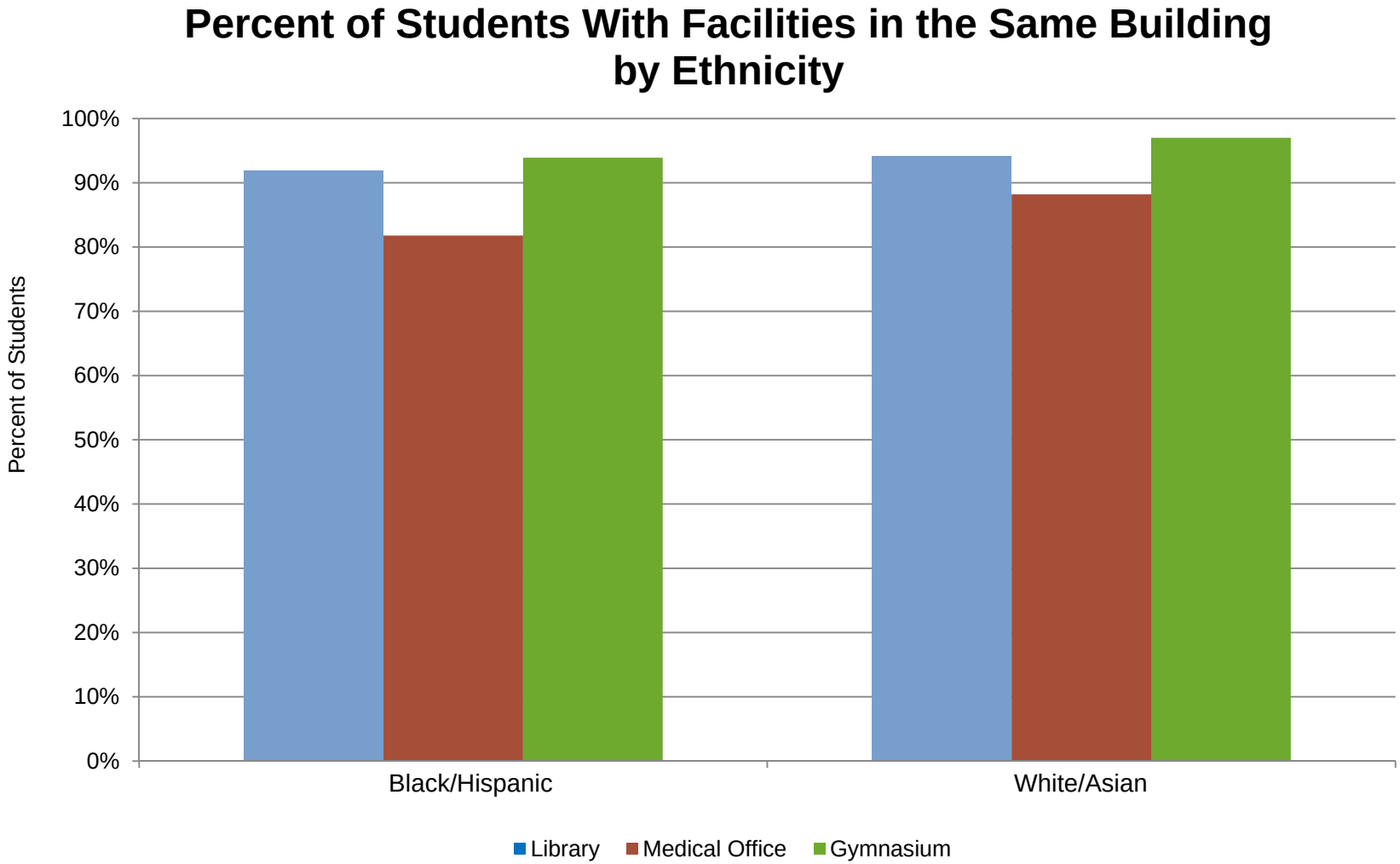
Student Subgroup	Percent of Students with Library	Percent of Students with Medical Office	Percent of Students with Gym	Number of Students
All Students	**92.6**	**83.8**	**94.8**	**281,134**
Ethnicity				
Black/Hispanic	91.9	81.8	93.9	192,835
White/Asian	94.2	88.2	97.0	85,723
Lunch Subsidy				
Free/Reduced Price	92.2	92.2	94.5	213,665
Full Price	94.0	94.0	95.8	67,469
Gender[1]				
Female	92.7	84.2	94.7	137,976
Male	92.6	83.4	95.0	143,157
English Proficiency				
ELL	87.5	78.6	95.1	35,795
Not ELL	93.4	84.5	94.8	245,339

NOTE: [1]One student was missing gender data.

English Language Learner Students Less Likely To Have a Library and Medical Office In Their School Building



Black/Hispanic Students Less Likely to Have a Library, Medical Office, or Gym in Their School Building

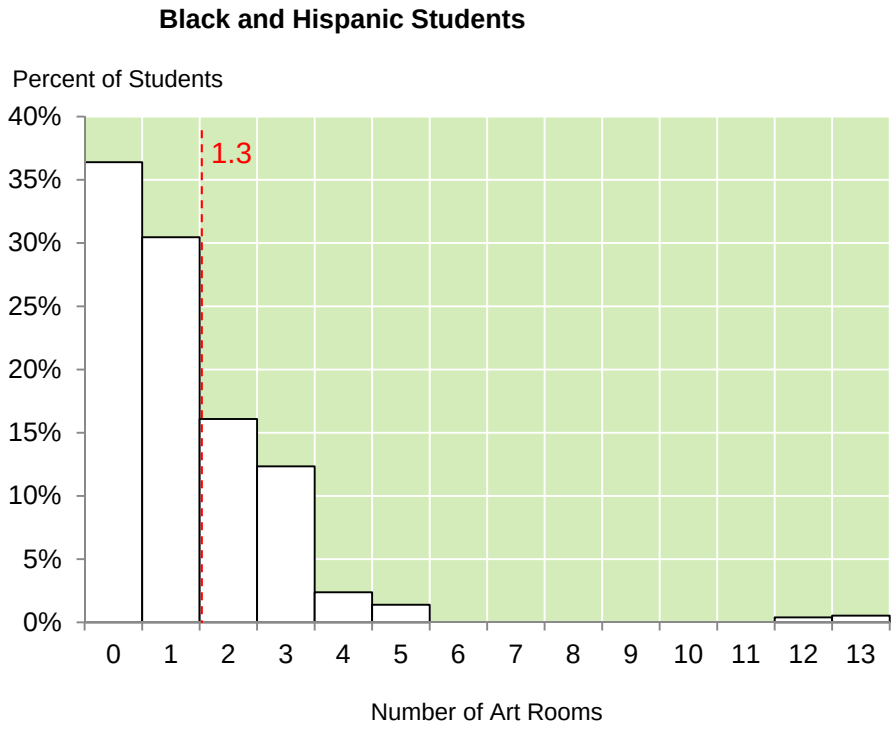


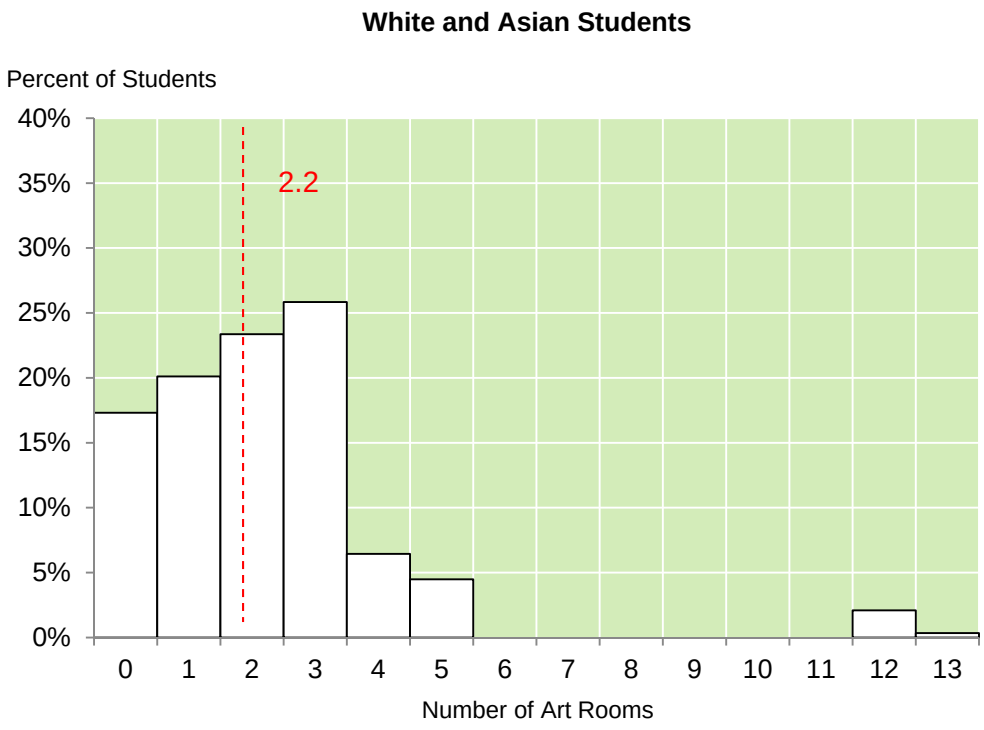
Availability of Arts and Science Rooms by Student Subgroup

Student Subgroup	Mean Art Rooms	Median Art Rooms	Mean Music Rooms	Median Music Rooms	Mean Science Labs	Median Science Labs	Number of Students
All Students	**1.6**	**1**	**1.8**	**1**	**3.5**	**3**	**281,134**
Ethnicity							
Black/Hispanic	1.3	1	1.4	1	2.8	2	192,835
White/Asian	2.2	2	2.7	2	5.2	4	85,723
Lunch Subsidy							
Free/Reduced Price	1.4	1	1.6	1	3.1	3	213,665
Full Price	2.1	2	2.5	2	4.6	3	67,469
Gender[1]							
Female	1.6	1	1.9	1	3.4	3	137,976
Male	1.5	1	1.7	1	3.5	3	143,157
English Proficiency							
ELL	1.4	1	1.5	1	2.7	2	35,795
Not ELL	1.6	1	1.8	1	3.6	3	245,339

