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Using Bourdieu and Networks to Place Student Data in a Societal Context

Gender and class disparities are a common trend in science participation at high school and university, with subjects such as physics and computer science tending to have an over representation of male students, and subjects like health being increasingly represented by female students. The current study utilised data from the New Zealand Integrated Data Infrastructure (IDI) to investigate these trends in fine grain detail. The IDI is an incredibly rich set of datasets from New Zealand, which includes data from the Ministry of Education, the 2013 Census, and other records that have been joined at an individual level. Sociological theory related to the work of Pierre Bourdieu was employed as a research framework, enabling results to be placed in the complex context society. Bourdieu was an advocate for Correspondence Analysis, a method of representing multidimensional data in 2-dimensional space. He argued that this method provides a “true representation” of society. The current study builds on Bourdieu’s work by employing network analysis to investigate course selection patterns. As network and correspondence analysis provide two different methods of analysing the same underlying data matrix, results present a rich description of science course selection trends in New Zealand.