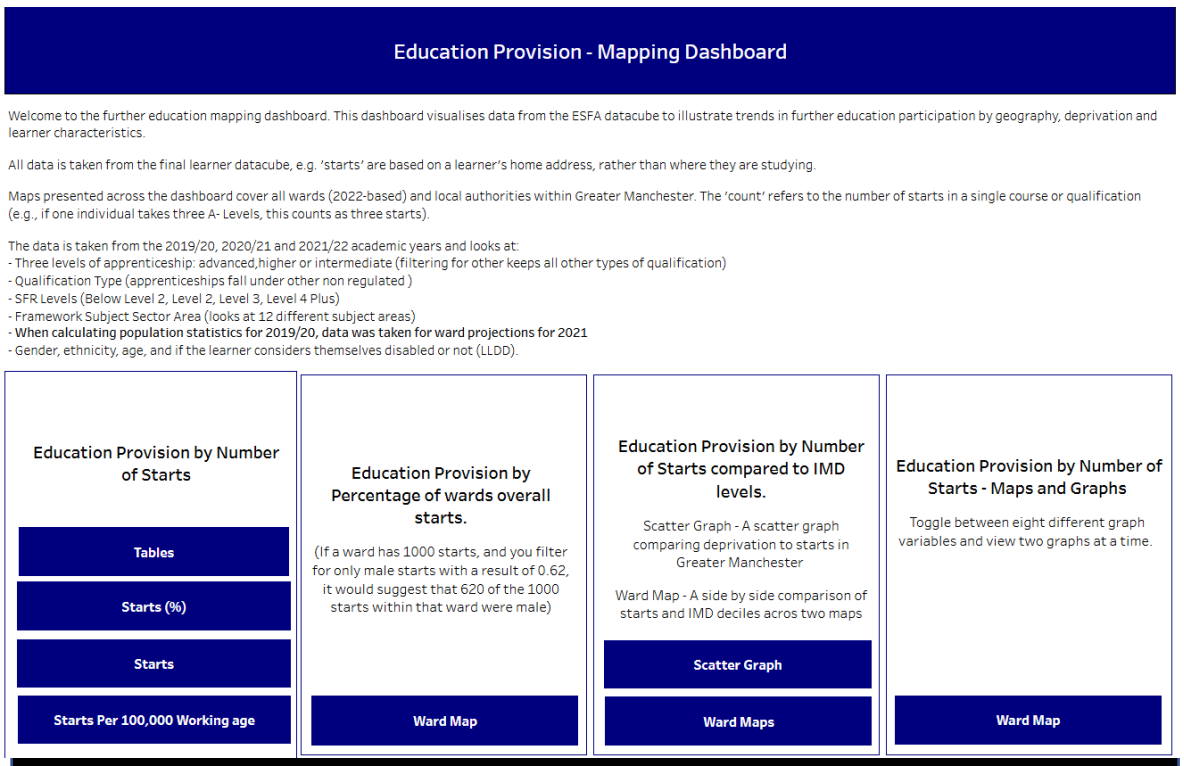


The image above is the homepage of the dashboard created, showing the source of the data and the navigation options available (in the blue

Overview of the Data Fellowship

Working with the Skills and Employment department in the GMCA to map further education trends within Greater Manchester. Over the summer I worked within the Greater Manchester Combined Authority (GMCA) office and used data from the Education and Skills Funding Agency (ESFA) to present a dashboard in Tableau to ease visualisation of data, helping further use and application of the data within the GMCA . Alongside this I did other data cleaning projects and a forecasting presentation around the potential of an increase in Manchester residents living under the national living wage . The projects undertaken all helped me understand how data can be applied in real world situations to benefit people around you.