NOTE: [1]One student was missing gender data

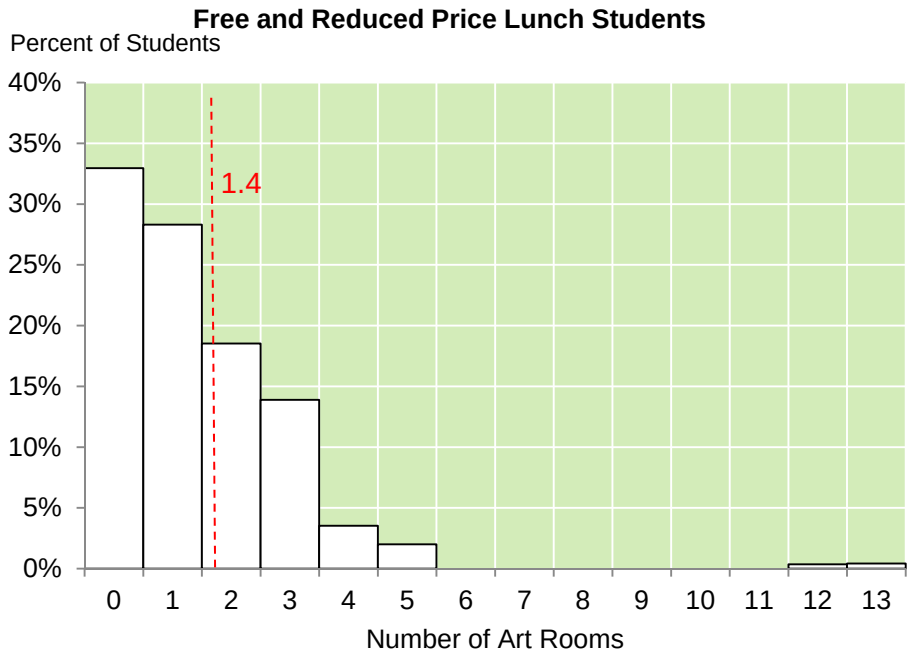
Black and Hispanic Students Tend to Be in Schools With Fewer Art Rooms

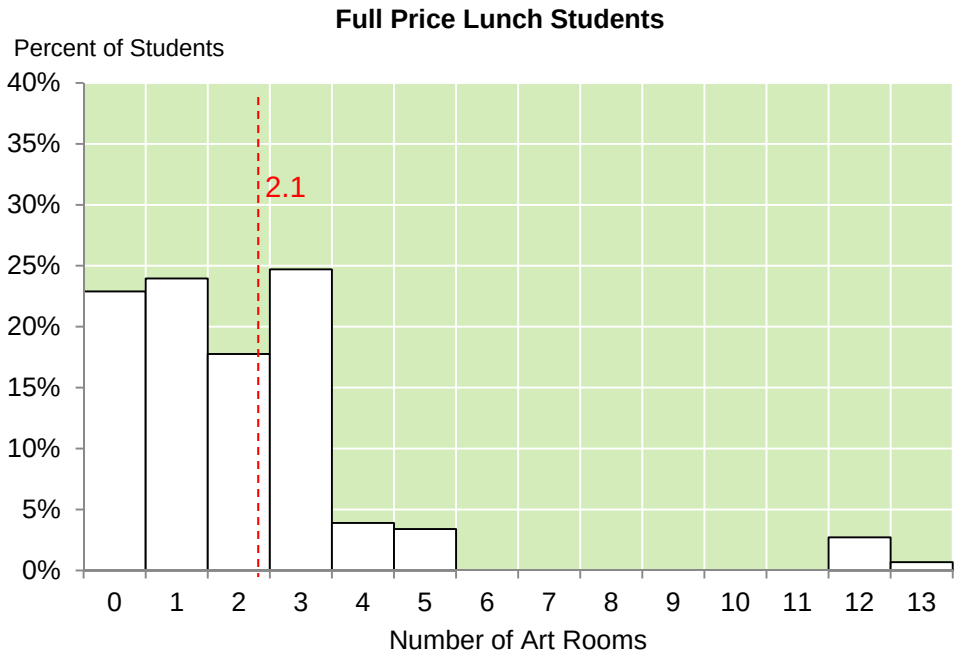




Mean Number of Rooms

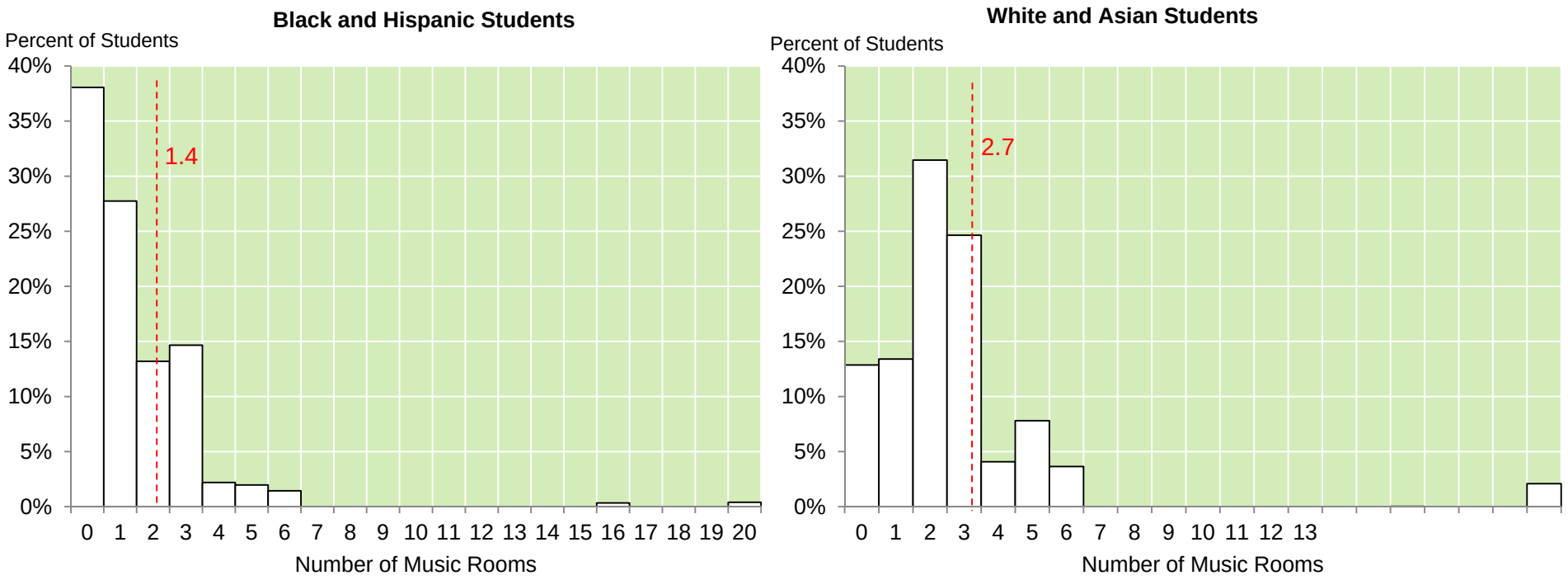
Students Receiving Free and Reduced-Price Lunch Tend to be in Schools With Fewer Arts Rooms



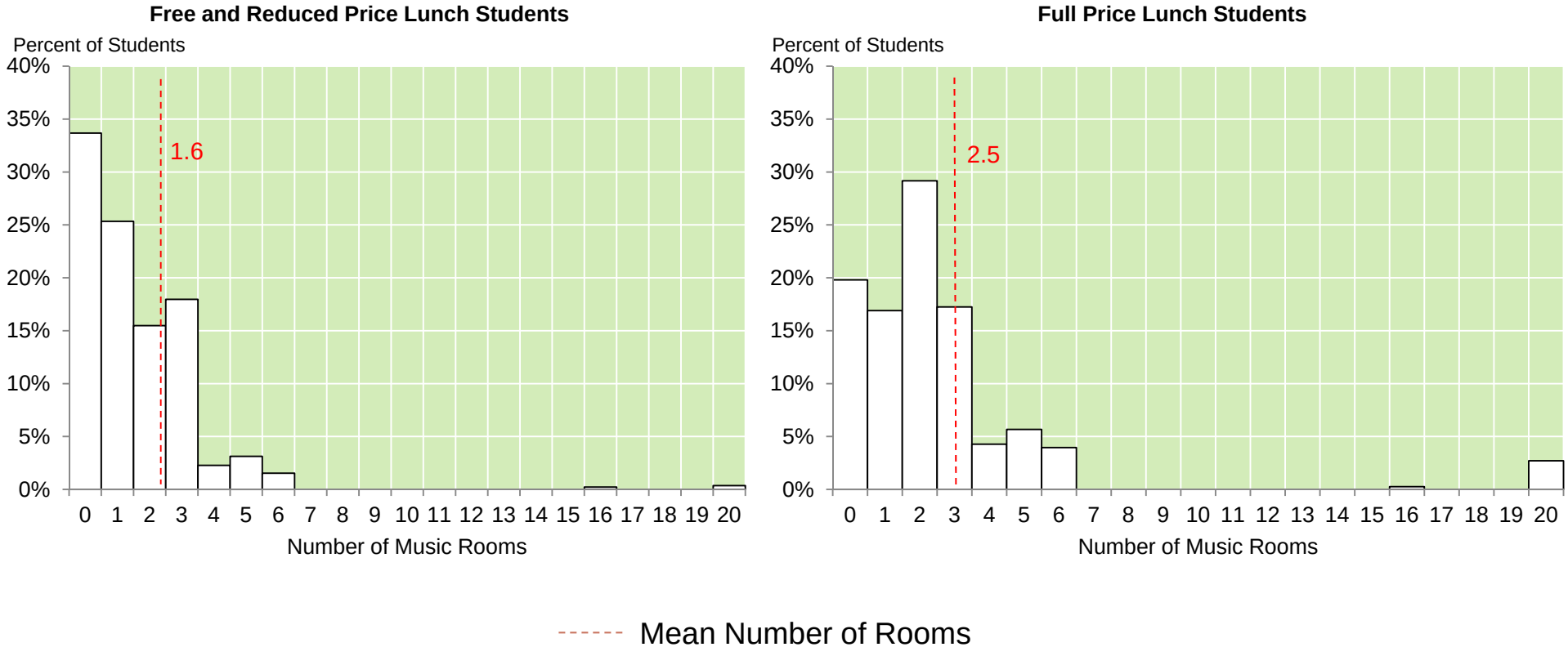


------ Mean Number of Rooms

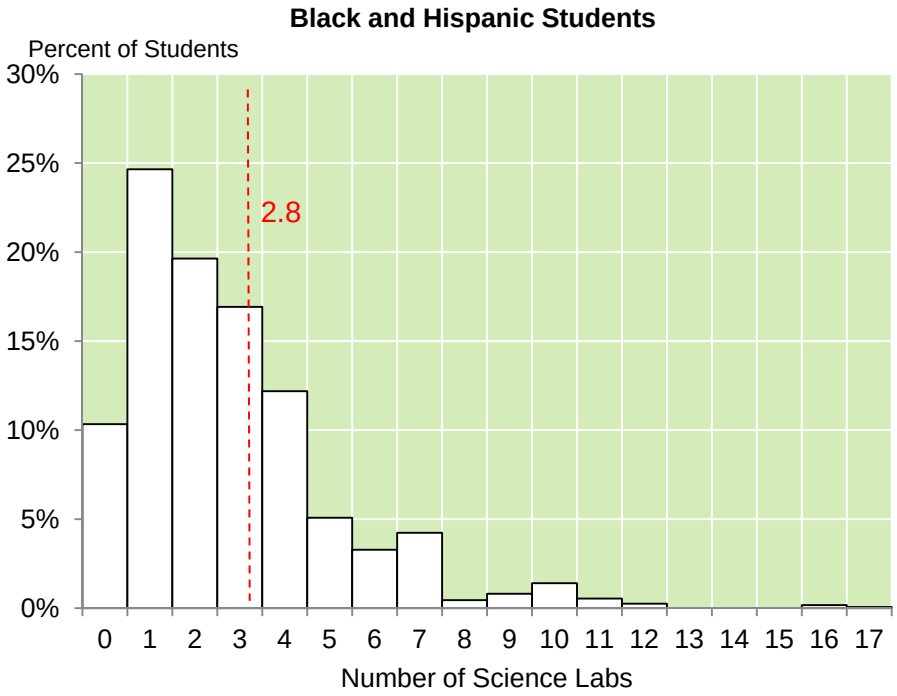
Black and Hispanic Students Attend Schools With Fewer Music Rooms

