

<b>Institution: University of Nottingham</b>
<b>Unit of Assessment: 25</b>
<p><b>a. Overview</b></p> <p>The Unit of Assessment maps on to the School of Education, with the exception of one staff member returned under UoA 22 and one from Psychology returned here. 25 staff (24.6 FTE) are returned here. Research in the School is organised into four units: the Centre for Research in Mathematics Education (<b>CRME</b>); the Centre for Research in Schools and Communities (<b>CRSC</b>); the Centre for Research on Higher, Adult and Vocational Education (<b>HAVE</b>); and the Learning Sciences Research Institute (<b>LSRI</b>). Strategic overview is provided by the Research Strategy Group (RSG), which meets six times a year. Its membership comprises the School Research Director; the Head of School; four Centre Directors; the PGR Director; one other professor elected by the professoriate; the School Manager and the Research Administrative Manager.</p>
<p><b>b. Research strategy</b></p> <p>Since 2008, 500 research outputs have been published by eligible staff. New research awards have totalled more than £11 million including 13 RCUK research grants. The School has had 109 external research partners, 10 ECRs have been appointed to R&amp;T posts and 163 PGRs (plus a further 15 EdDs in Hong Kong) have completed successfully.</p> <p>These achievements derive from the School's research strategy, which aims to produce and communicate high quality education research that is oriented towards improving the learning and well-being of all. Research has particularly been concentrated on improving mathematics teaching and learning; understanding the working lives of teachers; strengthening school leadership; evaluating technology-enhanced learning; analysing higher education pedagogies; and promoting human development through international post-school education policies.</p> <p>The strategy was developed through a series of staff workshops during 2008 and subsequently reviewed annually by RSG. In order to deliver high quality research that contributes to improved educational policy and practice, the Research Strategy focuses on:</p> <ol style="list-style-type: none"> <li>1. maximising the quality of bids, outputs and communications;</li> <li>2. building strategic partnerships; and</li> <li>3. developing the capacity of both staff and PGRs.</li> </ol> <p><b>1. Maximising research quality:</b> <i>the School has focused on building research excellence for all staff and PGRs through improved bidding, writing and communication.</i></p> <p><i>Bidding</i> has been supported through the institution of annual individual developmental meetings with the Research Director to discuss short- and medium-term bidding plans. It is also included in the University's annual performance review process. Staff are encouraged to request additional funding to support travel costs to meet potential partners / funders. Both the School and the Centre for Advanced Studies (CAS- see below) have run workshops and bootcamps on writing RCUK and the British Academy bids. The School supports bids with seed money, often in partnership with University structures such as CAS and the Integrating Global Society research priority group (IGS). The School also underwrites staff time on strategic projects, including British Academy small grants and mobility projects. CAS has developed a new approach to demand management and peer review for the Arts and Social Sciences faculties. In 2012, a "shadow college" of senior academics was established, advising a grant review panel comprising the relevant Deans, CAS Director and peer review coordinator. The School has made a significant contribution to the improvement in AHRC success rates with four projects and two studentship awards. The value of new research awards to the School for FY2012-13 was more than double that of the previous year.</p> <p><i>Academic writing</i> has been supported through regular workshops, including sessions led by Thomson, who has published extensively on academic literacies. Joint workshops have been held with the Open University. All R&amp;T staff have annual meetings with a senior researcher to discuss their publications. Development plans have been put in place to offer further writing support. Research-active staff receive funding for conference attendance. Additional international conference funding is available through competitive School and University processes. In the 2013 QS subject ranking, the School was 2<sup>nd</sup> in the UK on the H-index and 3<sup>rd</sup> on citations by paper.</p> <p><i>Research communication</i> has been improved by revamping the School website and developing a strong social media presence. Individual staff have developed their online presence: including five professors with strong twitter followings, and <b>Thomson's</b> blog averages 800+ hits a day. Several</p>

user-focused websites have been developed: the Gates-funded MAP project site containing mathematics resources for classroom use in the US ([www.map.mathshell.org](http://www.map.mathshell.org) - see impact case study) received nearly one million visits in the 2012-13 academic year.

