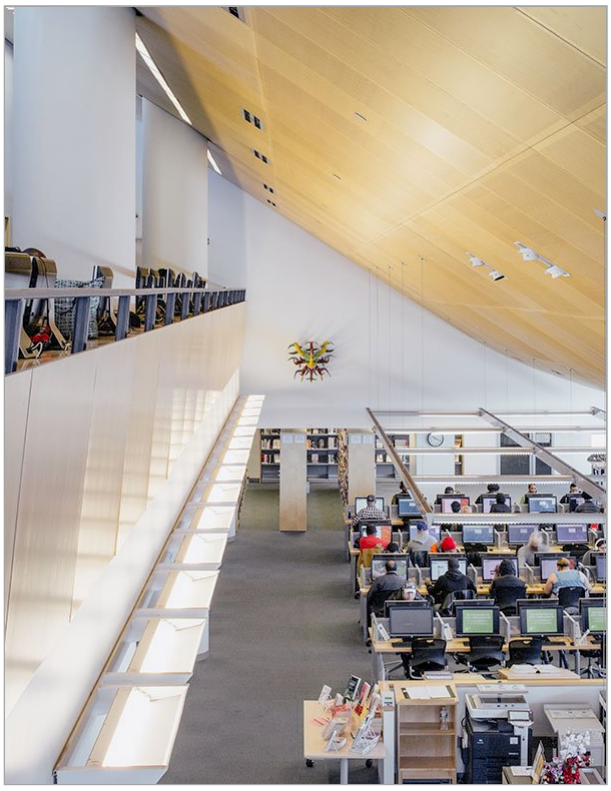
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Data - June 2016

Libraries Teach Tech: Building Skills for a Digital World

This new data brief finds that NYC's public libraries are playing an increasingly important role in helping New Yorkers develop the technology skills needed in today's economy. It shows that the city's libraries provided tech training to more than 150,000 New Yorkers in 2015, an 81 percent increase from just three years earlier.

by Jonathan Bowles

If New York City is going to succeed in reducing inequality and put more New Yorkers on the path to the middle class, it will need to significantly increase the number of city residents with digital skills. That's because so many of the good-paying jobs being created in today's economy require some level of technology skills. These jobs include the bulk of opportunities in the city's soaring tech sector, but also a growing share of the positions in more traditional fields, from health care to manufacturing, which are adopting new technologies at a rapid clip. In fact, a recent report by Burning Glass found that 88 percent of middle-skill jobs in New York were digitally intensive.

This data analysis is part of a series of research briefs on New York City public libraries that was generously funded by the **Charles H. Revson Foundation**.

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the M&T Charitable Foundation.

Although many of these technology jobs have the potential to boost New Yorkers into the middle class, alarmingly few residents from the city's low-income communities are equipped with the tech skills that are in such high demand.

The de Blasio administration is attempting to address this skills gap through its promising Tech Talent Pipeline initiative. In addition, a number of nonprofit and for-profit entities across the city–from Girls Who Code and Access Code to the Flatiron School–are providing scores of New Yorkers from underserved communities with the coding, programming, and web-development skills that so many employers now require.

But some of the most important efforts to boost digital skills are coming from an unlikely source: the city's public libraries.

As this data brief shows, the city's three public library systems served more than 158,000 people with technology training programs in 2015. This represents an astounding 81 percent increase from just three years ago, when the libraries served 87,000 people.

Beyond simply serving tens of thousands of New Yorkers, the libraries are reaching many who aren't being served by other digital training initiatives. One of the libraries' advantages is that, with 217 branches, the systems have a physical presence in nearly every community throughout the five boroughs.

In 2015, 28 branches across the city served at least 1,000 people with tech training programs: 13 branches in Manhattan, 11 in Brooklyn, 10 in the Bronx, 4 in Queens, and 1 on Staten Island.

The massive Mid-Manhattan Library served the most people with tech training programs in 2015 (14,704 attendees). Surprisingly, the Parkchester branch in the southeast Bronx had the second highest attendance (9,462). It was followed by the Morningside Heights branch in Manhattan (7,454), the Castle Hill branch in the Bronx (5,980), the Countee Cullen branch in Harlem (4,486), the Brooklyn Central Library at Grand Army Plaza (3,908), the Stephen A. Schwarzman building in Midtown (3,835), the Chatham Square branch in Chinatown (3,770), and the Wakefield branch (3,630) in the north Bronx.

Much of the growth in the libraries' tech training programs is occurring in neighborhoods whose residents are underrepresented in the city's tech workforce. In fact, 38 of the 50 branches with the greatest growth in tech program attendance between 2012 and 2015 are located outside of Manhattan, with 15 in Brooklyn, 14 in the Bronx, 7 in Queens and 2 on Staten Island.[1] And of the twelve Manhattan branches on the list, three are in Harlem, one is in Chinatown, and one is on Roosevelt Island. The following branches posted the largest growth in attendance for tech training programs:

- Epiphany Library (Gramercy) +4,259 percent, from 17 attendees in 2012 to 741 in 2015.
- Queens Central–Children's Library (Queens) +2,787 percent, from 23 in 2012 to 664 in 2015.
- Queens Central (Queens) +1,616 percent, from 193 to 3,312.
- Richmondtown (Staten Island) +1,546 percent, from 39 to 642.
- Rochdale Village (Queens) +1,504 percent, from 66 to 1,059.
- Columbus Library (Hell's Kitchen) +1,394 percent, from 140 to 2,091
- Parkchester (Bronx) +1157 percent, from 753 to 9,462.
- Castle Hill (Bronx) +1096 percent, from 500 to 5,980.
- Sheepshead Bay (Brooklyn) +1,070 percent, from 74 to 866.
- Laurelton (Queens) +953 percent, from 115 to 1,211.

