Evaluation and development of a data science curriculum to increase motivation and ambition for further study and careers in Computing and STEM

ESRC DTP Collaborative Studentship

Mathematics Education Centre, Loughborough University and David and Jane Richards Family Foundation

The Midlands Graduate School is an accredited Economic and Social Research Council (ESRC) Doctoral Training Partnership (DTP). One of 14 such partnerships in the UK, the Midlands Graduate School is a collaboration between the University of Warwick, Aston University, University of Birmingham, University of Leicester, Loughborough University and the University of Nottingham.

Loughborough University, as part of Midlands Graduate School is now inviting applications for an ESRC Doctoral Studentship in association with our collaborative partner David and Jane Richards Family Foundation (DJRFF) to commence in October 2020. The project will be supervised by Professor Tim Jay, Dr Colin Foster, and Emily Dreimann.

This collaborative project is a unique opportunity for a student to evaluate and contribute to the design of a data science curriculum created by the David and Jane Richards Family Foundation (a charitable foundation created by David Richards, CEO of WANdisco; djrff.org), with input from industry and academic experts. This curriculum is designed to give Key Stage 3 pupils an introduction to key concepts and methods in data science, and also, importantly for this project, to increase motivation and ambition to engage with further study and careers in Computing and STEM. The curriculum is currently being used in eight secondary schools, with plans to expand further in coming years. This project will evaluate the current curriculum, contribute to our understanding of engagement and ambition in Computing and STEM among a diverse pupil population, and contribute to the further development of the data science curriculum.

This project would suit a student with some experience working with schools and secondary-school-aged children, and who has an interest in mixed-methods research designs in Education. The successful candidate will gain experience and confidence in using a range of research methods – likely including surveys, observations, interviews and focus groups. They will have a strong interest in STEM learning at secondary level, and in encouraging participation in STEM activities and education among diverse student groups. Some experience of curriculum development, and interest or experience in data science, could be an advantage, but is not essential at this stage. The student will need to spend time in Loughborough and in Sheffield (HQ of DJRFF) and so should be prepared to travel to both sites – support for travel expenses will be included in the funding for this project.
Application Process

To be considered for this PhD, please complete the Collaborative Studentship application form available online here and email this to Denise Wade (d.j.wade@lboro.ac.uk), ESRC Doctoral Training Partnership Administrator at Loughborough University. Shortlisted applicants will also be required to provide two references.

Application deadline: 9am, Monday 2nd March

We expect to hold interviews on Wednesday 11th March

Midlands Graduate School ESRC DTP

Our ESRC studentships cover fees and maintenance stipend and extensive support for research training, as well as research activity support grants. Support is available only to successful applicants who fulfil eligibility criteria. To check your eligibility, visit: www.mgsdtp.ac.uk/studentships/eligibility/

Informal enquiries about the research project or about the Mathematics Education Centre at Loughborough University prior to application can be directed to Dr Colin Foster (c.foster@lboro.ac.uk).