Data Analysis

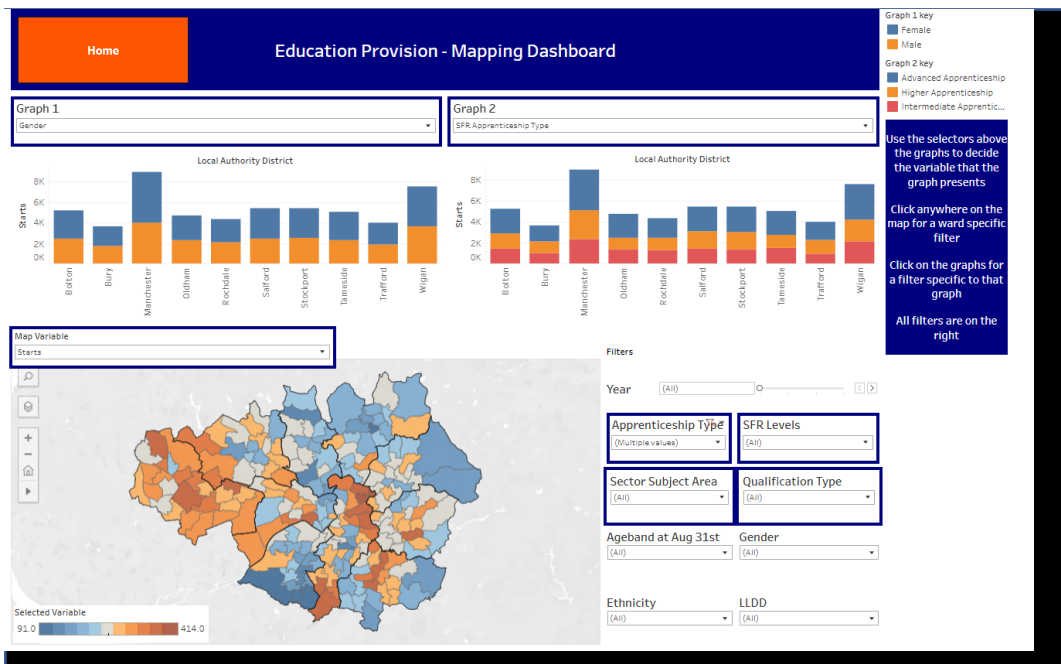
We Used data from the ESFA data cube between the years of 2019 and 2022. The data looked at the number of starts in education, so for example how many people in Rochdale started an apprenticeship in the year 2020. We split the data up between the; year, Levels of apprenticeship (advanced, higher, or intermediate), qualification type, subject area , gender, ethnicity ,age, and if the learner considers themselves disabled or not. Through these filters on the dashboard an individual can discover their own analysis. A user can also filter between; total number of starts, starts per 1000 working age population, and % of all starts in that year. The dashboard offers bar charts, tables, scatter graphs, and ward maps. For example, when looking at the scatter graph area of the dashboard a user can select to compare all apprenticeship starts against the index of Multiple Deprivation (IMD) level in that ward.

Findings

There are many different takeaways a user can get from the dashboard. The Scatter graph to the right shows the relationship between apprenticeship starts in Greater Manchester and the IMD levels of each ward. The lower an IMD score the more deprived an area is seen to be. As we can see there is a negative relationship between the two. Other findings from the dashboard have helped visualise the divide between Manchester and the surrounding local authorities. Qualifications such as diplomas have been located within the Manchester Local Authority, whereas apprenticeships are heavily offered in the Bolton area compared to their other qualifications.

Key Skills Learnt

Throughout the Q-Step data fellowship, I gained valuable new skills. I was introduced to Tableau for the first time, and I expanded my proficiency in R. This experience has also strengthened my analytical capabilities and enhanced my ability to work with large datasets.
Most Importantly, completing the fellowship with the GMCA provided me with invaluable exposure to a professional, collaborative environment, whilst exposing me to strategic decision-making on a regional level and how cross-functional teams address complex social and economic challenges. This experience helped me build professional confidence, enhanced my communication skills, and taught me how to work effectively within a structured, goal-oriented organization.



One of the Dashboards showing the filters and graphs that are available to users. The map is filtered for all apprenticeship starts.

The scatter graph dashboard showing a scatter graph with a line of best fit comparing starts of apprenticeships (X-axis) against the Deprivation level (IMD) (Y-Axis) . Lower IMD levels represent a more deprived area.