**2. Building strategic partnerships:** *the School has targeted international, national and local partnerships with key educational change agents, and academic partnerships both within the University and with other universities.*

*Strategic international partnerships* have been identified and financially supported. High level University support has been given to key partnerships (e.g., from the Vice-Chancellor regarding UNESCO); international business development officers have been appointed (e.g., to support EU bids); and strategic inter-University partnerships have been initiated (e.g., with Lund). The School has paid particular attention to relationships with statutory research agencies in the BRICS countries, resulting in collaborations with social science research councils in China, Russia and South Africa on higher, adult and vocational education. The UNESCO Chair of the Political Economy of Education (established within the School in 2005) was renewed in 2011 and this partnership has been built upon by awarding visiting professorships to senior UNESCO staff; hosting major UNESCO-related public events; and knowledge exchange activities including professorial secondments (e.g., **McGrath** was lead author of the 2013 World Report on Technical and Vocational Education and Training - see impact case study). **Morgan** is Chair of the UK National Commission and co-chairs UNESCO's Senior Experts' Group on rethinking the seminal Delors Report. Other international collaborations include nine EU projects and seven projects under RCUK / UK government international schemes. This has involved working with over 100 partners, resulting in 80 outputs jointly authored with international collaborators. Visiting Professors come from 12 universities and from major international organisations.

*National partnerships with key organisations* have been central to the School's strategy to diversify funding and to maximise impact (see REF3a). School and University leadership have built relationships with the National College for Teaching and Leadership (NCTL- see impact case study) and the British Film Institute (BFI). Financial support for partnerships has come from School, University and RCUK Knowledge Exchange funding. School and RCUK doctoral studentships have been awarded to support partnerships with the BFI, Tate Gallery and the National Trust; PGR interns have worked with Pearson Education and the NCTL. Educational materials produced and widely circulated by organisations such as the NCTL and the Bowland Trust are built upon research conducted in the School, and Pearson have licensed materials for use in a new tablet-based mathematics curriculum for US schools (see impact case study).

*Local partnerships* have been developed with cultural, heritage and community organisations as well as with large numbers of schools and FE colleges. RCUK studentships have been awarded for work with the Broadway Cinema and the Papplewick Pumping Station. School and community learning resources have been developed as a result of these local partnerships.

*Interdisciplinary work* has expanded. School staff play key roles in University interdisciplinary initiatives, including CAS and IGS (directed by **Thomson** and **McGrath** [from 2013] respectively). School staff initiated a new network on Intellectual and Developmental Disability and are active members of the Children & Childhood and Knowledge Without Borders Networks (KWBN); the Centre for Trauma, Resilience and Growth; and the China Policy Institute. The School has partnered the new School of Veterinary Medicine in researching innovative pedagogic practices. Income to the University from research collaborations with 14 other Schools totalled more than £42 million.

*Other universities in the UK* are regular partners. There have been research collaborations with 24 other UK HEIs, including the Institute of Education, the Open University, Birmingham, Oxford and Manchester. School staff have co-convened six ESRC seminar series since 2008: on new spaces of education; restorative approaches to reducing conflict in schools; emotional well-being and social justice in education policy and practice; educational futures; teacher resilience; and international higher education student experiences.

**3. Capacity development:** *the School has recruited and supported early career researchers; moved staff onto permanent R&T contracts; and further strengthened its doctoral education.*

10 ECRs have been appointed as part of a strategy to rejuvenate staffing, as identified in RAE2008. ECRs are entitled to specific School development funds and each has a mentor (see

section c). Contract researchers are supported by both a mentor and their PIs. There is a strong focus on supporting their publications, resulting in more than 30 outputs since 2008. Both ECRs and contract researchers are eligible for specific University support (see c below). Funding from the School, CAS and IGS has supported initial experience as CIs and PIs, leading to five ECRs becoming PIs on external projects. One ECR from RAE2008 is now a professor and two are associate professors. Since 2008, four staff have moved to R&T contracts: three from Research only and one from a Teaching only contract.

*Doctoral education* is a priority of the School, Faculty and University. The School has included PGRs fully in its work and life; improved doctoral completion rates; developed transferable and employability skills; and enhanced PGRs capacity to publish. The Faculty was awarded an ESRC Doctoral Training Centre (one of 12 successful single university bids) with Education as one of 13 pathways. School staff fill key roles in the DTC and convene two advanced modules, which are also available to external students through the National Centre for Research Methods. In 2008 the School commissioned an external review of its three EdD courses and a new EdD was launched in 2010, staffed exclusively at professorial and associate professor (AP) levels. This builds on the School's research insights into doctoral education, as reflected in the Routledge doctoral handbooks for students and supervisors, co-edited by School staff. In 2013 an agreement was signed with the Ningbo Education Bureau for it to fund 60 EdD students on a split-site programme. Since 2008, an average of 33 PGRs per annum have successfully completed. The four-year completion rate improved from 36% to 63% whilst recruitment has grown from 34 to 38 FTEs per annum between 2008 and 2013. 15 students have held RCUK studentships and 20 students have held University or School awards. Eight studentships (five RCUK; three University) were awarded for October 2013. Students' capacity to publish early in their careers is supported through a writing programme developed by senior staff and informed by their research on academic writing. Publication outcomes and plans are integral to the annual review process. Whilst on course, students have published more than 50 outputs. 17 internships were funded 2012 -13.

