

# SOCIAL NETWORK ANALYSIS ON SCHOOL HEADS AND SECONDARY SCHOOLS

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## INTRODUCTION

To study the factors that can contribute to educational inequality, reductionistically investigating factors within the school structure and how it interacts with each other holds merit. Within school leadership, the role most important to the management of schools is with the School Head. To study this a type of analysis method called social network analysis can be used.

## AIM

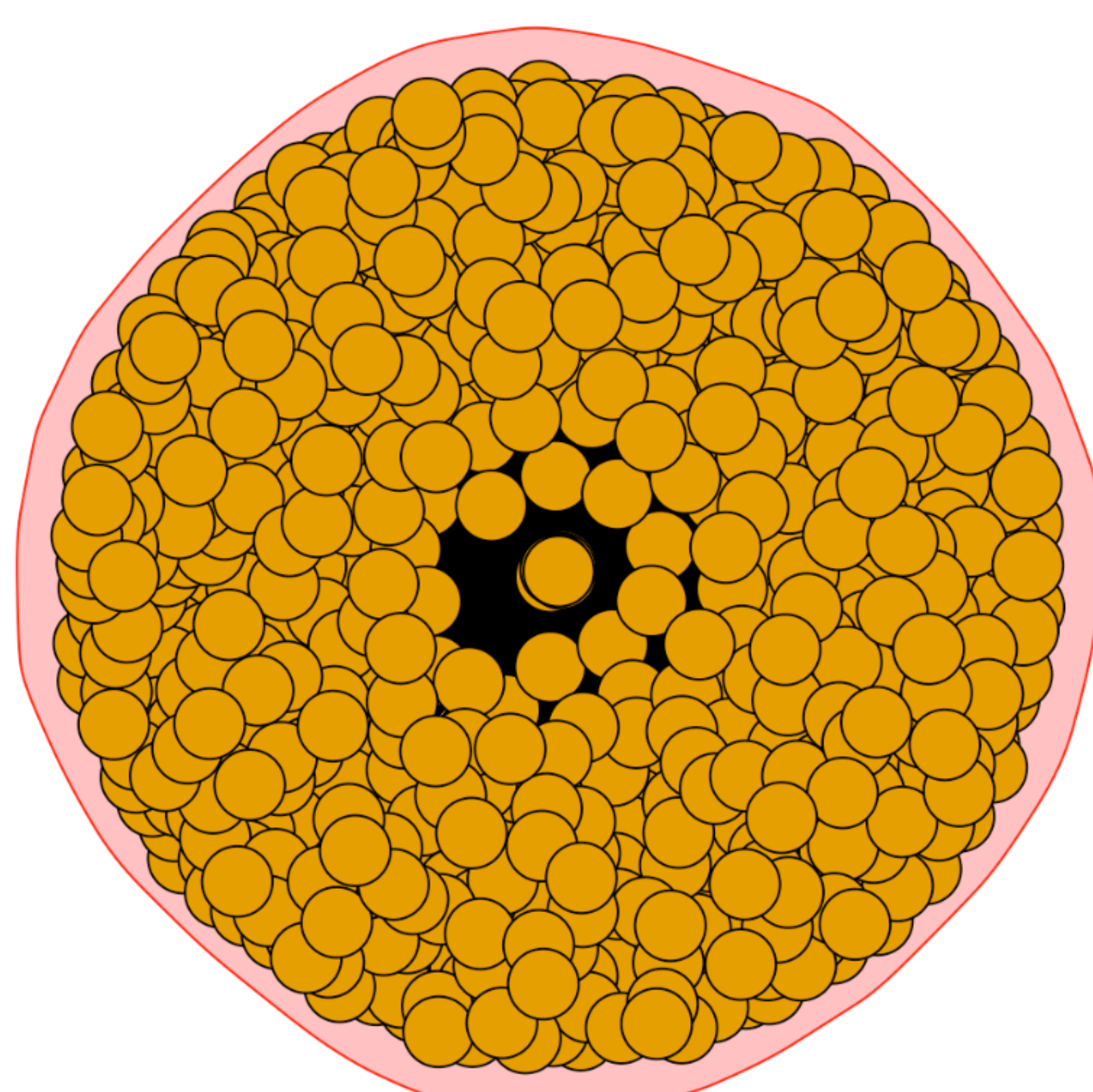
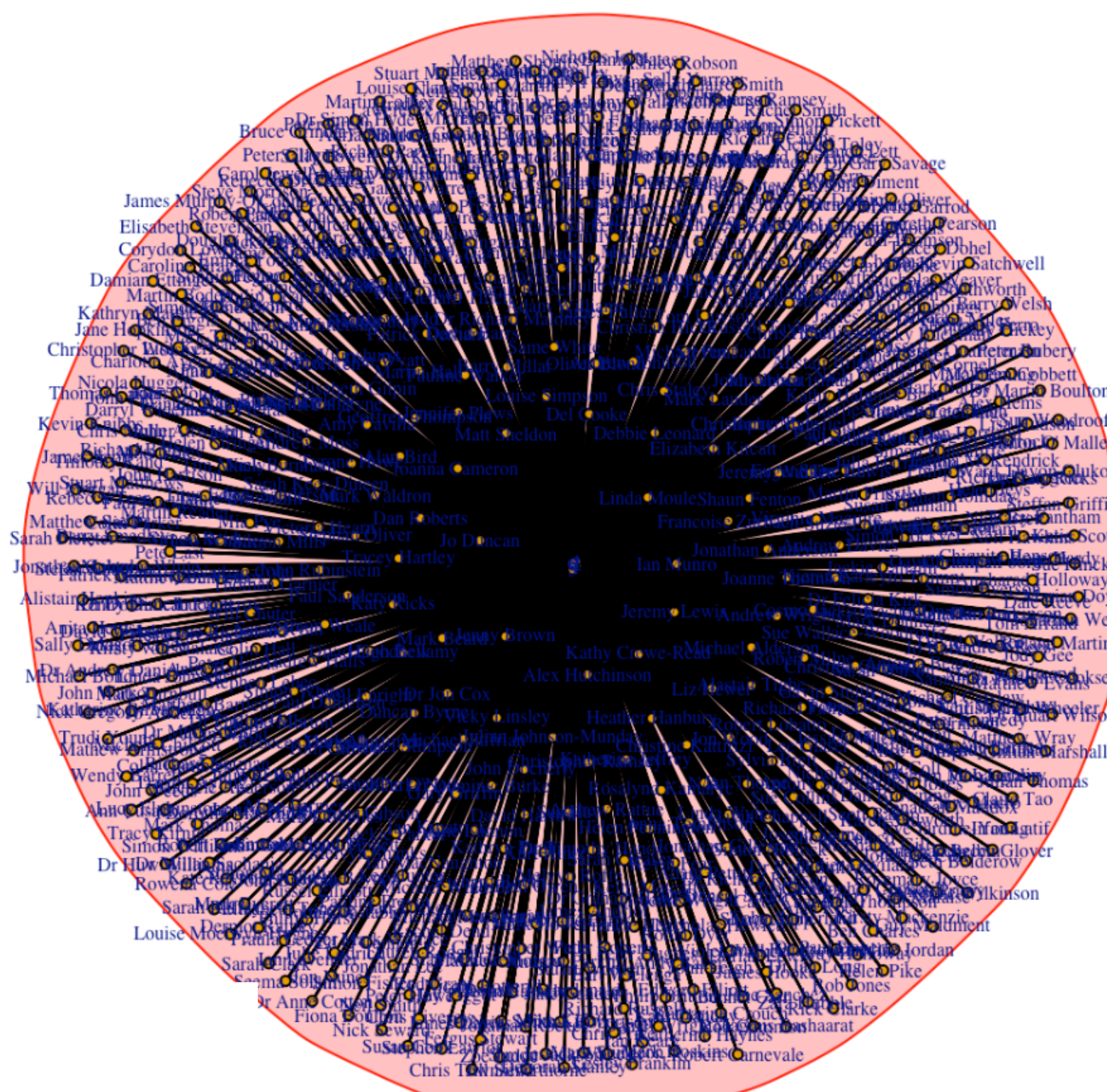
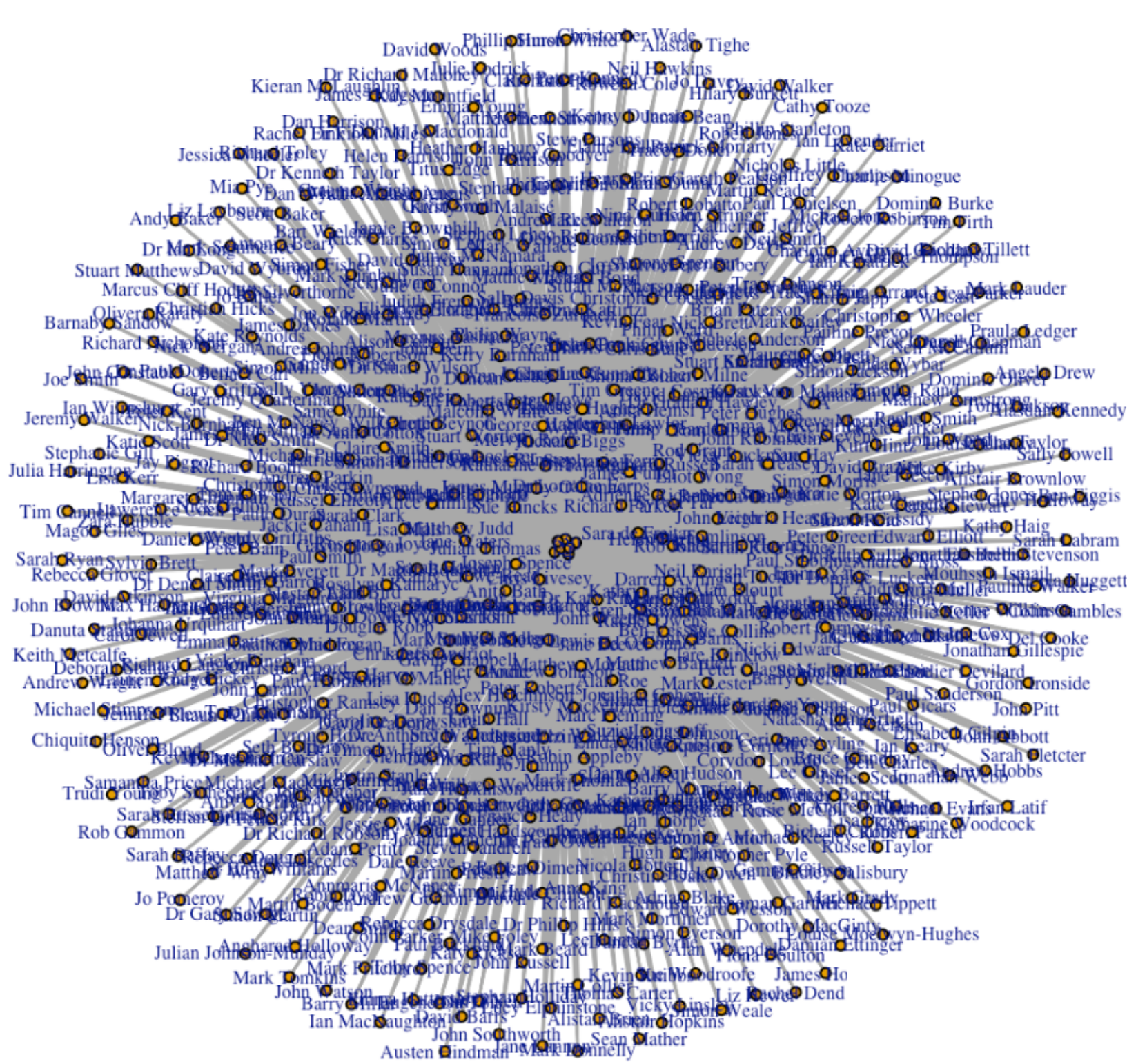
My research aims to create and begin introductory analysis in social network of school heads of private schools and elite state schools by using social network analysis to identify differences and theorize how these differences can lead to educational inequality.

## METHODOLOGY

Information was obtained from the Good Schools Guide 22nd Edition. Once data collection was finished, the dataset was cleaned so that alternate names of the same institution, positions and subject were consolidated into one. Initials of institutions were used wherever possible for ease of reading and better comprehension.

Data analysis was conducted on R. Using the tidyverse package, data was first converted from wide form to long form into a bipartite edge list. To then conduct one of the core elements of social network analysis, which is to visualise the network, the igraph package on R was used to plot the connections between schools and headteachers. Once visualised, introductory analysis was conducted by running community detection algorithms. The Newman-Girven Edge-Betweenness algorithm and the Label Propagation algorithm was used.

## RESULTS



## DISCUSSION

The shape is quite circular with many nodes spiking out and a community of headteachers/schools at the very center of the social network. Given the shape of the social network, it can be interpreted that the nodes at the edges of the social network may be headteachers or schools that are not very well established while the community at center is the core of the school/teaching community in UK. Additionally, the social network is one big network, rather than being made up of different communities with edges that connect between them as if this was the case, there would be different coloured circles encircling different communities. As such, this suggests the secondary school education industry is quite intertwined with each other with no distinct communities.