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UNEQUAL REPRESENTATION OF SOCIOECONOMIC CLASSES IN STEM EDUCATION

Pallavi Amitava Banerjee

Schhol of Education, Durham University, Durham, UK

Educational research has focussed on the shortage of participation of certain socioeconomic classes in Science and Mathematics secondary education and Science Technology Engineering and Mathematics (STEM) tertiary education over the last few decades. Consequently, Government policies ensured implementation of planned STEM activities across England to raise the aspirations of students in Primary and secondary schools. This research project attempts to evaluate how effective have some of these STEM initiatives been in improving the educational attainment and progression rates of students from disadvantaged backgrounds during and after compulsory education. Have these schemes been able to promote learning trajectories outweighing barriers to participation?

The inquiry builds up on secondary data analysis and is followed up by an experiment based on a sample obtained from secondary schools across England using the sampling criteria of eligibility for free school meals. In order to map the existing literature a systematic review was conducted to estimate the representation of socioeconomic classes in STEM education. The review focussed on research conducted in England from January, 2000 to December, 2013. A total of thirteen databases were searched and conference papers and proceedings, reports, dissertations and peer reviewed journal articles were included in the study. In addition to the hits obtained, articles known to authors were included. The overall aim of the review in line with prevalent concern was to estimate the changes brought about in the population of England as a result of the widening participation agenda during the last 13 years. Studies addressing immediate and long-term aims of curriculum reforms, programme evaluations, factors affecting attainment and changing politics of education were amongst the prominent few of the many analysed. Research findings from the systematic review will be summed up and presented which suggest a drift towards improvement during the last thirteen years.

The study would be useful for researchers, policy makers and anyone interested in improvement or evaluation of Science education as it sums up some of the major steps taken and changes accrued.

*Email address for Correspondence p.a.banerjee@durham.ac.uk