RSG reviews both research and PGR strategies annually. The Research Director also reports regularly to the School Executive and to the Dean, the latter through a Faculty Research Board. The Research Office supports implementation and monitoring.

#### ***Future research strategy***

The School's 2013-18 research strategy was developed during 2013. Research staff agreed a set of revised research groups and an approach to interdisciplinary work. The groups have identified significant questions in their areas, supported by intelligence on funding trends from the Research Office and CAS. Newer groups are being supported with School seedcorn funds, and matched funding from University sources will also be targeted. The groups largely reflect existing priorities, with some such as well-being and inclusion benefitting from recent staffing increases that raise their potential for large-scale research impact (see section c). The major new grouping is on internationalising higher education, reflecting the University's international profile. Staffing in this area has been built at Nottingham and Ningbo campuses since 2012 and an additional chair appointment is planned. This draws on existing School relationships and wider university initiatives, including IGS and KWBN. During 2012-13, **McGrath** coordinated the work of these structures in developing an interdisciplinary University strategy for researching international higher education. In developing work in this area, the School was successful in six IGS seedcorn bids in 2012-13.

The existing cross-cutting strategic priorities remain the same. Additionally, strategic funding will be directed towards building stronger quantitative and mixed methods research capacity. Given the success of the ECR focus, more attention on mid-career development is needed for the next period. Mentoring sessions and workshops will focus particularly on strategies for increasing the scale of successful bids, improving the quality of research outputs and building cases for promotion. A more flexible approach to study leave will operate from January 2014.

The rapidly changing landscape of schooling in England requires a new relationship with schools both as sites of research and as research partners. A whole School approach to developing work in this area has been identified as a major priority for 2013-14. This will engage critically with the notion of evidence-based practice. The 2014 research conference will focus on school-related research; drawing upon work of staff, PGRs and school-based practitioner-researchers. Given the likely rise of very large academy chains, the School has begun establishing new relationships with emerging large-scale players that will combine teacher development and research.

Education staffing at the China and Malaysia campuses is growing and this, together with new opportunities for research funding from the region, highlights the need to build inter-campus research collaborations. School leaders have visited both campuses in 2013 to begin developing an action plan and professorial leadership of research strategies at both campuses has been established.

Targets have been developed for each goal and annual monitoring and reporting systems established. RSG membership and Research Directorate structures will be revised from Autumn 2013 to support the new strategy: including new roles to support impact, project bidding and research staff development, previously all aspects of the Research Director's role.

### c. People, including:

#### i. Staffing strategy and staff development

*Staffing:* Given the School's age profile in 2008, there has been a strong concern to recruit early career staff and support their development. As was noted above, 10 ECRs have been appointed to R&T posts. They are entitled to development funds, and each has a mentor, with mentorship overseen by the Research Director. There are currently eight CRS, who have a mentor in addition to their PIs, and are supported to attend non-project funded conferences where appropriate. Both groups are eligible for wider University support. The University has gained the European Commission's 'HR excellence in research' badge, reflecting its compliance with the QAA Code of Practice for Research Degree Programmes; the Concordat to Support the Career Development of Researchers; and the European Charter for Researchers and Code of Conduct for their Recruitment. The School's staffing strategy is aligned with University policies on human resources, including those on equity and diversity. 48% of the staff returned are female, including five professors.

Research-related staffing needs are discussed at RSG and School Executive meetings before proposals are made to the University. The focus is on making new appointments in areas with emergent research opportunities and on consolidating existing capacity.

Since 2008, the School has built its research staffing around its centres and their main themes. Mathematics research was identified as a major priority and a new centre, **CRME**, was established. **Swan** and **Noyes** were promoted to chairs to provide leadership in the two main areas of design and policy work. There has also been one new appointment at both lecturer and AP levels, the former having been a contract researcher in the Centre.

**CRSC's** leadership is provided by Professors **Bush**, **Day**, **Hall**, **Stevenson** and **Thomson**. The Centre has been further strengthened by four appointments to the teacher development team at lecturer level; and one to leadership at AP. The creative pedagogies team has been strengthened by two AP and one lecturer appointments. In 2011 the decision was taken to rebuild research capacity in the area of well-being and inclusion. One lecturer and two AP (both .6 FTE) posts have been created and, in August 2013, Professor Joseph transferred from Sociology and Social Policy to lead this newly enlarged team (returned in UoA 22).