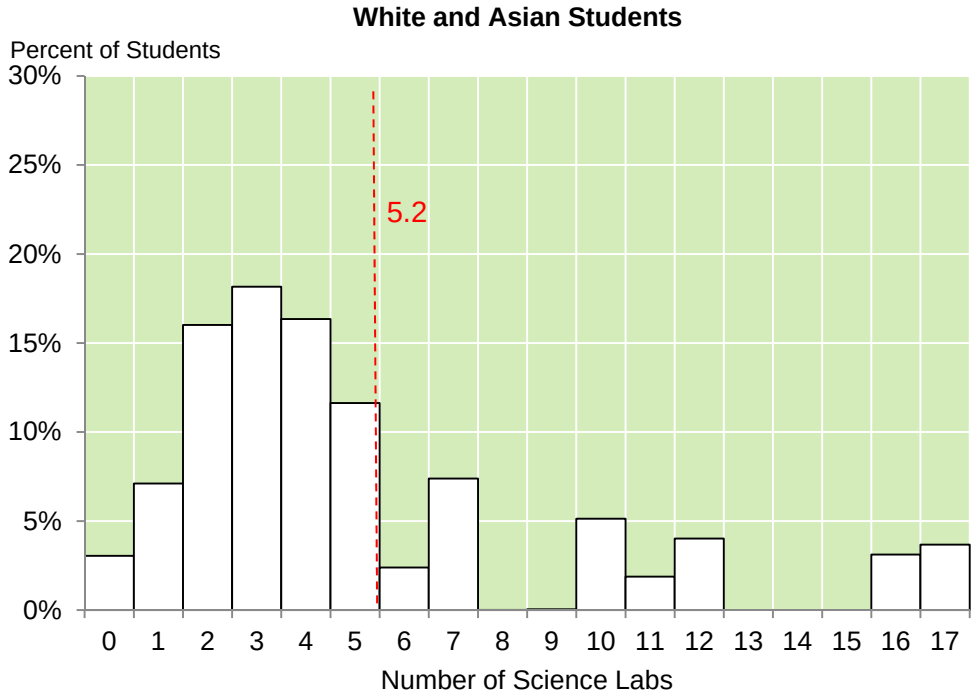


Students Receiving Free and Reduced-Price Lunch Attend Schools With Fewer Music Rooms



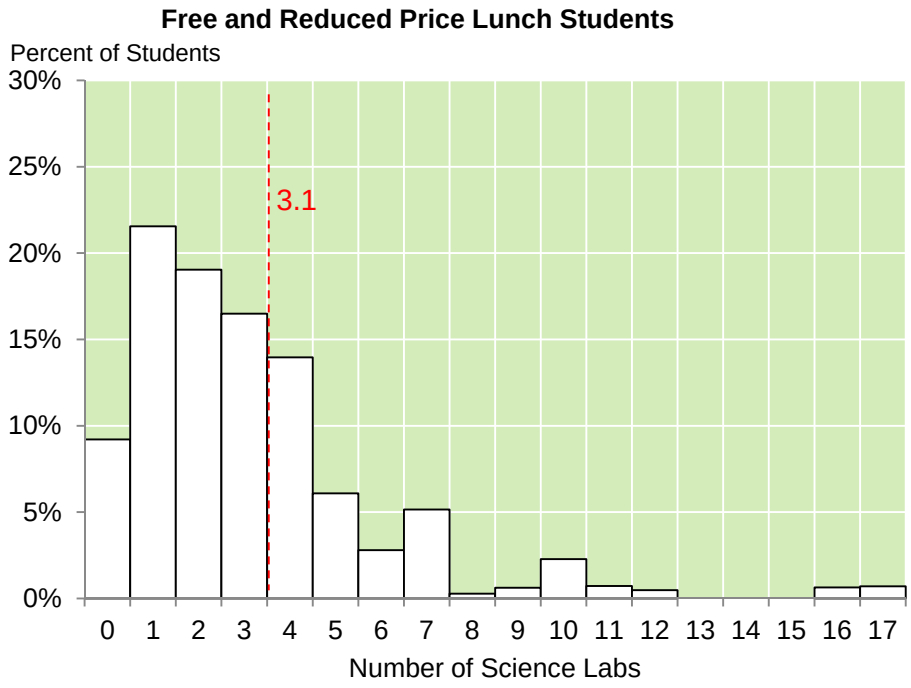
White and Asian Students Attend Schools With Almost Twice as Many Science Labs

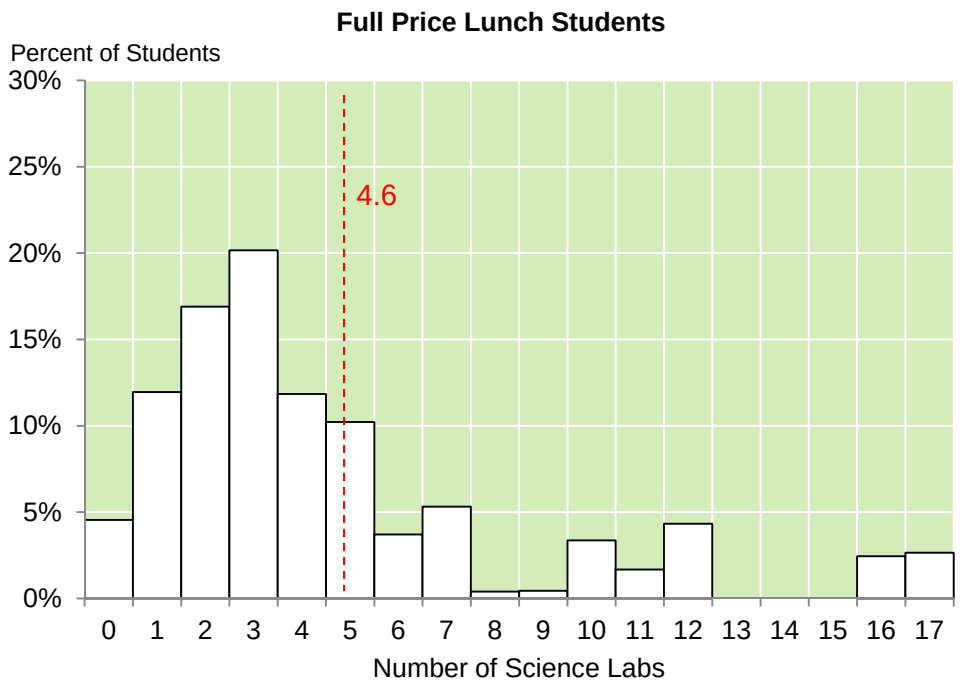




Mean Number of Labs

Students Receiving Free and Reduced-Price Lunch Attend Schools With Fewer Science Labs, On Average