- Saratoga (Bed Stuy) +897 percent, from 70 to 698.
- Kings Bay (Brooklyn) +757 percent, from 192 to 1,646.
- Wakefield (Bronx) +733 percent, from 436 to 3,630.
- New Amsterdam (Lower Manhattan) +687 percent, from 68 to 535.
- Countee Cullen Library (Harlem) +633 percent, from 612 to 4,486.

The libraries' technology programs run the gamut from high-level coding courses to more basic computer classes. While some are more in-demand than others–New York Public Library's Project Code program currently serves just 400 people and has a wait-list of 5,000–they are all contributing to a more digitally literate workforce.

The importance of these programs is hard to understate. Employment in the city's tech sector grew by 71 percent from 2004 to 2014 (from 68,571 to 117,147 jobs), far outpacing the overall job growth in the city's economy.[2] Yet, many of the city's tech companies struggle to attract workers with the technology skills they need. At the same time, although many low-income New Yorkers would jump at the chance to get a decent-paying tech job, too few of these residents have the digital skills that employers require. One consequence is that tech companies do not resemble New York City as a whole: African Americans make up just 9 percent of the city's tech workforce, while Hispanics account for only 11 percent.[3]

As city policymakers continue to develop strategies for addressing the tech talent gap and creating pathways to the middle class, libraries should be seen as a crucial part of the equation.

NYC Library Branches Where Attendance in Tech Training Programs Topped 1,000 in FY 2015

Branch	Attendance in Tech Training Programs, 2015	Borough
ST. GEORGE LIBRARY CENTER	1,350	STATEN ISLAND
MID-MANHATTAN LIBRARY	14,704	MANHATTAN
MORNINGSIDE HEIGHTS	7,454	MANHATTAN
COUNTEE CULLEN BRANCH	4,486	MANHATTAN
STEPHEN A. SCHWARZMAN BUILDING	3,835	MANHATTAN
CHATHAM SQUARE BRANCH	3,770	MANHATTAN
67TH STREET BRANCH	3,013	MANHATTAN

NYC Library Branches Where Attendance in Tech Training Programs Topped 1,000 in FY 2015		
Branch	**Attendance in Tech Training Programs, 2015**	**Borough**
58TH STREET BRANCH	2,323	MANHATTAN
COLUMBUS BRANCH	2,091	MANHATTAN
SEWARD PARK BRANCH	1,749	MANHATTAN
WASHINGTON HEIGHTS BRANCH	1,675	MANHATTAN
YORKVILLE BRANCH	1,109	MANHATTAN
INWOOD BRANCH	1,058	MANHATTAN
QUEENS CENTRAL	3,312	QUEENS
LAURELTON	1,211	QUEENS
ROCHDALE VILLAGE	1,059	QUEENS
FLUSHING	1,028	QUEENS
BROOKLYN CENTRAL LIBRARY	3,908	BROOKLYN
KINGS HIGHWAY	2,858	BROOKLYN
CENTRAL LIBRARY LEARNING CENTER	2,656	BROOKLYN
STONE AVENUE	1,800	BROOKLYN
KINGS BAY	1,646	BROOKLYN
CORTELYOU	1,382	BROOKLYN
WASHINGTON IRVING	1,346	BROOKLYN
CLARENDON	1,137	BROOKLYN
CYPRESS HILLS	1,118	BROOKLYN
EASTERN PARKWAY LEARNING CENTER	1,065	BROOKLYN
ANDREW HEISKELL BRAILLE AND TALKING BOOK LIBRARY	1,031	BROOKLYN

NYC Library Branches Where Attendance in Tech Training Programs Topped 1,000 in FY 2015		
Branch	**Attendance in Tech Training Programs, 2015**	**Borough**
CONEY ISLAND	1,003	BROOKLYN
PARKCHESTER BRANCH	9,462	BRONX
CASTLE HILL BRANCH	5,980	BRONX
WAKEFIELD BRANCH	3,630	BRONX
BRONX LIBRARY CENTER	3,018	BRONX
HIGH BRIDGE BRANCH	1,832	BRONX
WEST FARMS BRANCH	1,788	BRONX
MELROSE BRANCH	1,531	BRONX
HUNTS POINT BRANCH	1,293	BRONX
EDENWALD BRANCH	1,059	BRONX
BAYCHESTER BRANCH	1,039	BRONX

