

Research Associate in *Mathematical Cognition*

Designing and evaluating a novel board game to improve early numerical skills

Job Ref: REQ210665

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Project Description

This project aims at developing, in collaboration with expert game designers, a number game that will be optimised based on teachers and children's feedback to achieve high playability. When ready, the research team will run a randomised controlled trial to evaluate the effectiveness of the game in improving early numerical skills. We will organise workshops, create instructional videos, and write blog posts to engage teachers and parents to support the project, disseminate findings, and promote future studies.

Job Description

Job Grade: Specialist and Supporting Academic Grade 6

Job Purpose

An enthusiastic research assistant is sought to work with Dr Francesco Sella and Prof Tim Jay on a project funded by the Nuffield Foundation. The aim of the project is to design and subsequently evaluate the efficacy of a number game in improving numerical skills in primary school children.

The successful applicant will be involved in the design of the game, and will be responsible for recruiting participants, data collection and initial analysis. In addition, they will have the opportunity to contribute to interpretation and write-up of the research.]

Job Duties

- To liaise with primary schools to recruit participants for research studies and conduct studies both at Loughborough University and at external sites.
- To take an active role in the collation and analysis of data using a variety of methods and tools.
- To contribute to aspects of dissemination of results such as writing methods and results sections of publications and preparing conference posters, blogposts, instructional videos.
- To take advantage of appropriate professional development opportunities, such as conference attendance and participation in the general academic life of the Centre for Mathematical Cognition Mathematics Education Centre.
- To contribute to the design and development of experimental studies, including use of computerised experimental software.
- To liaise closely with primary school teachers as part of a collaborative project.
- Any other duties appropriate to the grade and role of the post holder.
- Be responsible for conducting the day to day running of the project.
- To support the project team by enhancing relationships with existing collaborators and by assisting the establishment of relationships with new collaborators.
- To contribute to project promotion and public engagement events.
- To feed back to the project team on progress, to make recommendations for next steps.

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 entailed.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equality & Diversity policy and procedures at all times. Duties must be carried out in accordance with relevant Equality & Diversity legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Respecting Diversity and, where appropriate, Recruitment and Selection.

Organisational Responsibility

Reports to [Principal Investigator: Dr Francesco Sella]

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	Interest and knowledge in developmental or educational psychology (e.g., final year project or options).	1, 3
	Experience of running relevant cognitive psychology experiments with children.	1, 3
	Familiarity with a school environment.	1, 3
Skills and abilities	Methodological skills appropriate for the research project, including quantitative data analysis.	1, 3
	The ability to communicate effectively orally and in writing with colleagues, teachers and parents.	1, 3
	Good interpersonal skills that can be applied to interactions with child participants in the study, their parents and teachers.	1, 3
	Self-motivated with ability to meet deadlines.	1, 3
	Familiarity with statistical software (e.g., R, Python).	1, 3
	Ability to write project reports and make technical presentations to industrial and academic research groups.	1, 3
Training	Demonstrate evidence of having undertaken further training.	1, 3
Qualifications	A good honours degree, or equivalent, in psychology (or a related subject) or PhD (or near completion).	1
Other	Commitment to observing the University's Equal Opportunities policy at all times.	1, 3

Desirable Criteria

Area	Criteria	Stage
Experience	Interest in the learning of mathematics.	1, 3
	Interest in intervention to improve mathematical learning.	1, 3
	Experience of working in a primary school classroom.	1, 3
	Working in a high quality academic research environment	1, 3
Skills and abilities	Familiarity with experiment generator software (e.g., ePrime or equivalent).	1, 3
Qualifications	PhD (or near completion) in psychology, education, computer science	1, 3
Other	Ability to travel independently throughout the East Midlands.	1, 3

Conditions of Service

The position is fixed term from 01/11/2021 to 30/10/2022. Salary will be on Specialist and Supporting Academic Grade 6, £30,942-£38,017 per annum, at a starting salary to be confirmed on offer of appointment.

The appointment will be subject to the University's Terms and Conditions of Employment for STAFF GRADES 6 AND ABOVE details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which can be found [here](#).

The University offers a wide range of employee benefits which can be found [here](#).

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>)

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality 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 academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>

Applications

The closing date for receipt of applications is **27/08/2021**. Interviews will be held on **06/09/2021**.