

Job title	Research Associate/Fellow	Job family and level	Research and Teaching Level 4 (CTG) / Research and Teaching Level 4
School/ Department	Education	Location	Jubilee Campus

Purpose of role

The Observatory for Mathematical Education is generating state-of-the-art, evidence-driven, and policy-relevant research to improve mathematical education and learner outcomes in England as well as longer-term benefits for individuals and society. Its remit stretches through primary and secondary education, to undergraduate study and postgraduate research in mathematics, and one of its focuses is on mathematical excellence.

The Observatory's research programme comprises three parts, the first of which is the analysis of secondary datasets (e.g. the National Pupil Database, Higher Education Statistics Agency) and panel surveys (e.g. the Millennium Cohort Study) within a secure Data Lab. The second part is the Observatory's three longitudinal cohort studies comprising national surveys and institutional case studies. The third area of the Observatory's work includes proactive and reactive projects (e.g. evaluations, interventions). The work programme will enable the Observatory team to explore how learner pathways and outcomes in mathematics education are impacted by social background, institutions, locations, policies, interventions, time, curriculum, teaching, parents and peer groups.

This role holder will contribute to all aspects of this work, with a particular focus on the national cohort studies. They will be involved in the management, cleaning, descriptive analysis and statistical modelling of large data sets, in collaboration with the Observatory team and senior researchers. They will also contribute to the annual design of research instruments for the cohort studies, and might also be involved in case study research, as appropriate. The role holder will support other Observatory projects as required.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time
1	Research and data analysis - Generate, analyse and evaluate primary data, supporting survey design, case study research and other projects. - Analyse, interpret and evaluate research findings based on secondary data sources (e.g. NPD, HESA). - Support the delivery of original research of international excellence as part of the Observatory team and contribute to the achievement of the Observatory's research objectives. - Plan and manage own research activity, in collaboration with Observatory colleagues, to meet Observatory deadlines for quantitative analyses. - Assist in the delivery of the Observatory's research objectives and the Observatory's bids for research grant applications.	75%
2	Engagement, Communication and Dissemination	15%

	▪ Draft papers for publication in leading peer-reviewed journals and assist in the drafting of formal project reports for Observatory stakeholders. ▪ Contribute to the dissemination of the Observatory's findings at national/international conferences. ▪ Support the Observatory's other researchers through writing internal reports and participation in regular Observatory-wide research meetings.	
3	Administration and Personal Development ▪ Contribute to the management and cleaning of the Observatory's primary and secondary data. ▪ Contribute to collaborative decision making with Observatory colleagues. ▪ Contribute to organising the Observatory's resources and facilities, and arrange meetings and workshops as appropriate. ▪ Engage with appropriate training and network with other quantitative researchers using official statistics and education data.	10%

Person specification

	Essential	Desirable
Skills	▪ Ability to assess and organise resource requirements and deploy effectively. ▪ Ability to apply relevant research techniques, methods, and models. ▪ Ability to analyse and interpret data and reports to bring new insights. ▪ Excellent communication skills, including the ability to clearly communicate complex information in academic writing and presentations. ▪ Excellent organisational, time-management and multi-tasking skills. ▪ The ability to build positive relationships and to work independently and as part of a multidisciplinary team.	▪ Ability to foster a research team culture.
Knowledge and experience	▪ Expert knowledge and practical experience of quantitative research methods and statistical techniques. ▪ Proven ability to produce research of high quality. ▪ Experience of working with large and complex datasets. ▪ Background knowledge of mathematics education in England. ▪ Knowledge of relevant literatures. ▪ Networking, actively engaging with and valuing other areas and diverse groups.	▪ Knowledge of approaches to dealing with missing data and multi-level modelling. ▪ Published papers in relevant academic journals. ▪ Experience of working as part of a research team. ▪ Experience of studying and/or teaching mathematics in England.

	▪ Experience of R (or other appropriate statistical computing software).	
Qualifications, certification and training (relevant to role)	▪ PhD or equivalent in mathematics education, quantitative social science or similar (or close to completion). ▪ Have (or be eligible to apply for) ONS approved researcher status.	



Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

Valuing people	Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
Taking ownership	Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
Forward thinking	Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
Professional pride	Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
Always inclusive	Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others