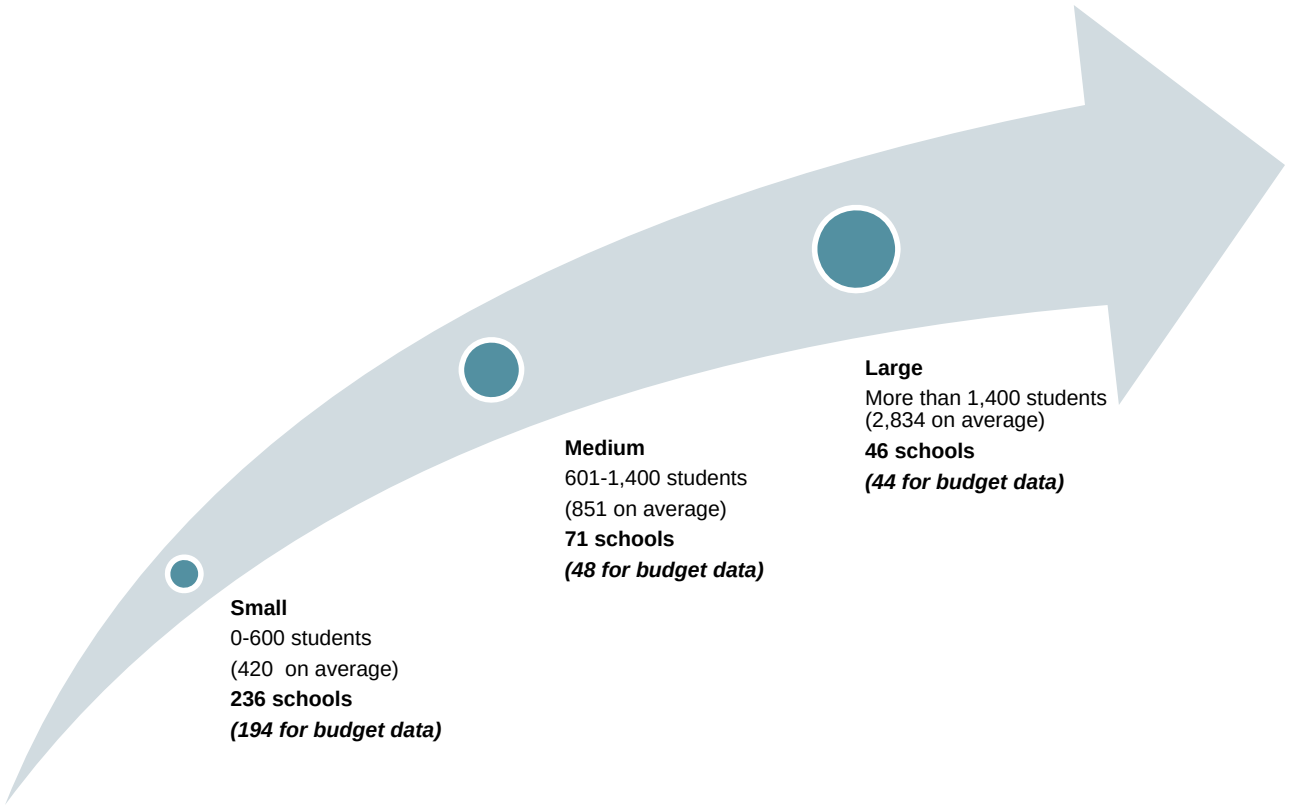


Mean Number of Labs

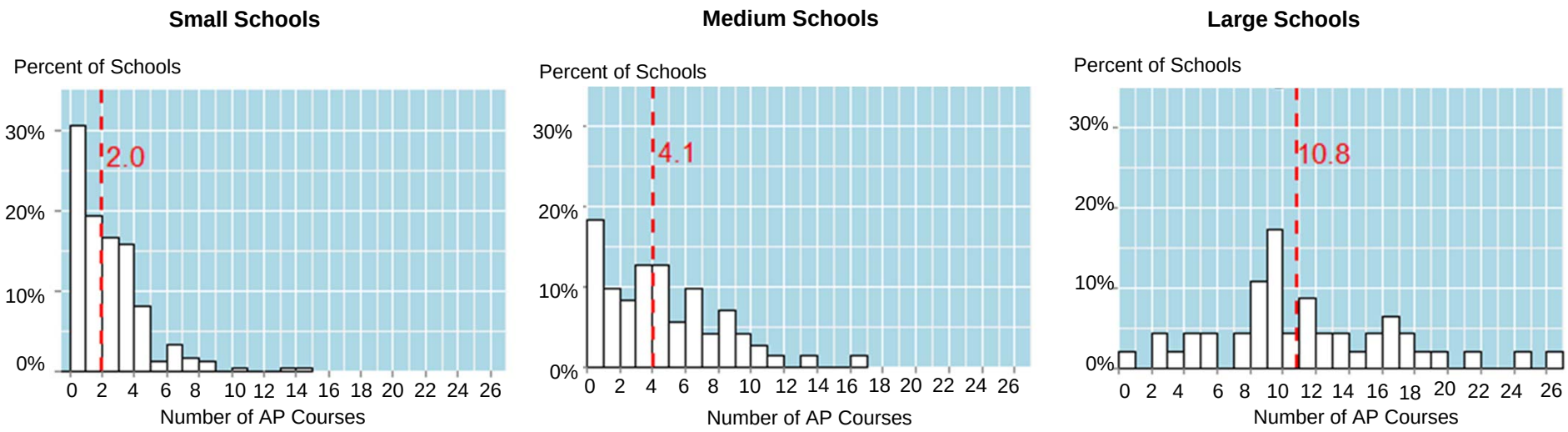
Differences by Type of High School

- Size
- Age
- Progress Report Grade
- Admissions Selectivity

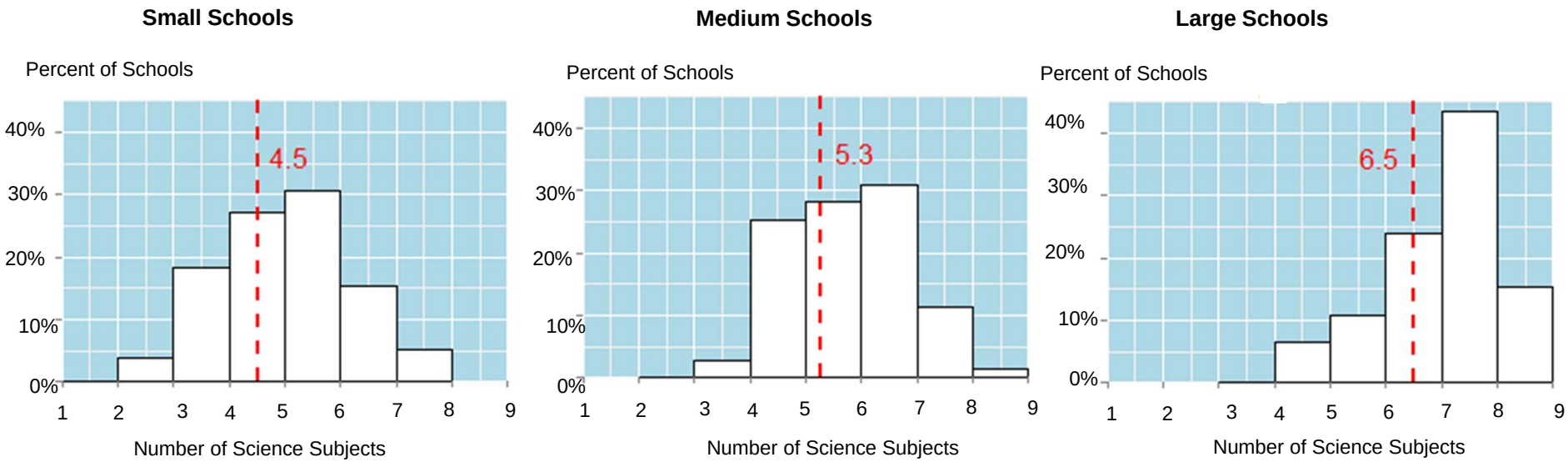
School Size


Small
0-600 students
(420 on average)
236 schools
(194 for budget data)
Medium
601-1,400 students
(851 on average)
71 schools
(48 for budget data)
Large
More than 1,400 students
(2,834 on average)
46 schools
(44 for budget data)

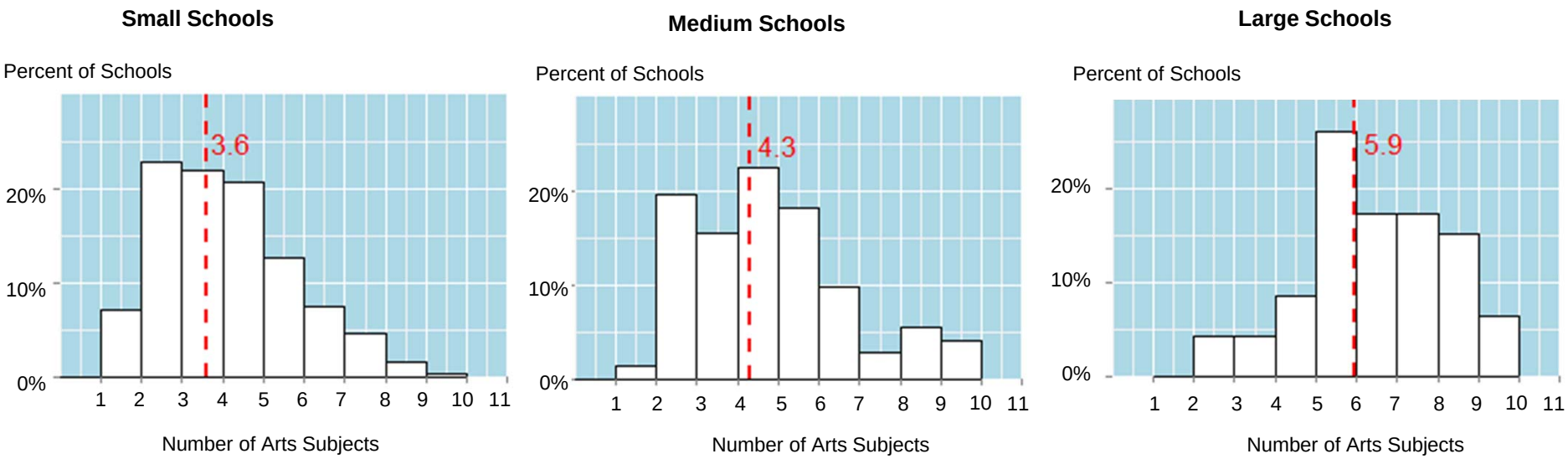
Large High Schools Average Five Times as Many Advanced Placement Courses as Small Schools



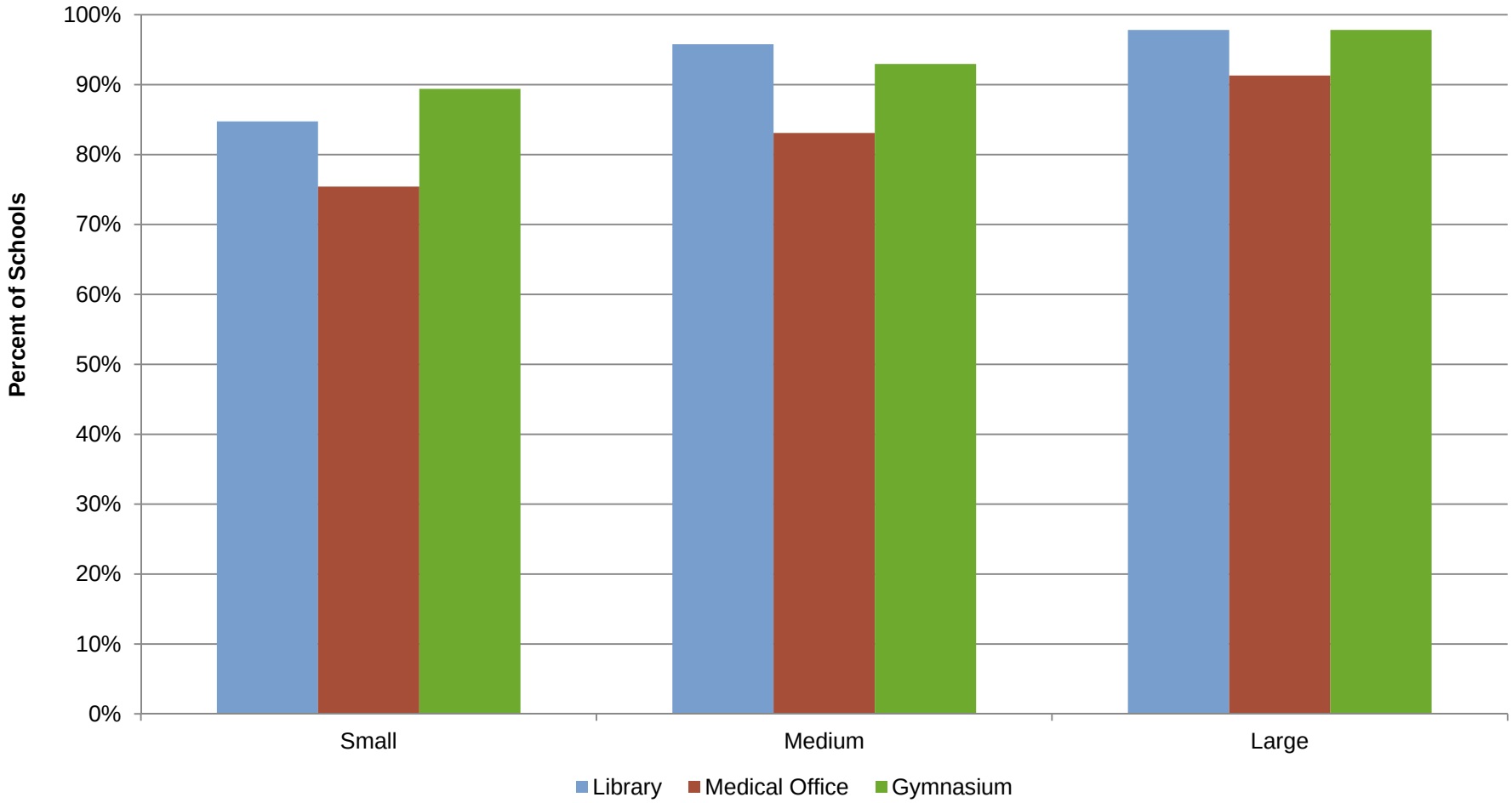
Large High Schools Average Two More Science Subjects Than Small Schools



