UNIVERSITY OF SURREY

Research Role Profile

Job Title:	Research Fellow A in Psychology

Responsible to:	Head of research group, or principal investigator

Responsible for:	Not applicable

Job Summary and Purpose:
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

Main Responsibilities/Activities
To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research. Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research. Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity. To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control. To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate. The post holder may occasionally be required to supervise more junior research staff.

UNIVERSITY OF SURREY

Research Role Profile

Person Specification
The post holder must have: A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years experience in specified / relevant fields. The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

Relationships and Contacts
Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

Special Requirements
To be available to participate in fieldwork as required by the specified research project

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.

- Help maintain a safe working environment by:

  - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand

  - Following local codes of safe working practices and the University of Surrey Health and Safety Policy

- Undertake such other duties within the scope of the post as may be requested by your Manager.

UNIVERSITY OF SURREY

Research Role Profile

Addendum

This document provides additional information relating to both specific aspects of the post/faculty and any post specific person specification criteria. The information contained within this document should always be read in conjunction with the accompanying generic Job Purpose.

Job Title:	Research Fellow in Psychology

Bee Spatial – Randomised Control Trial for Primary Mathematics

The Project

Spatial ability involves perceiving the location and dimension of objects and the relationships between them (e.g., map-reading, packing a suitcase), and is associated with expertise in Science, Technology, Engineering and Mathematics (STEM). Meta-analytic evidence demonstrates that spatial training increases children's spatial skills, with positive transfer to mathematics (Hawes et al., 2022). Furthermore, many spatial interventions have demonstrated the largest gains for children from disadvantaged backgrounds (Bower et al., 2020; 2022; Schmitt et al., 2018). Despite this robust research literature, the domain of spatial thinking is less regularly targeted for intervention compared to the number domain.

Bee Spatial is a 'spatialised' maths classroom-based programme designed for Year 3 children (7- 8-year-olds) and delivered by their teachers during their usual mathematics lesson timeslots. Bee Spatial draws on many spatial skills (e.g., part-whole relationships, spatial visualisation and spatial representation), supported by spatial language and gesture. We will measure spatial and mathematics ability, and attitudes to mathematics before and after the two-term Bee Spatial programme. We predict that children who take part in the Bee Spatial programme will demonstrate improved spatial abilities and mathematics performance, and improved attitudes to mathematics.

In Phase 1, we will complete development work to ready Bee Spatial for trial. This will include writing ethics applications, drawing on existing Bee Spatial pilot material to extend it to the current efficacy trial (including teaching slides, guidance, professional development, and child assessments), as well as creating templates for practitioners to support implementation and evaluation (e.g., attendance and monitoring logs). Finalisation of these documents will be iterative via focus groups. You will also support the project officer with school recruitment.

In Phase 2, we will deliver the Bee Spatial programme to 40 schools (alongside 40 control schools). The intervention includes professional development (delivered by existing team members), followed by a two-term intervention (implemented by practitioners, with support from the Bee Spatial team), and pre- and post data collection.

The Role and its Responsibilities

In Phase 1, you will support the development work for the Bee Spatial trial, including reviewing the teaching slides and guidance (lead: Jane Brown, Head of Primary Maths, White Rose Maths). You will lead on adapting and extending existing Bee Spatial data collection materials (including surveys, child assessments) and other intervention

preparation (including ethics applications). You will organise and run focus groups to gain feedback on created resources. In Phase 2, you will support the implementation of the Bee Spatial programme. This includes completing four online check-ins with up to 25 schools (supported by a Research Assistant who will complete the remaining check-ins). You will lead on data collection for monitoring and evaluation purposes (including child assessment marking validation, surveys, focus groups) and data analysis. You will contribute to report writing, presentations, and publications.

You will be part of a strong team of experts in spatial cognition and mathematics, and in intervention research. Prof. Emily Farran directs the CogDeV lab (lead unit, University of Surrey), an internationally recognised centre for spatial-mathematics research and impact and is a member of the Centre for Educational Neuroscience (CEN) management committee, which aims to further translational research across neuroscience, psychology and education. Prof. Camilla Gilmore (Director of the ESRC Centre for Early Mathematics Learning) investigates research and practice in Early Years and KeyStage 1 mathematics. Jane Brown is Head of Primary Maths at White Rose Maths, the lead mathematics resource provider for primary maths.

You will be responsible to Prof. Emily Farran in the School of Psychology, University of Surrey. The post will be based in the Department of Psychological Sciences, within the University's School of Psychology, Faculty of Health and Medical Sciences.

You are welcome to contact Prof. Emily Farran (e.farran@surrey.ac.uk) if you would like further information or would like to discuss the post.

Person Specification

This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Job Purpose.

Qualifications and Professional Memberships	**Essential/ Desirable**
A PhD (or near completion) or equivalent qualification in Psychology or a related subject	Essential
Experience in conducting cognitive behavioural studies and preparing data for analysis.	Essential
Experience of statistical analysis	Essential
The ability to write clearly and concisely with a good publication record commensurate with the level of your career.	Essential
The ability to work independently, as well as proven ability to work collaboratively as part of a research team with excellent organisation and communication skills.	Essential

UNIVERSITY OF SURREY

Research Role Profile

Experience of working in a primary school classroom or conducting research with childhood populations.		Essential
Experience of reporting findings to non-academic audiences.		Essential
A background in spatial cognition and / or mathematical cognition and / or cognitive intervention.		Desirable
Familiarity with open science / open research practices.		Desirable
Experience working with non-academic partners, preferably schools, including school recruitment, liaising with school staff and delivering teacher training and professional development.		Desirable
Special Requirements	**Essential/ Desirable**	**Level 1-3**
Eligible to work with children (an enhanced DBS will be required).	E	
Clean driving licence	D	

Key Responsibilities

You will be required to

1. Contribute to the day-to-day management of the project, in line with the agreed objectives of the project to ensure that goals are achieved.
2. Communicate effectively with the Bee Spatial project team and schools.
3. Comply with ethical procedures and data protection requirements.
4. Lead on creating and adapting Bee Spatial data collection material.
5. Lead focus groups, and code and use focus group outcome data to adapt the intervention materials.
6. Support the delivery of the Bee Spatial programme to schools.
7. Contribute to report writing, presentations, publications, including leading on at least one first author paper.
8. Undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post.

N.B. The above list is not exhaustive.