

Research Associate

Centre for Early Mathematics Learning: Causal Mechanisms

Job Ref: REQ260116

Project Description:

Following a £10m grant from the ESRC, Loughborough University is seeking to appoint highly-motivated Research Associates to join the Centre for Early Mathematics Learning (CEML). The centre is led by Loughborough University in collaboration with academics from the universities of Bristol, Edinburgh, Oxford, York, London School of Economics and Political Science, and University College London.

CEML aims to transform research in early mathematics education by revealing new understanding of children's early mathematical learning, designing and evaluating educational resources based on the science of mathematical learning, and working with teachers, early years practitioners and families to translate these findings to practice.

The work of the Centre is organised across five Challenges. The Postdoctoral Research Associate role will be a position to work in Challenge 2 for a duration of 12 months. This Challenge uses a range of methods to further our understanding of the development of early mathematical skills and the causal relationship between specific mathematics skills and mathematics achievement.

Applicants should have a PhD in psychology, education or a related discipline, and a desire to work in an interdisciplinary centre focused on early mathematics learning.

Job Description

Job Family and Grade: Specialist and Supporting Academic Grade 6

Job Purpose

PDRA Centre Challenges 2: Causal Mechanisms

The postholder will be expected to work independently and take the lead in day-to-day management of specific research activities under the supervision of CEML investigators. In collaboration with investigators, they will carry out the delayed post-test phase of a randomised control trial. They will lead on data collection in schools, with the support of graduate and undergraduate research assistants. They will also contribute to an ongoing systematic review on numerical predictors of mathematical development. The postholder will further be involved in analysing and interpreting data collected, disseminating results, as well as in the preparation of draft manuscripts for journal publication.

Job Duties

- Be responsible for the day to day running of research studies.
- Work in close collaboration with the Centre's Partnership Development Manager to organise the delayed post-test in schools and to maintain positive relationships with education settings.
- Supervise the work of graduate and undergraduate research assistants.
- Analyse data under supervision of the investigators.
- Write up regular progress reports and present outcomes to the investigators.
- Contribute to draft manuscripts suitable for publication in high-quality academic journals.
- Contribute to impact and knowledge exchange activities.

- Comply with ethical procedures and data protection requirements and ensure that intellectual property (IPR) agreements are not violated.
- Engage in training programmes in the University (or elsewhere) that are consistent with the needs and aspirations of the Centre.
- Undertake other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

Points To Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility outlined in the document.

Organisational Responsibility

Reports to the: Senior Lecturer in Mathematical Cognition

Direct Reports: N/A

Budget Responsibilities: N/A

Person Specification

Your application will be assessed based on the essential and desirable criteria listed below.

Applicants are strongly encouraged to explicitly demonstrate how they meet each essential (and desirable) criteria at the application stage. The criteria that you need to demonstrate in your application will be listed as Stage 1 in the table below.

Stages of assessment are as follows:

- 1 – Criteria measured within the Application
- 2 – Criteria measured at Test/Assessment Centre/Presentation
- 3 - Criteria measured at Interview

Essential Criteria:

Area	Criteria	Stage
Experience	Background in psychology, education or a related discipline	1
	Experience conducting quantitative cognitive behavioural studies	1,3
	Authoring original work for academic journal papers or conference proceedings	1
	Demonstrated awareness of the latest developments in research design	1,3
Skills and abilities	Proficiency in experimental research methodologies	1, 3
	Proficiency in conducting standardised assessments and/or other cognitive measures	1,3
	Excellent written and oral communication skills	1,3
	Self-motivated with ability to meet deadlines	1,3
	Excellent interpersonal, and organisational skills	1,3
	Working knowledge of statistical software packages (e.g., R, SPSS, JASP etc)	1

	Ability to write project reports and make technical presentations to academic research groups	1
	Knowledge of relevant Health & Safety issues	3
Training	Demonstrate evidence of having undertaken further training	1
Qualifications	PhD (or near completion)	1
Other	Uphold and actively contribute to the University's commitment to Equity, Diversity and Inclusion.	1,3
	Eligible to work with children, an enhanced DBS check is required.	3

Desirable Criteria: These are skills, experience and competencies that are additional extras that may be used to narrow the pool down if we receive a high volume of applications that meet the essential criteria.

Area	Criteria	Stage
Experience	Experience conducting research in mathematical cognition	1,3
	Experience working with children	1,3
	Experience engaging with schools in a research context	1,3
	Working in a high-quality academic research environment	1
	Experience of supervision of research staff	1,3
	Experience with systematic reviews/meta-analyses	1,3
Skills and abilities	Authoring original work, in the highest quality refereed academic journals	1
	A strong publication track record	1

Conditions of Service

The appointment will be subject to the [University's Terms and Conditions of Employment](#) relevant to the job grade.

Shared University Responsibilities

As a member of the Loughborough community, you are expected to:

- Take reasonable care of yourself, others and the environment, and to prevent harm by your acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Sustainability Policies & Procedures.
- Support and contribute to the University's commitment to Equity, Diversity, and Inclusion (EDI), while carrying out all duties in a way that respects these principles and upholds the right to free expression. Further information about EDI at Loughborough and our strategic aims is available on our website.

Our Purpose, Vision, and Values

Our purpose, Vision and Values underpin all that we do and shape how we work together at Loughborough.

We're proud to promote our values: **Adventurous, Collaborative, Creative, Authentic** and **Responsible**. Our people bring these values to life every day, and they are central to the positive and supportive culture that makes Loughborough unique.

If you join us, you'll be encouraged to bring these values to life in your own work and contribute to the positive, supportive culture that makes Loughborough unique.

Read more about our [vision and values](#).

Our Accreditations



We strive to create a culture that supports equity and celebrates diversity throughout the campus. The University holds a [Bronze Athena SWAN award](#) which recognises the importance of support for women at all stages of their career.



We are proud to be a [Race Equality Charter Member](#). The Charter aims to improve the representation, progression and success of all minority ethnic staff and students within higher education and address issues of racism within higher education institutions (HEIs).



We are proud to be a Disability Confident Employer and have adopted a proactive approach to employing disabled people and to creating a more diverse workforce. We ensure that our recruitment processes are inclusive and accessible. We guarantee to offer an interview to all applicants who have declared a disability, provided that the essential criteria for the role are met. We proactively anticipate and provide reasonable adjustments and support existing employees who acquire a disability or long-term condition to thrive in the workplace.



We are a real living wage employer, and our Living Wage Employer Mark shows our commitment to paying our staff according to the cost of living.



We are proud supporters of the [City of Sanctuary movement](#) and delighted to be recognised as a University of Sanctuary. This national network brings together, university staff, lecturers, academics, and students, who together work to make Higher Education institutions places of safety, solidarity and empowerment for people seeking sanctuary.

***Disclosure and Barring Service Check:** This post is subject to the Rehabilitation of Offenders Act (Exceptions Order) 1975 and as such it will be necessary for a submission for a Disclosure to be made to the Disclosure and Barring Service (formerly known as CRB) to check for any previous criminal convictions.

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.