

SEATTLE COMMUNITY DATA: NORTHEAST REGION

SEATTLE PUBLIC LIBRARIES AND OPEN DATA LITERACY PROJECT BY KARALYN OSTLER

INTRODUCTION

This report is a brief summary of the findings from the Open Data Literacy (ODL) project “Beyond Census Data: Using Open Data to Understand Communities Around Public Libraries,” which aims to transform external open data into actionable intelligence for Seattle Public Library (SPL) frontline staff. This report includes an assessment of data needs of SPL staff based on interviews with two regional managers, a collection of links to available data sources and datasets relevant to the northeast region of Seattle, a link to interactive maps of SPL branches and census data, and a breakdown of statistics for the communities around each branch of the northeast region.

DATA NEEDS OF REGION

To find what information would be most useful to SPL frontline staff, I started with interviewing two regional managers. I interviewed Francesca Wainwright, the regional manager for the northeast region, and Wei Cai, the regional manager for the southeast region. Both regional managers expressed a desire for more granular data that looked at smaller geographic areas closer to individual branches. Overall, there were a variety of characteristics about the community that could be helpful information for the staff in the northeast region, specifically:

- Age
- Unemployment and Employment rates
- Education
- Language
- School enrollment type (private versus public)

Because of the limited time frame for this project, I chose to focus on finding and visualizing datasets for age, household income, language spoken at home, and school type enrollment.

DATA SOURCES AND DATASETS

Based on the information found in the interviews, I started searching open data portals for socioeconomic and demographic datasets in Seattle. Some of the available open data sources for information Seattle data are:

- City of Seattle Open Data Portal: <https://data.seattle.gov>
- Washington State Open Data Portal: <https://data.wa.gov/>
- Data.gov: <https://www.data.gov/>
- U.S. Census Bureau: <https://www.census.gov/>

From all the above data sources and based on the specific information needs expressed by regional managers, the U.S. Census Bureau emerged as the best data source for finding information about communities in Seattle. The Census Bureau conducts a variety of censuses and surveys and releases counts and estimates yearly based on the information collected. The American Community Survey (ACS) 2017 estimates were the most recent data released by the Census Bureau and had information about age, median household income, language spoken at home, and school enrollment type. This data was what I used to produce maps and statistics found in the findings section.

Some additional dataset topics that are available from the Census Bureau and could be used in future projects:

- Disability
- Income by size of household
- Housing Costs
- Poverty Status
- Etc (More topics can be found at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

FINDINGS

To get statistics for each library branch, I averaged all the values for the census tracts that fell within about 1 mile of the branch. In the sections below, each branch has an age, income, language, and school enrollment section. The age section for each branch has average median age, a breakdown of percentage for each age range for the population in the area, and a table of statistics derived from an internal SPL dataset of borrowers for comparison with the census data. Income has the average median household income for the area. Language spoken at home is divided by language and school enrollment type is divided by private and public school

and by grade level. All census statistics found below are also available on interactive maps as described in the next section. Each value is an estimate and may not represent the exact population.

INTERACTIVE MAPS

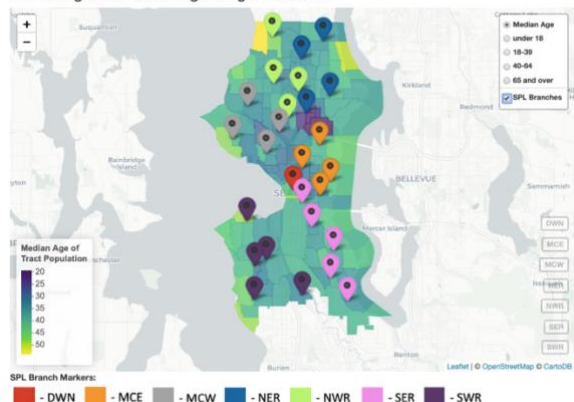
City of Seattle Census Data

Welcome!
Below you will find four interactive maps of the city of Seattle with data from the U.S. Census Bureau. These maps are intended for use by Seattle Public Library staff to better understand the communities around each library branch. Data is based on 2017 American Community Survey estimates.

Click on a census tract or branch location below to see statistics for each area.

Age Map Income Map Language Map School Map Help

Median Age and General Age Range Breakdown



This data dashboard was created for SPL as a part of the Open Data Library project. ODL is funded by a grant from the Institute of Museum and Library Services, Laura Bush 21st Century Librarian Program. Grant number 07-5285.

To visualize the datasets in a way that SPL staff could easily find specific information, I created an application with a set of four interactive maps that can allow the user to click through the various SPL branch locations and surrounding census tracts to find relevant statistics for the community. Each map covers a topic of interest: age, income, language spoken at home, or school enrollment type. The maps can be accessed via <https://kostler.shinyapps.io/SPL-Seattle-Census-Data/>. These maps can be shared with anybody, within SPL and beyond. All census bureau statistics in this report are included on this map.

