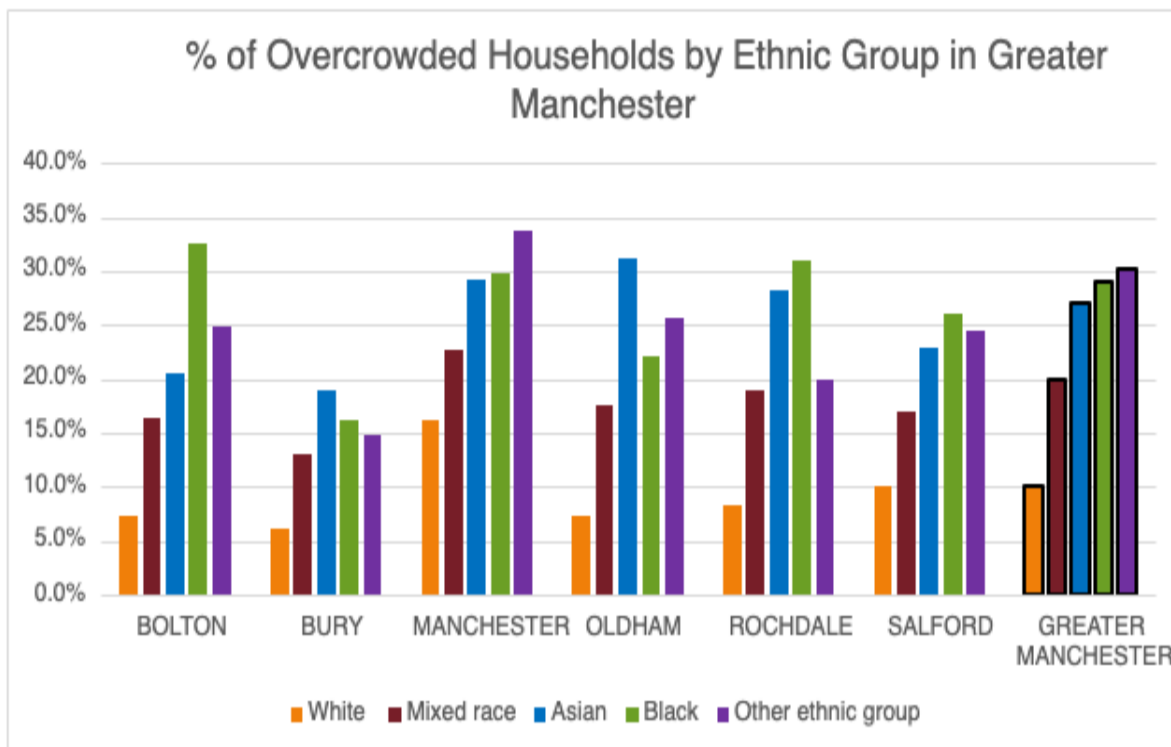


Using Census for Social Analysis- UK Data Service

# Developing toolkits to help others analyse social data with Excel.

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Graph showing the level of overcrowded households in Manchester by ethnic group, created following instructions in the toolkits.

## Overview of the Data Fellowship

My data fellowship project was to create training materials on how to use Excel to analyse different types of social data. The main focus was on Census data, but I also looked at the World Bank and survey data. These 'toolkits' outlined tasks to be completed with the provided data, and are intended to be used in schools to teach IT or numeracy, or in offices which may need to analyse this data. I first had to find the data myself, and refine it so it would be manageable enough to be used with the toolkits. I then used Excel to analyse the data, create graphs and ask relevant questions to get the participants thinking more about the results of the data and its impact. I analysed Census 2011 data, recent World Bank data and the British Social Attitude surveys of 2017 and 2019.

## Data Analysis

The analysis was mainly done using Excel. This included filtering the data and making it easier for the people using the toolkits to follow the activities. Therefore, I carefully chose meaningful and interesting variables from very large datasets.