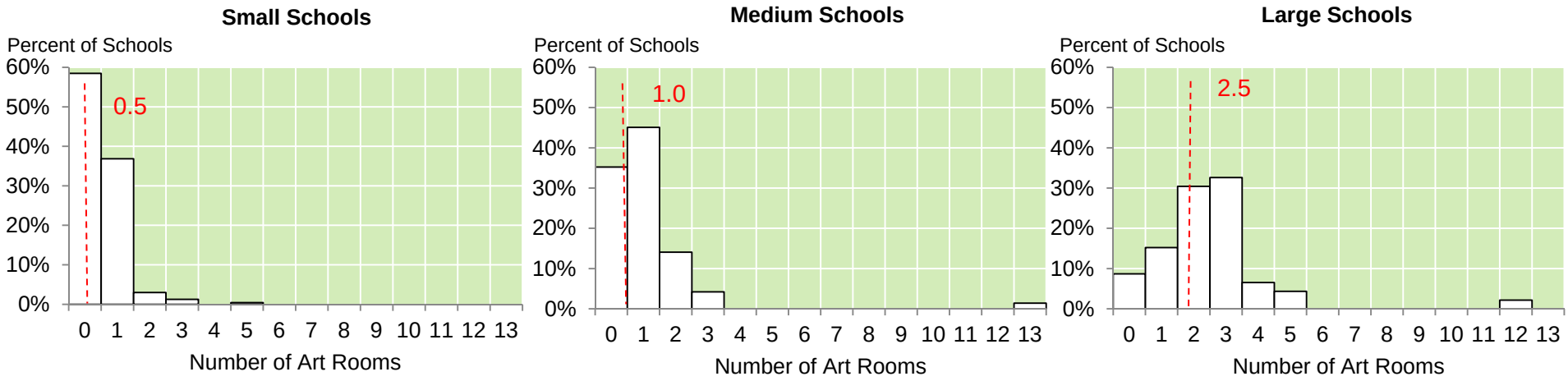
Large Schools Average Two More Arts Subjects Than Small Schools



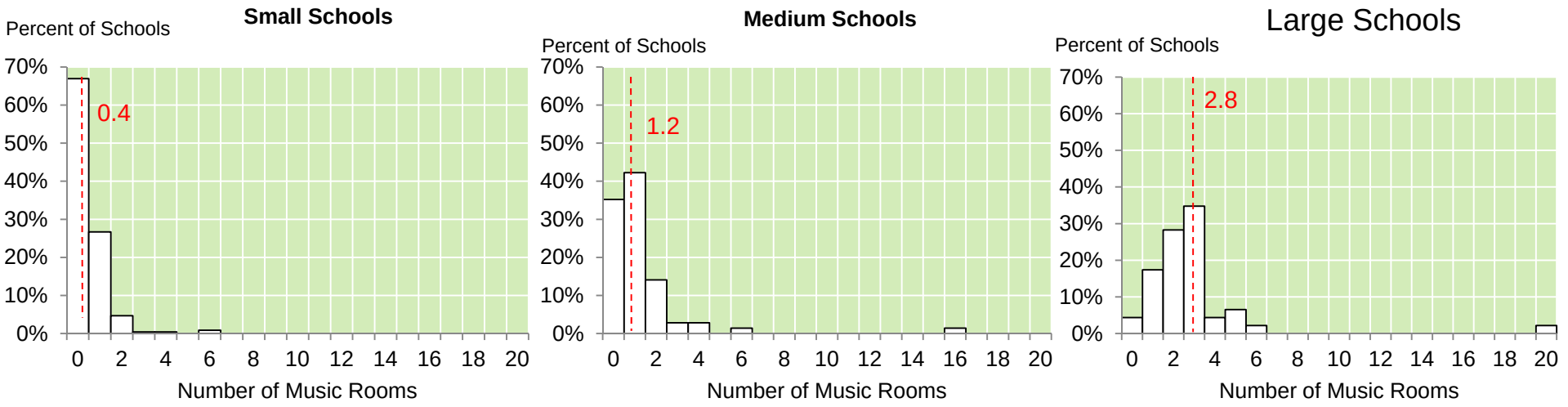
The Greater a High School's Size, the More Likely A Library, Medical Office, or Gym in the Building



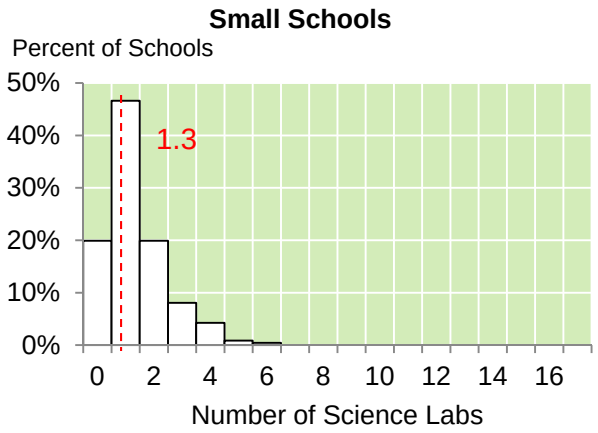
Almost 60 Percent of Small Schools Have No Art Room

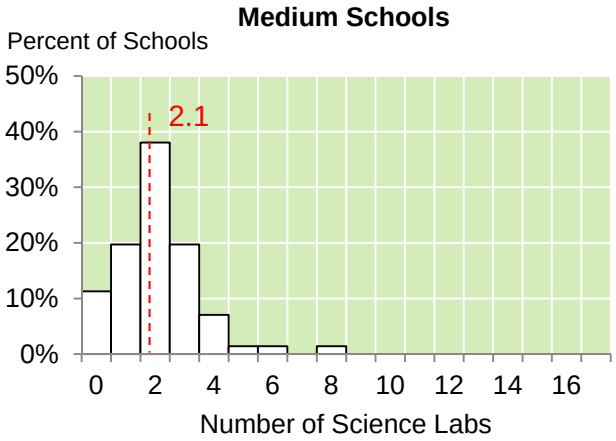


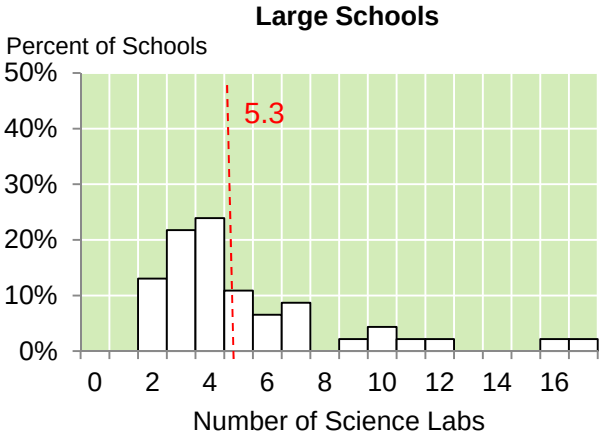
More Than 60 Percent of Small Schools Have No Music Room