50 NYC Library Branches With the Highest Percentage Increases in Tech Training Attendance, 2012–2015					
Branch	**FY12**	**FY15**	**Change FY12–FY15**	**% Change FY12–FY15**	**Borough**
SHEEPSHEAD BAY	74	866	792	1070%	BROOKLYN
SARATOGA	70	698	628	897%	BROOKLYN
KINGS BAY	192	1646	1454	757%	BROOKLYN
RED HOOK	64	469	405	633%	BROOKLYN
CENTRAL LIBRARY LEARNING CENTER	379	2656	2277	601%	BROOKLYN
BEDFORD	74	487	413	558%	BROOKLYN

50 NYC Library Branches With the Highest Percentage Increases in Tech Training Attendance, 2012–2015					
Branch	**FY12**	**FY15**	**Change FY12–FY15**	**% Change FY12–FY15**	**Borough**
EASTERN PARKWAY LEARNING CENTER	222	1065	843	380%	BROOKLYN
BEDFORD LEARNING CENTER	183	846	663	362%	BROOKLYN
CROWN HEIGHTS	164	652	488	298%	BROOKLYN
KINGS HIGHWAY	944	2975	2031	215%	BROOKLYN
SUNSET PARK	253	717	464	183%	BROOKLYN
BROOKLYN CENTRAL	1685	3967	2282	135%	BROOKLYN
EAST FLATBUSH	357	832	475	133%	BROOKLYN
BAY RIDGE	274	609	335	122%	BROOKLYN
CORTELYOU	664	1382	718	108%	BROOKLYN
PARKCHESTER BRANCH	753	9462	8709	1157%	BRONX
CASTLE HILL BRANCH	500	5980	5480	1096%	BRONX
WAKEFIELD BRANCH	436	3630	3194	733%	BRONX
MELROSE BRANCH	278	1531	1253	451%	BRONX
WEST FARMS BRANCH	342	1788	1446	423%	BRONX
HUNTS POINT BRANCH	272	1293	1021	375%	BRONX
MORRIS PARK BRANCH	212	908	696	328%	BRONX
EDENWALD BRANCH	261	1059	798	306%	BRONX
BAYCHESTER BRANCH	270	1039	769	285%	BRONX
WESTCHESTER SQUARE BRANCH	240	863	623	260%	BRONX
HIGH BRIDGE BRANCH	588	1832	1244	212%	BRONX

50 NYC Library Branches With the Highest Percentage Increases in Tech Training Attendance, 2012–2015					
Branch	**FY12**	**FY15**	**Change FY12–FY15**	**% Change FY12–FY15**	**Borough**
MOSHOLU BRANCH	301	791	490	163%	BRONX
THROGS NECK BRANCH	213	481	268	126%	BRONX
MOTT HAVEN BRANCH	440	928	488	111%	BRONX
RICHMONDTOWN BRANCH	39	642	603	1546%	STATEN ISLAND
ST. GEORGE LIBRARY CENTER	461	1350	889	193%	STATEN ISLAND
EPIPHANY BRANCH	17	741	724	4259%	MANHATTAN
COLUMBUS BRANCH	140	2091	1951	1394%	MANHATTAN
NEW AMSTERDAM BRANCH	68	535	467	687%	MANHATTAN
COUNTEE CULLEN BRANCH	612	4486	3874	633%	MANHATTAN
CHATHAM SQUARE BRANCH	652	3770	3118	478%	MANHATTAN
ROOSEVELT ISLAND BRANCH	105	508	403	384%	MANHATTAN
MORNINGSIDE HEIGHTS	1750	7454	5704	326%	MANHATTAN
YORKVILLE BRANCH	261	1109	848	325%	MANHATTAN
HARLEM BRANCH	128	507	379	296%	MANHATTAN
INWOOD BRANCH	283	1058	775	274%	MANHATTAN
SEWARD PARK BRANCH	504	1749	1245	247%	MANHATTAN
ANDREW HEISKELL BRAILLE AND TALKING BOOK LIBRARY	339	1031	692	204%	MANHATTAN

50 NYC Library Branches With the Highest Percentage Increases in Tech Training Attendance, 2012–2015					
Branch	**FY12**	**FY15**	**Change FY12–FY15**	**% Change FY12–FY15**	**Borough**
QUEENS CENTRAL–CHILDREN'S LIBRARY	23	664	641	2787%	QUEENS
QUEENS CENTRAL	193	3312	3119	1616%	QUEENS
ROCHDALE VILLAGE BRANCH	66	1059	993	1505%	QUEENS
LAURELTON BRANCH	115	1211	1096	953%	QUEENS
WOODSIDE BRANCH	166	685	519	313%	QUEENS
FAR ROCKWAY BRANCH	141	523	382	271%	QUEENS
FOREST HILLS BRANCH	278	920	642	231%	QUEENS

1. This analysis includes only those branches whose tech training programs had at least 500 attendees in 2015.
2. "NYC's Tech Profile," Center for an Urban Future, August 2015.
3. Ibid.

LIBRARIES TEACH TECH is a publication of the Center for an Urban Future written by Jonathan Bowles, researched by Kathleen Gorman, edited by Eli Dvorkin, and designed by Ahmad Dowla. Photo of Bronx Library Center by Ross Mantle.

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