Most of the toolkits began with a simple univariate example, and then proceeded with more advanced multivariate activities. These activities included calculating averages, percentages, creating different types of graphs and including weights in quantitative analysis. I also learnt how to create a map using QGIS, which was a completely new skill which I really enjoyed.

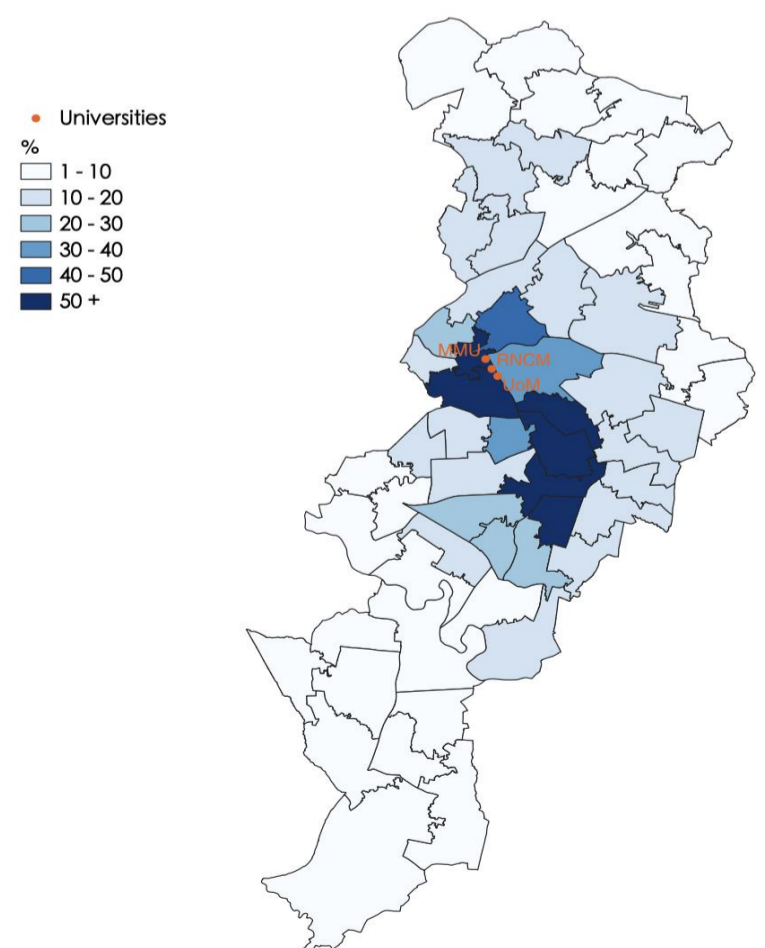
The toolkits covered a range of topics from different types of data. Using Census 2011 data, I analysed the distribution of the student population in Manchester and the levels of overcrowded households in Greater Manchester. Data on the number of refugees entering and leaving a country from the World Bank was also explored. People's attitudes towards climate change were analysed using BSA data.

I also wrote questions after the analysis activities to allow people to consider the possible effects of the results seen. As my degree is in English Language, this allowed me to learn more about social issues. For example, I learnt more about how large student populations impact the local community, and the extent of the effects on people living in overcrowded households.

## Key Skills Learnt

- Excel and Microsoft skills- the fellowship developed my skills in this area massively. I am particularly grateful to have advanced these skills as it is beneficial in the workplace.
- Organising data- as I was working with large datasets, I had to choose which variables to analyse and filter the data accordingly.
- Time management- I was allowed to manage my own time and work from home at times. This meant I had to learn how to effectively manage my time.
- Independent work- There were times where I was left to my own devices completely, with less supervision for 2 weeks. This was a challenge at first but it greatly improved my confidence.
- Communication- I spoke and presented my work in a team meeting. I explained my project and the process involved and asked for feedback.

Percentage of Students in Usual Population of MSOAs in Manchester (Census, 2011).



Map showing the distribution of the student population in Manchester.