

Appointment of Research Associate or Assistant (one post, full-time or part-time)

Effecting Principled Improvement in STEM Education (*epiSTEMe*): Student Engagement and Learning in Early Secondary-School Physical Science and Mathematics

The University of Cambridge

The University of Cambridge is one of the oldest universities in the world and one of the largest in the United Kingdom. Its reputation for outstanding academic achievement is known world-wide and reflects the intellectual achievement of its students, as well as the outstanding original research carried out by the staff of the University and the Colleges.

The Faculty of Education

The Faculty of Education at the University of Cambridge is committed to the highest standards of research and teaching and is a significant contributor to the improvement of educational policy and practice in partnership with schools, colleges and other educational agencies both in the UK and internationally.

The Faculty is one of the largest groups of educational researchers and teacher educators in the country. Currently, the Faculty has an academic staff of 10 professors, six readers and some 50 lecturers/senior lecturers, over 60 research and teaching staff and 50 assistant staff in support of teaching, research, outreach projects, finance, library, IT, audio-visual, buildings, etc.

The Faculty has a diverse research profile, currently with annual grant expenditure of over £2.5 million, from a range of sponsors including the Research Councils and a wide range of government departments and national agencies active in Education. The Faculty has a varied teaching programme with full- and part-time courses for over 1600 postgraduate and undergraduate students undertaking a range of qualifications; PhD, EdD, MPhil, MEd, Advanced Certificate and Diplomas, BA in Education Studies. Further information about the Faculty is available at www.educ.cam.ac.uk

The Faculty has five Academic Groups. Information about the groups is available at <http://www.educ.cam.ac.uk/research/academicgroups/>

The Project

The postholder will join the final phase of a high-profile project which is funded by the Economic and Social Research Council [ESRC] as part of its Targeted Initiative on Science and Mathematics Education. Further details of the *epiSTEMe* project are available at <https://www.educ.cam.ac.uk/research/projects/episteme/>.

The project has developed a teaching intervention in early-secondary mathematics and science and collected a substantial pre-structured data corpus over the course of a quasi-randomised field trial. The data come from mathematics and/or science classes in 25 intervention and control schools, were captured through structured test, questionnaire and observational instruments, and have already been coded. The work that remains to be done is to complete preliminary statistical analyses of data from certain instruments and construct composite variables, to prepare structured files and carry out the main statistical analyses, and to write the associated technical reports.

You will be part of a team, also comprising the Principal Investigator (Professor Kenneth Ruthven), Co-Investigators (Professor Christine Howe, Professor Neil Mercer, Dr Keith Taber), and another (part-time) Research Associate (Dr Riikka Hofmann).

Reporting Chain

You will report to the Project Director/Principal Investigator (Professor Kenneth Ruthven). You will carry out specific work packages under the direction of the particular Investigator with lead responsibility for that package.

Responsibilities of the Post

Subject to final confirmation, if appointed as a **Research Associate** you will:

- Conduct the statistical work noted above and prepare technical reports, within guidelines provided by the Principal and Co-Investigators;
- Contribute to the drafting of research publications arising from the project;
- Carry out any additional duties as may reasonably be required within the general scope and level of the post.

Subject to final confirmation, if appointed as a **Research Assistant** you will:

- Conduct the statistical work noted above and prepare technical reports, with guidance from the Principal and Co-Investigators.
- Carry out any additional duties as may reasonably be required within the general scope and level of the post.

Person Specification

For appointment as a **Research Associate**, *essential* qualities include:

- excellent skills in statistical data preparation and analysis including hierarchical linear methods, through use of PASW/SPSS and a package such as HLM or MLwiN;
- a strong understanding of statistical methods and modelling;
- good interpersonal skills and the ability to liaise with a range of professionals;
- the capacity to work independently within guidelines provided;
- a PhD in a relevant discipline (or equivalent training, experience and achievement in research);
- the capacity to draft reports and contribute to writing for publication.

For appointment as a **Research Associate**, *desirable* qualities include:

- broad-based understanding of educational research and research methods;
- good understanding of school mathematics and/or physical science.

