UNIVERSITY OF SURREY

Research Role Profile

Job Title:	Research Fellow A

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	
Job Title:	Research Fellow in Psychology

SPAtial Cogniton to Enhance mathematical learning (SPACE)

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). In our recent meta-analysis (Hawes et al., 2022) we evidenced that spatial training increases children's achievement in mathematics, with an effect equivalent to half the annual gain (~6 months) in mathematics. Furthermore, many spatial interventions have demonstrated the largest gains for children from disadvantaged backgrounds (Bower et al., 2020b; 2021; 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.

The SPAtial Cognition to Enhance mathematical learning (SPACE) programme is a Lego construction intervention designed for 6- to 7-year-old children. SPACE is modelled on our successful Block Construction for Mathematics (BLOCs) programme, which is currently being implemented with older children. Lego construction draws on many spatial skills (e.g., mental rotation, part-whole relationships, visuo-spatial working memory) as well as problem-solving skills that are vital to mathematics learning. We predict that children who take part in the SPACE programme will demonstrate mathematics improvement, with the largest gains for children from disadvantaged backgrounds.

In Phase 1, we will create the SPACE intervention material by adapting and expanding the BLOCs intervention to be suitable for 6- to 7-year-olds. This involves increasing our training provision for practitioners and challenge testing the intervention material with children.

In Phase 2, we will deliver the SPACE intervention to fifteen schools. The intervention includes a half day training session with practitioners at each school, followed by a six-week intervention (implemented by practitioners, with support from the SPACE team). The SPACE intervention requires children to build up to six Lego models per session using pictorial instructions. Each week has a story theme.

UNIVERSITY OF SURREY

Research Role Profile

The Role and its Responsibilities

You will be responsible for creating the training material, SPACE booklets and manuals, and other intervention preparation (including ethics applications). These will be based on existing BLOCs material and our spatial reasoning toolkit. You will assess children on our proposed SPACE intervention sessions and adapt as necessary. You will be responsible for managing the creation of all Lego packs (supported by research assistants and the project administrator). In Phase 2, you will deliver training to school staff and support the implementation of the SPACE intervention in ten schools and train a Graduate Research Assistant to support five schools. Throughout the project you will support the project administrator and the wider SPACE team in school recruitment, liaising with schools and liaising with the independent project evaluators. You will lead on a project summary report and an end of project review, and 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. The CogDeV lab (lead unit, University of Surrey; co-directors: Prof. Emily Farran, Dr. Katie Gilligan-Lee) is internationally recognised for spatial-mathematics research and impact. The ESRC Centre for Early Mathematics Learning (Director: Prof. Camilla Gilmore, Member: Prof. Tim Jay) investigates research and practice in Early Years and KeyStage 1 mathematics. Prof. Emily Farran and Prof. Denis Mareschal are members of the Centre for Educational Neuroscience (CEN) management committee, which aims to further translational research across neuroscience, psychology and education. LEARNUS, represented in SPACE by Prof. Derek Bell, is a Think-tank which acts as a bridge between research, the classroom, and policy makers.

You will be responsible to Prof. Emily Farran and Dr Katie Gilligan-Lee in the School of Psychology, University of Surrey and Prof. Camilla Gilmore, Mathematics Education Centre, Loughborough University. 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

UNIVERSITY OF SURREY

Research Role Profile

Qualifications and Professional Memberships		**Essential/ Desirable**
A PhD (or near completion) or equivalent qualification in Psychology, Education 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
Experience of working in a primary school classroom or conducting research with childhood populations.		Essential
Experience of reporting findings to non-academic audiences, e.g., reporting of assessments to teachers and parents.		Essential
A background in spatial cognition and / or mathematical cognition and / or cognitive intervention.		Desirable
Familiarity with open science / open research practices.		Desirable
Experience supervising and managing more junior researchers, e.g., placement students, undergraduate students, or research assistants		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 (a DBS will be required).	E	
Clean driving licence	D	
Key Responsibilities		

UNIVERSITY OF SURREY

Research Role Profile

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 SPACE project team, schools, and the independent evaluation team.
3. Supervise and co-ordinate research assistants involved in the project.
4. Comply with ethical procedures and data protection requirements.
5. Lead on creating and adapting SPACE intervention material.
6. Assess children with SPACE intervention materials, and code and use outcome variables to adapt the intervention materials.
7. Deliver SPACE training to educational practitioners.
8. Contribute to report writing, presentations, publications.
9. Lead the writing of project summary reports for practitioners and an end of project review.
10. 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.