80 Percent of Small Schools Have at Least One Science Lab

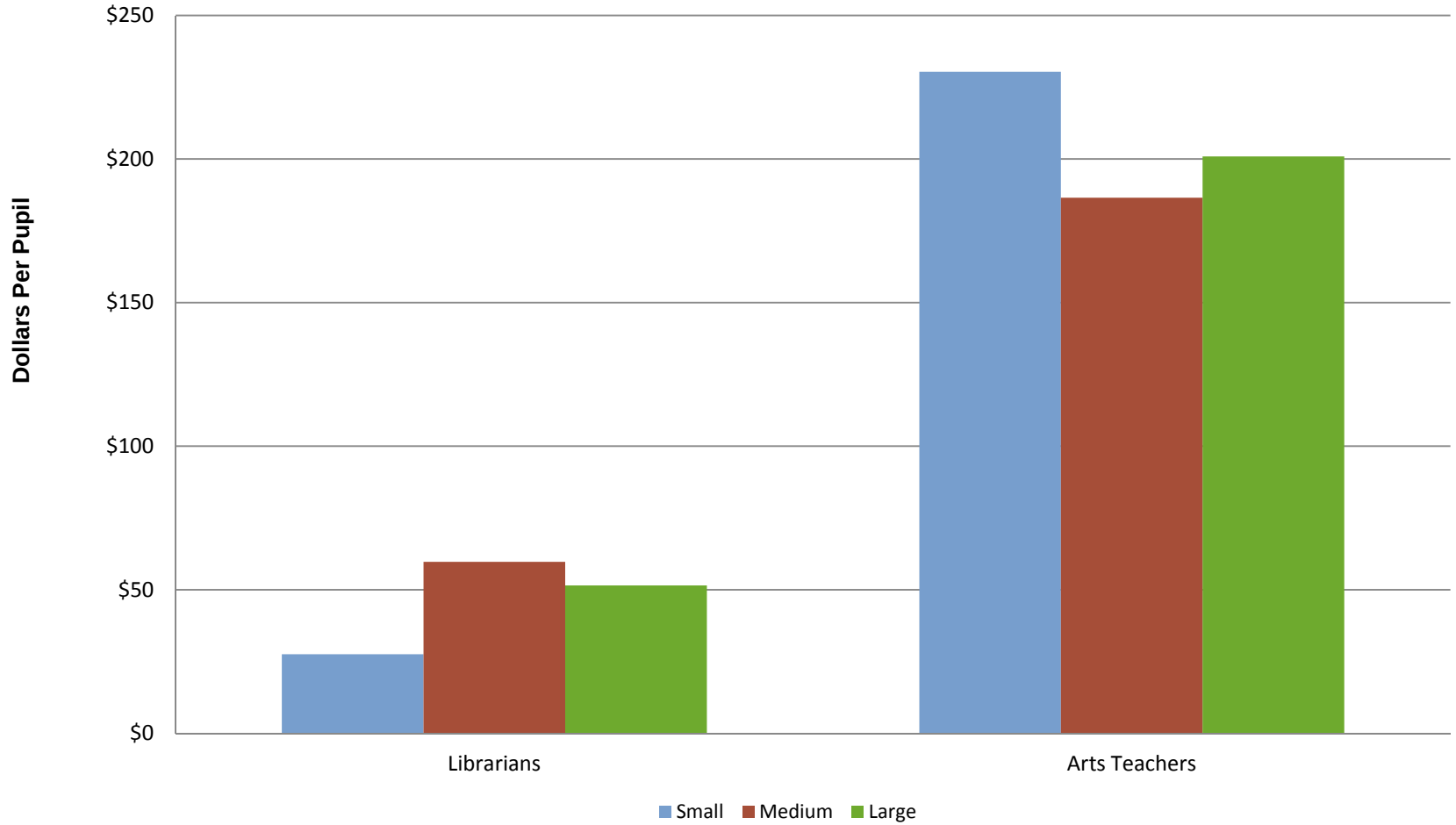




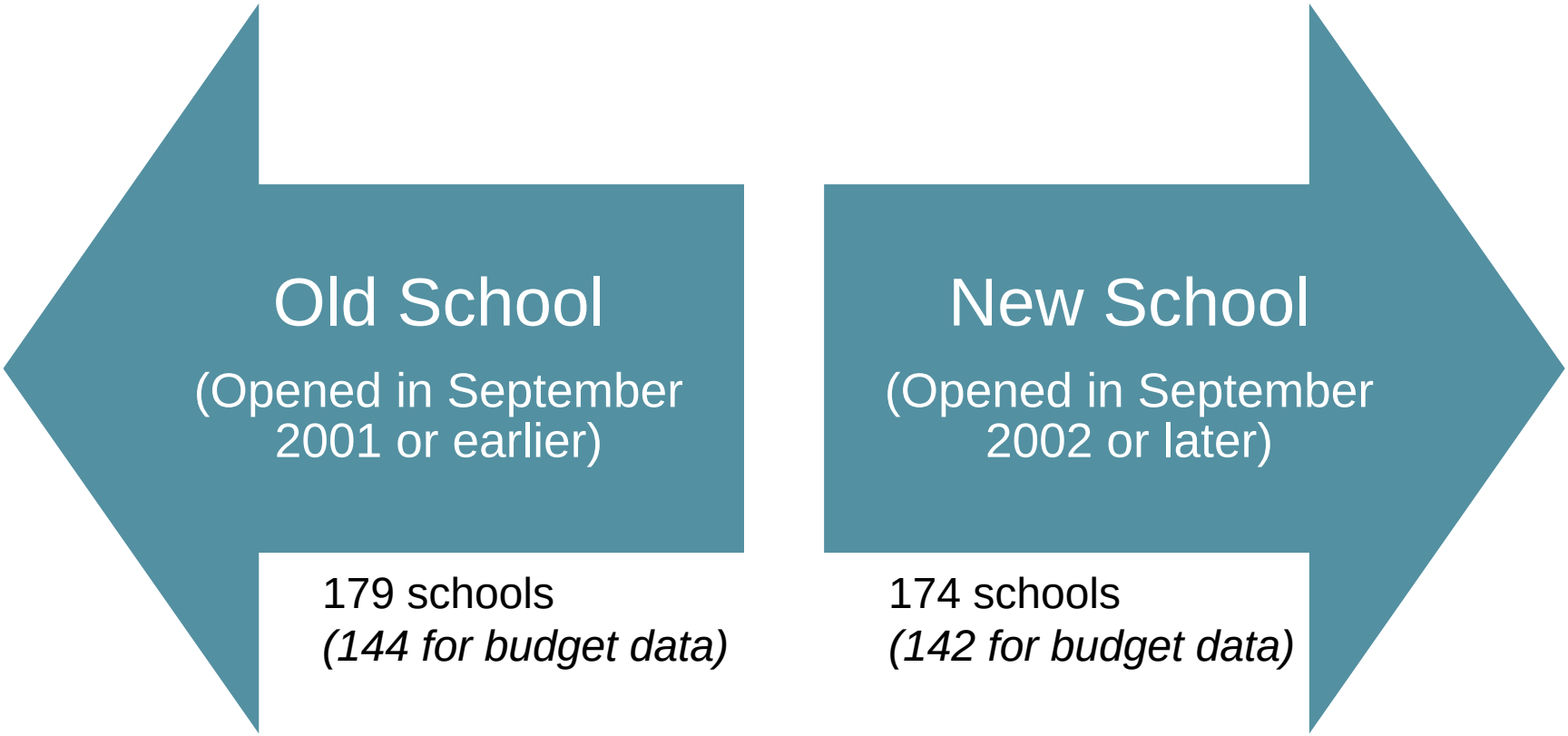


Mean Number of Labs

Small High Schools Spend the Most Per Pupil on Arts Teachers, Medium Schools Spend the Most Per Pupil on Librarians



Old vs. New High School



Differences Based on School Age Consistent With Newer Schools Typically Being Smaller

	Year that High School Opened:	
	September 2001 or Earlier	**September 2002 or Later**
	Average in School	
Advanced Placement Courses	5.2	1.9
Science Subjects	5.3	4.5
Arts Subjects	4.5	3.6
Building Includes	*Percent of Schools*	
Library	92.2%	85.1%
Medical Office	81.0%	77.0%
Gym	90.5%	92.0%
School Includes		
Art Room	70.4%	34.5%
Music Room	63.7%	31.0%
Science Lab	91.6%	77.0%
Pupil Support Services	*Average Dollars Per Pupil (All Students)*	
Nonmandated Guidance	$288	$248
Nonmandated Social Worker	26	92
Librarians	51	25
Arts Teachers	203	224
	Average Dollars Per Pupil (Students with IEPs)	
Mandated Guidance	$420	$435
Mandated Social Worker	320	224

Progress Report Grade

A	• 117 schools *(94 for budget data)*
B	• 128 schools *(102)*
C	• 71 schools *(57)*
D or F	• 27 schools *(24)*

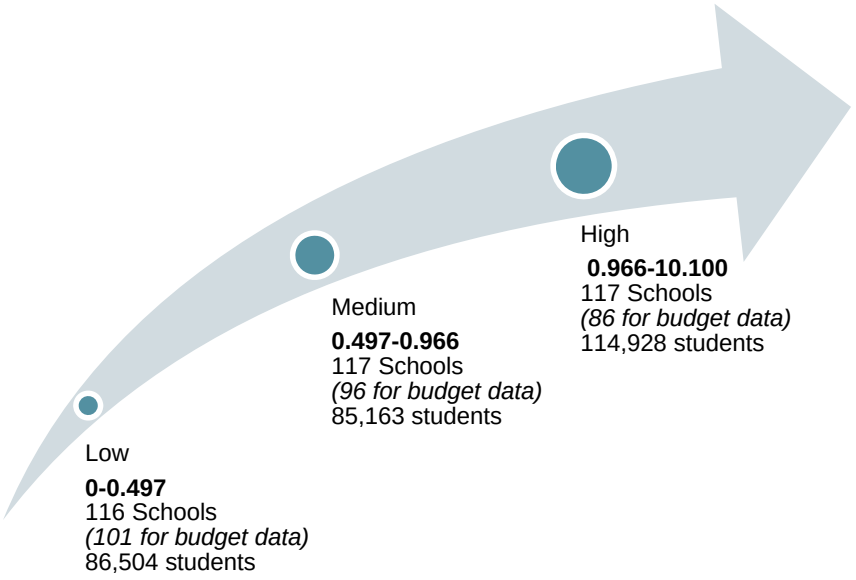
Schools with Higher Progress Report Grades Offer More AP Courses; Little Difference for Other Resources

	Progress Report Grade			
	A	**B**	**C**	**D or F**
	Average in School			
Advanced Placement Courses	4.2	3.8	2.6	2.6
Science Subjects	4.9	5.0	4.9	4.7
Arts Subjects	4.1	4.2	4	3.7
Building Includes	*Percent of Schools*			
Library	87.2%	89.8%	88.7%	96.3%
Medical Office	77.8%	79.7%	80.3%	77.7%
Gym	88.9%	93.0%	93.0%	88.9%
School Includes				
Art Room	48.7%	52.3%	60.6%	51.8%
Music Room	46.1%	50.0%	45.1%	37.0%
Science Lab	85.5%	83.6%	84.5%	81.5%
Pupil Support Services	*Average Dollars per Pupil (All Students)*			
Nonmandated Guidance	$258	$268	$275	$370
Nonmandated Social Worker	$45	$41	$44	$22
Librarians	$37	$49	$47	$42
Arts Teachers	$252	$185	$201	$184
	Average Dollars per Pupil (Students with IEPs)			
Mandated Guidance	$351	$412	$473	$490
Mandated Social Worker	$337	$277	$293	$250

High School Admissions Selectivity

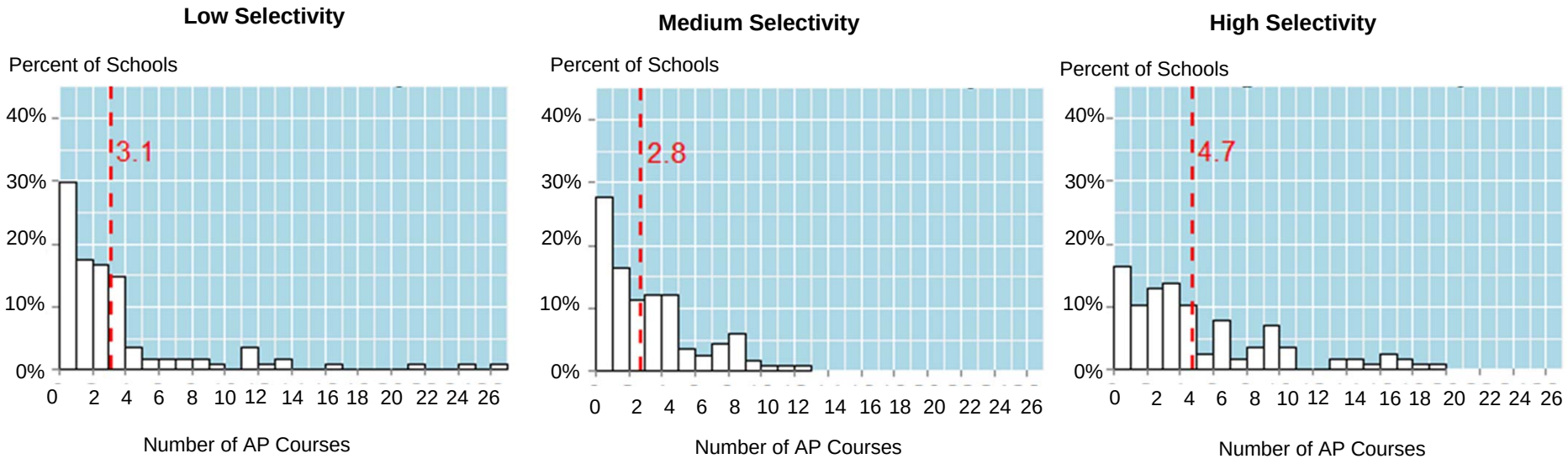
- Four-year average (2008-2009 through 2011-2012) of the ratio:

$$\frac{\text{(Number of students who picked a school as their top choice)}}{\text{(Number of students admitted to that school)}}$$