For appointment as **Research Assistant**, *essential* qualities include

- excellent skills in statistical data analysis including hierarchical linear modelling, through use of PASW/SPSS and a package such as HLM or MLwiN;
- good interpersonal skills and the ability to liaise with a range of professionals;
- the capacity to work independently with appropriate guidance;
- a Masters in a relevant discipline (or equivalent training, experience and achievement in research).

For appointment as **Research Assistant**, *desirable* qualities include

- the capacity to draft reports and contribute to writing for publication.
- broad-based understanding of educational research and research methods;
- good understanding of school mathematics and/or physical science.

The vacancy

The vacancy arises from the resignation following maternity leave of the previous holder. The appointment is funded for around 4.5 months f.t.e. (depending on the level of appointment). There is some flexibility over starting date and working pattern, subject to a requirement that the work be completed by autumn 2012.

The postholder will report to the Project Director/Principal Investigator (Professor Kenneth Ruthven) and will be based in Cambridge. The preference is for candidates who meet the essential criteria for appointment at the Research Associate level, but consideration will also be given to candidates who meet the essential criteria for appointment at the Research Assistant level. You should indicate which appointment you wish to be considered for, and explain how you meet the essential criteria for appointment at the Research Associate or Assistant level as appropriate. In

particular, your application should demonstrate in suitable detail how you satisfy the first criterion concerning statistical analysis.

Starting Date

The start date is open to negotiation, subject to the proviso that it enables the work to be completed by autumn 2012.

Salary

The appointment will be made on the Research Associate scale, currently £27,428-£35,788 pa per annum, or Research Assistant scale, currently £23,661-£26,629 pa, (*pro rata* for a part-time post) according to qualifications and experience.

Hours of Work

No fixed pattern of hours for attendance are laid down as working hours are arranged in consultation with the Project Supervisor to fit the nature of the work. The General Board expects the average full-time working week to be in the region of 37-40 hours a week.

Applications

Applications, comprising an application cover sheet (CHRIS/6) giving the names and addresses of three referees (to include your current/most recent employer), a full *Curriculum Vitae*, and a covering letter, should be sent **by post** to Pauline Mason, University of Cambridge Faculty of Education, 184 Hills Road, Cambridge CB2 8PQ to arrive on or before the closing date of **Monday 27 February 2012**. Our intention is to interview shortlisted candidates on Thursday 15 March 2012. Please indicate in your application if you would be available for interview on this day.

Regrettably, we are unable to acknowledge receipt of your application unless you enclose a stamped, self-addressed postcard/envelope.

Informal enquiries to: Kenneth Ruthven at kr18@cam.ac.uk

CLOSING DATE FOR APPLICATIONS: MONDAY 27 FEBRUARY 2012

Equal Opportunities Information

The University of Cambridge appoints solely on merit. No applicant for an appointment in the University, or member of staff once appointed, will be treated less favourably than another on the grounds of sex (including gender reassignment), marital or parental status, race, ethnic or national origin, colour, disability (including HIV status), sexual orientation, religion, age or socio-economic factors.

Information if you have a Disability

The University welcomes applications from individuals with disabilities. Our recruitment and selection procedures follow best practice and comply with disability legislation.

The University is committed to ensuring that applicants with disabilities receive fair treatment throughout the recruitment process. Adjustments will be made, wherever reasonable to do so, to enable applicants to compete to the best of their ability and, if successful, to assist them during their employment.

We encourage applicants to declare their disabilities in order that any special arrangements, particularly for the selection process, can be accommodated. Applicants or employees can declare a disability at any time.

Applicants wishing to discuss with or inform the University of any special arrangements connected with their disability can, at any point in the recruitment process, contact, Pauline Mason, who is responsible for recruitment to this position, by email on **pam26@cam.ac.uk**

For additional guidance and information, applicants can contact the HR Business Manager responsible for the department they are applying to via hrenquiries@admin.cam.ac.uk.

Proof of right to work

The University has a legal responsibility to ensure that all employees are eligible to live and work in the UK. Therefore, before you commence work, the University must confirm your eligibility to live and work in the UK. To confirm eligibility you will be asked to bring certain original documents to your interview and a copy will be taken. All offers of employment are made subject to verification of eligibility to work in the UK.