Screenshot of map dashboard. Dashboard is available at:

<https://kostler.shinyapps.io/SPL-Seattle-Census-Data/>

LAKE CITY BRANCH

AGE

Average Median Age: 39.48 years old

Age Range	% of the Population within about 1 mile
Under 18	17.82 %
18-39	35.33 %
40-64	31.85 %
65 and over	15 %

SPL Borrower Data:

Average Median Age: 43.62 years old

Age Range	2017 % of total Borrowers at branch	2018 % of total Borrowers at branch
Under 18	12.61 %	11.00 %
18-39	34.99 %	33.8 %
40-64	36.2 %	37.09 %
65 and over	16.21 %	18.11 %

INCOME

Average Median Household Income: \$ 83,785.70

LANGUAGE SPOKEN AT HOME

Language	% of the Population within about 1 mile
Only English	72.74 %
Spanish	6.48 %
Other Indo-European	5.3 %
Asian and Pacific Island	10.65 %
Other Languages	4.82 %

SCHOOL ENROLLMENT TYPE: PUBLIC VERSUS PRIVATE

	% of the enrolled students within about 1 mile	
Grades	Private School	Public School
All grades	32.93 %	67.07 %
Preschool	8.25 %	5.63 %
K-4	8.1 %	26.76 %
5-8	12.89 %	18.23 %
9-12	3.67 %	16.44 %

NORTHEAST BRANCH

AGE

Average Median Age: 34.53 years old

Age Range	% of the Population within about 1 mile
Under 18	16.14 %
18-39	46.22 %
40-64	26.43 %
65 and over	11.21 %

SPL Borrower Data:

Average Median Age: 41.93 years old

Age Range	2017 % of total Borrowers at branch	2018 % of total Borrowers at branch
Under 18	17.38 %	17.32 %
18-39	27.95 %	28.14 %
40-64	37.72 %	36.8 %
65 and over	16.94 %	17.74 %

INCOME

Average Median Household Income: \$ 90,091.25

LANGUAGE SPOKEN AT HOME

Language	% of the Population within about 1 mile
Only English	79.52 %
Spanish	2.53 %
Other Indo-European	5.5 %
Asian and Pacific Island	11.47 %
Other Languages	0.97 %

SCHOOL ENROLLMENT TYPE: PUBLIC VERSUS PRIVATE

	% of the enrolled students within about 1 mile	
Grades	Private School	Public School
All grades	36.88 %	63.12 %
Preschool	10.88 %	3.93 %
K-4	8.45 %	26.30 %
5-8	12.43 %	18.13 %
9-12	5.11 %	14.76 %

NORTHGATE BRANCH

AGE

Average Median Age: 36.52 years old

Age Range	% of the Population within about 1 mile
Under 18	16.45 %
18-39	40.31 %
40-64	30.73 %
65 and over	12.51 %

SPL Borrower Data:

Average Median Age: 39.88 years old

Age Range	2017 % of total Borrowers at branch	2018 % of total Borrowers at branch
Under 18	12.42 %	11.71 %
18-39	42.7 %	42.33 %
40-64	33.28 %	33.29 %
65 and over	11.59 %	12.67 %

INCOME

Average Median Household Income: \$ 82,219.31

LANGUAGE

Language Spoken at Home	% of the Population within about 1 mile
Only English	77.54 %
Spanish	5.06 %
Other Indo-European	4.97 %
Asian and Pacific Island	9.95 %
Other Languages	2.48 %

SCHOOL ENROLLMENT TYPE: PUBLIC VERSUS PRIVATE

	% of the enrolled students within about 1 mile	
Grades	Private School	Public School
All grades	35.88 %	64.12 %
Preschool	12.06 %	4.34 %
K-4	8.78 %	26.7 %
5-8	12.43 %	18.13 %
9-12	5.11 %	14.76 %

UNIVERSITY BRANCH

AGE

Average Median Age: 30.63 years old

Age Range	% of the Population within about 1 mile
Under 18	10.76 %
18-39	59.42 %
40-64	21.54 %
65 and over	8.28 %

SPL Borrower Data:

Average Median Age: 36.8 years old

Age Range	2017 % of total Borrowers at branch	2018 % of total Borrowers at branch
Under 18	5.64 %	5.17 %
18-39	59.26 %	60.77 %
40-64	25.87 %	24.83 %
65 and over	9.23 %	9.23 %

INCOME

Average Median Household Income: \$ 79,080.07

LANGUAGE SPOKEN AT HOME

Language	% of the Population within about 1 mile
Only English	78.99 %
Spanish	2.87 %
Other Indo-European	5.66 %
Asian and Pacific Island	11.73 %
Other Languages	0.76 %

SCHOOL ENROLLMENT TYPE: PUBLIC VERSUS PRIVATE

	% of the enrolled students within about 1 mile	
Grades	Private School	Public School
All grades	33.53 %	66.47 %
Preschool	12.29 %	3.9 %
K-4	6.84 %	29.15 %
5-8	10.87 %	19.65 %
9-12	3.53 %	13.77 %

CONCLUSIONS

The U.S. Census Bureau provides a lot of insightful information about communities in Seattle and this project only touched on a few datasets available. There is further exploration that can be done using Census data, both in combination with other available datasets and with future data releases from the Census Bureau.

The interactive maps and this report provide a quick summary of statistics for populations closest to branches in the northeast region. These statistics are intended to help guide staff to parts of the community where prioritized populations might be located.

ABOUT ODL

The University of Washington Information School's Open Data Literacy (ODL) project works with public institutions to create, manage and publish open data. These projects range from working with data policy to curating datasets for publication. ODL is funded by a grant from the Institute of Museum and Library Services, Laura Bush 21st Century Librarians Program. Grant number 67-5285.

PROJECT RESOURCES

GitHub Repository with code: <https://github.com/OpenDataLiteracy/SPL-KO>

Map Dashboard: <https://kostler.shinyapps.io/SPL-Seattle-Census-Data/>

Have questions about this project? Email Karalyn Ostler at kostler@uw.edu