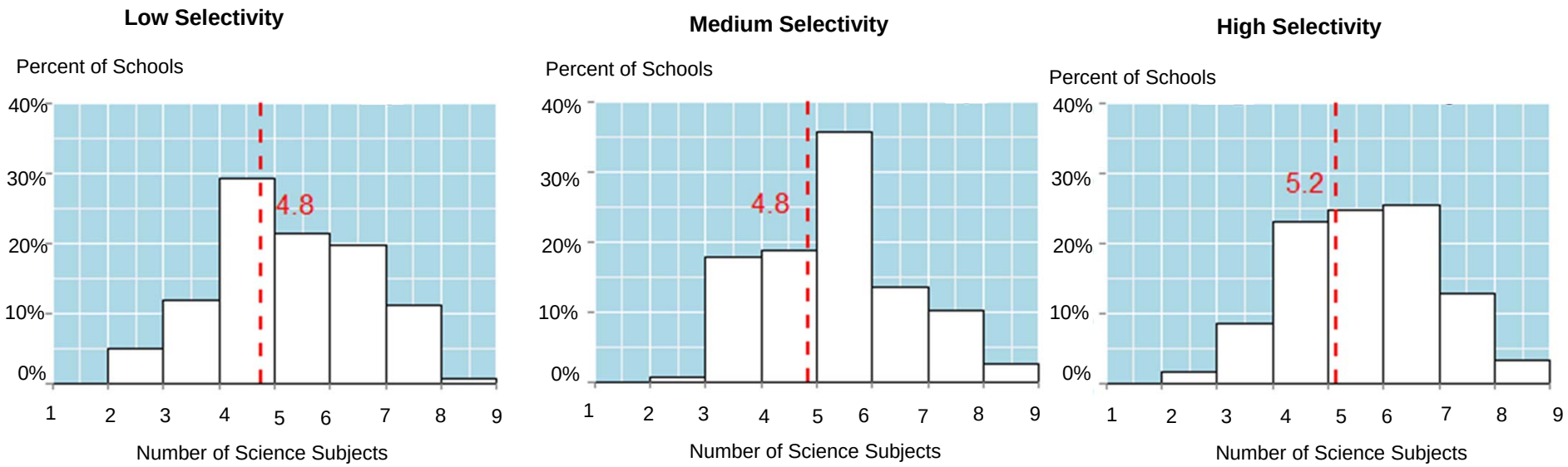


Schools divided into three equal groups based on relative selectivity.

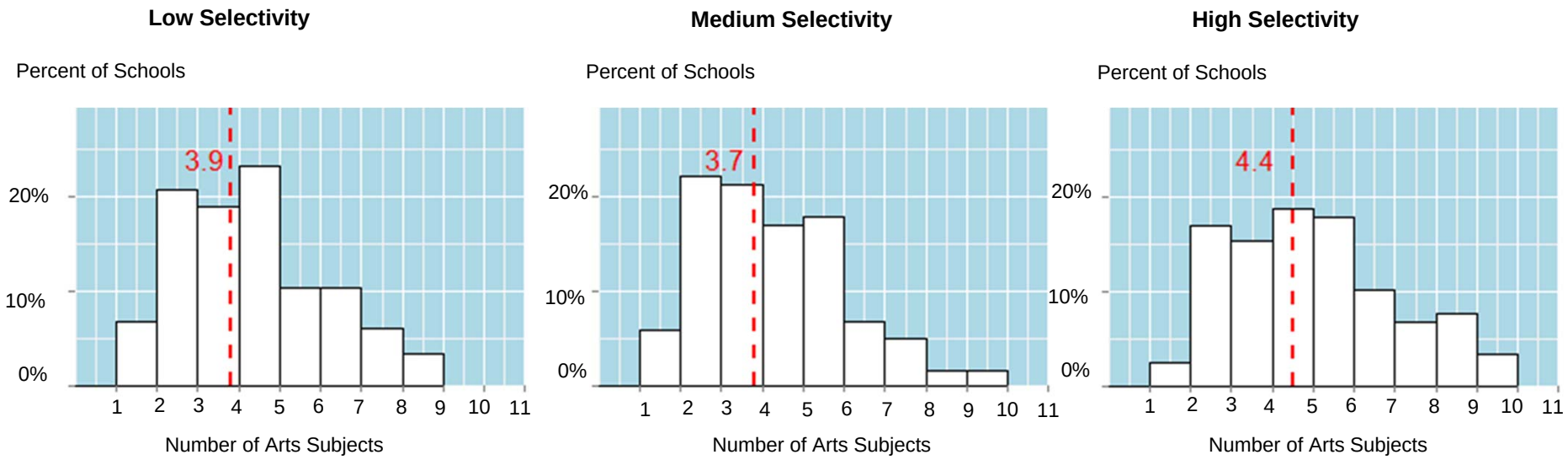
Highly Selective High Schools Offer More Advanced Placement Courses



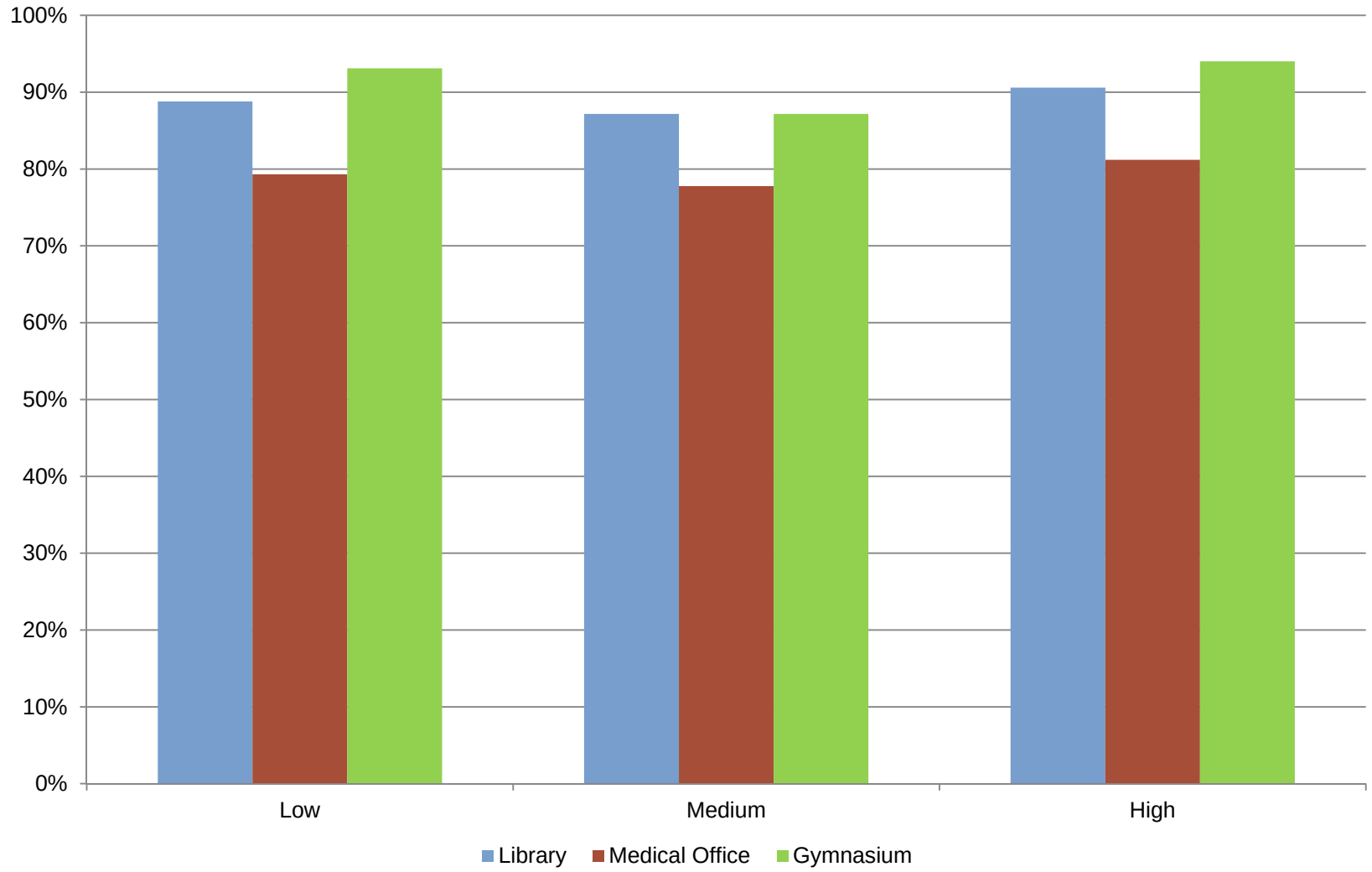
Availability of Science Subjects Fairly Constant For Schools of Different Selectivity



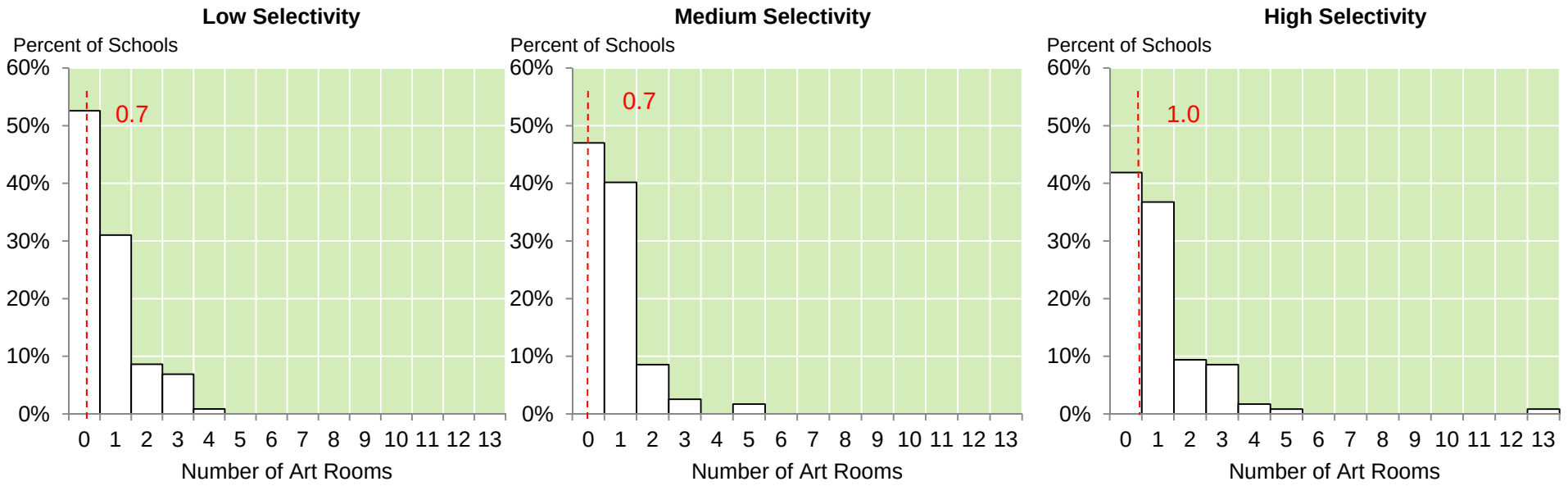
Highly Selective Schools Offer More Arts Subjects



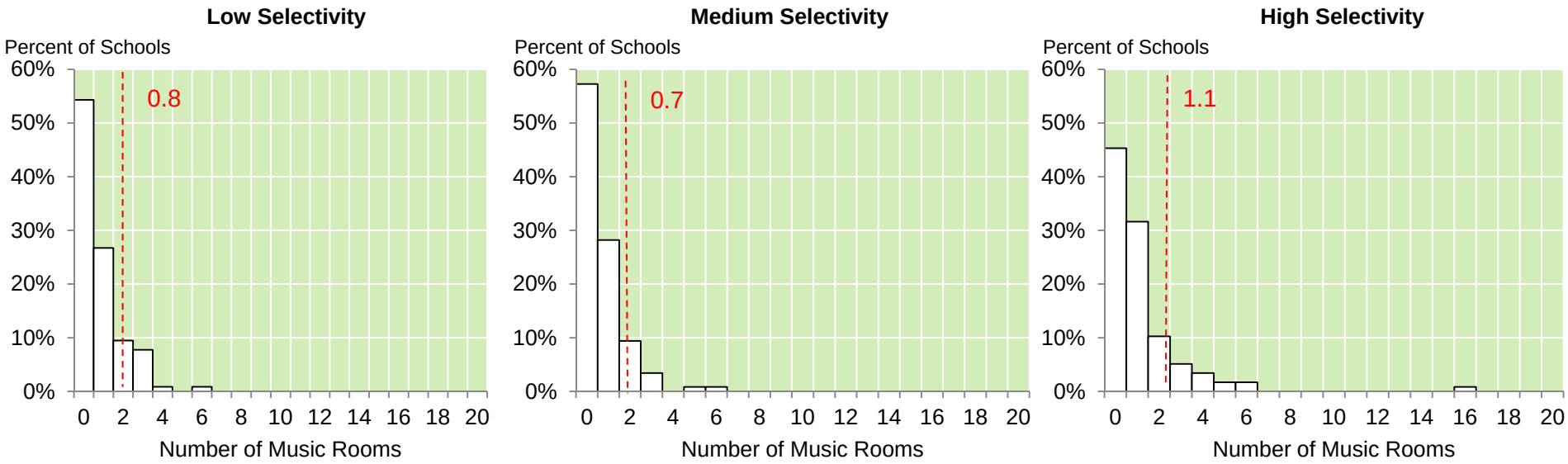
High School Selectivity Does Not Vary Much by Availability of Library, Medical Office, and Gym in Building



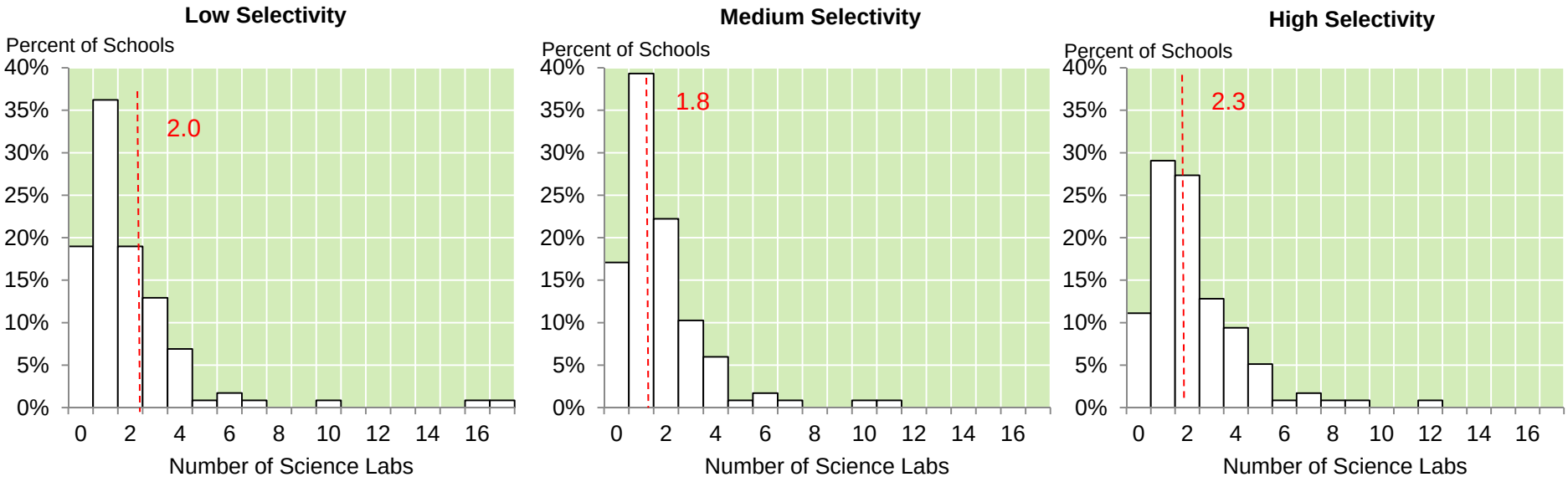
Highly Selective Schools Are More Likely to Have an Art Room



Highly Selective Schools Are More Likely to Have a Music Room



Science Labs More Common in Highly Selective Schools



Notes on Course and Subject Availability

Credits data from 2011-2012 was matched to IBO's primary school list for this study. The school list includes all schools offering grades 9-12 on 2011-2012 that were not transfer or charter schools, District 75/79, or in the process of phasing in or out.

Counts were generated by unique course title at each school, each unique course title was evaluated and categorized, and a sum of courses/subjects was calculated by school. Course records for credit recovery and transfer credit were excluded.

The student calculations include all students in grades 9-12 who were enrolled for at least one day at any point in the 2011-2012 school year, and who attended one of the schools in IBO's primary analysis list.

Science Subjects

Science categories were designed to reflect the four Regents subjects (earth science, biology/living environment, chemistry, and physics) along with categories that capture the variety of elective subjects offered.

No 'other' category was created, and very general science courses (i.e. 'Integrated Science', 'Foundations of Science', 'Science Research', etc.) were not included in the counts.

To capture the range of subjects available to students at schools rather than the number of individual courses, sums were created by subject. For example, a school with AP chemistry, Regents chemistry, and honors chemistry is counted the same as a different school with only Regents chemistry. Both schools are counted as offering chemistry coursework.

In very rare cases, some courses were treated as falling in two subject categories. For example, a school offering a course titled "Astrophysics" was counted as offering coursework in both astronomy and physics.

The categories were created as follows:

Earth Science:

Earth science, geology

Biology:

Biology, living environment, environmental science

Chemistry:

Chemistry, organic chemistry

Physics:

Physics, mechanics

Medical Sciences:

Medical science, paramedic training, anatomy, physiology, immunology, health sciences, epidemiology, human development, genetics, pharmacology, sports medicine, toxicology, nutrition science, public health, and courses at various hospitals and medical centers.

Ecology:

Ecology, evolution, ecosystems, agriculture, horticulture, zoology, marine ecology, paleontology, science and sustainability, environmental conservation, and courses at various community gardens, farms, or zoos.

Psychology and Forensic Sciences:

Psychology, neuroscience, forensic science, criminology

Astronomy and Meteorology:

Astronomy, meteorology, atmospheric science, climatology, global warming

Arts subjects

Arts subjects were created to capture broad categories of subjects offered at New York City schools: music, dance, art history, drama, sculpture, drawing, design/digital/professional arts, photography and film, and other/general arts.

Music:

Chorus, orchestra, band, individual musical instruments, music theory, music production.

Dance:

Ballet, choreography, musical theater, tap, modern dance, general dance.

Drama:

Play, performing arts, acting, comedy, Shakespeare, spoken word, theater arts.

Historical and Cultural Art

Art history, film history, multicultural art, world art, regional arts, art criticism, art movements.

Sculpture:

Ceramics, clay, 3-D arts, mosaic, crafts, plastics.

Drawing and Painting:

Drawing, painting, illustration, animation, cartooning, watercolor, sketch, mural, calligraphy.

Photography & Film:

Photography, film making, video, cinema, television production.

Design, Computer Art, Textiles, and Professional Art Fields:

Design, digital arts, fashion & textiles, architecture, media arts, computer graphics, yearbook design, printmaking.

Other Art:

General visual art, art appreciation, core art, foundations of art, general art portfolio, general art for grade level.

Advanced Placement Courses

AP course categories were based on the official list of AP exams offered by the College Board in 2011-2012. All courses were counted separately with the following exceptions:

All AP Studio Art classes were counted as a single “Studio Art” category.

AP English language and AP English literature were counted as a single “English” category.

AP Spanish language and AP Spanish literature were counted as a single “Spanish” category.

AP economics courses that did not otherwise specify were grouped with macroeconomics courses in a “General or Macroeconomics” category.

AP Physics courses were grouped together in a single “Physics” category.

The following 28 AP course categories were used in the analysis: Art History, Art Studio, Biology, Calculus AB, Calculus BC, Chemistry, Chinese, Comparative Government, Computer Science, English, Environmental Science, European History, French, General or Macroeconomics, German, Human Geography, Italian, Japanese, Latin, Microeconomics, Music Theory, Physics, Psychology, Spanish, Statistics, U.S. Government, U.S. History, World History.

Final sums of AP courses were cross-checked against a school-level dataset from the College Board. The College Board data was broadly consistent with IBO’s analysis of course records, with the exception of four schools enrolling a total of 1,774 students.These schools had no record of any AP exams in the course data, but the College Board reported small numbers of students taking AP exams. Although students can take AP exams independently without enrolling in a course, IBO excluded these schools and students to avoid any potential downward bias in the AP course analysis.