**HAVE** has leadership from four professors: **Holford**, **McLean**, **McGrath** and **Morgan**. New staffing in the Centre has been at more junior levels and reflects the growing interest in international higher education. Two new lecturer appointments have been made and two further lecturers have joined as a result of the School's absorption of the Centre for English Language Education. Additionally, a Professor and an AP in international higher education were appointed at Ningbo during 2013.

The **LSRI** was repositioned in 2011 from a University institute to a School centre with associate members from other schools. As part of the redevelopment, **Crook** and **Ainsworth** have been promoted to professorships, the latter having transferred from Psychology. Three other staff have relocated to LSRI from other centres within the School and two new lecturers were appointed in July 2013. Professor **O'Malley** (Psychology) is part of this return, reflecting LSRI's continued cross-departmental work.

In total, 20 new UK-based R&T appointments were made during the REF period; two staff joined from other units; and four changed onto R&T contracts. The School's commitment to staff career progression has resulted in five promotions to professor and two to AP during the REF period. During the REF period, 17 potentially eligible staff have left the School. This has included five retirements and one death.

*Study Leave:* All R&T staff are eligible to apply for a semester's study leave and 29 staff took this between 2008 and 2012. In each case, a plan of activities was agreed in advance with the Research Director and Head of School, and mentoring support planned, where appropriate. Staff met with the Research Director on the completion of their study leave to report on activities and achievements against the initial plan. Where limited additional time was required to finalise outputs or activities from study leave, the Research Director liaised with other Directors (PGT and ITE) to secure this. At least two half-day whole-School research staff development sessions have taken place annually and a staff research conference.

*Teaching and Learning Scholarship:* The School has nearly 60 teaching and learning (T&L) staff (mainly English language tutors) who are encouraged to engage in scholarly activities and a new School Scholarship Strategy was developed in 2013 under the Research Directorate. T&L staff can apply for funding to support conference attendance and for short study leave periods for career development purposes, including scholarship activities. Several are enrolled as doctoral students in the School. T&L staff published 59 outputs in the REF period.

*Ethics:* The School of Education subscribes to the ethics guidelines of the British Educational Research Association and the ESRC, as well as being subject to the University's Code of Research Conduct and Research Ethics. The School ethics model has been very influential in the development of the latest iteration of the University Code, including on issues regarding criminal records checks and lone working. All staff and student research must receive ethical clearance. Before submitting a research bid (or undertaking unfunded research), staff are required to submit an outline ethics application and support for bids is dependent on approval being granted. On award of funding (or prior to starting unfunded research), the Research Ethics Coordinator will decide whether the project requires an expedited or full ethics review. The latter is required for all RCUK projects. A full review is considered by the whole Research Ethics Committee, including the School Safeguarding Officer and both external and non-School University members. The ethics committee also meets annually to reviews activities and policies. The Senior Ethics Coordinator (a professorial role) reports to RSG and the University Ethics Committee annually.

*Authorship:* All project teams must develop authorship policies at the inception of the project. From 2013, revised advice has been given to staff on authorship, reflecting the growing importance of dissemination through social media. Supervisors and PGRs are also expected to agree authorship as part of doctoral publication plans, which are reported on annually. The School has invested in a reinvigoration of the internal Jubilee Press. This focuses largely on early career writing, and has an editorial board comprising all grades of R&T staff, T&L staff and students.

## ii. Research students

The School's PGR strategy is integrated with that of the University's ESRC Doctoral Training Centre. The DTC draws upon the University's research excellence across a broad range of social science disciplines to provide research students with high quality subject-specific and cross-disciplinary training and development opportunities. It comprises 13 ESRC-accredited clusters, including Education. All DTC students receive training in core research methods and researcher development, offered through a blend of central provision organised by the Graduate School and School-level provision.

Student attendance and progress is monitored closely. Supervisors and students produce joint annual progress reports and these are independently reviewed by internal assessors. In the small number of cases where there is a cause for concern, the case is referred to a Progress Review Panel, chaired by one of the professoriate, from which an action plan is developed and monitored. All students are required to produce a Confirmation of Status (CoS) paper towards the end of first year (FT) or second year (PT) and to participate in a CoS viva with an experienced internal examiner. A professorial-level Postgraduate Student Advisor can be consulted in the event of a problem in the student-supervisor relationship. This is in addition to formal grievance procedures.

The School includes its more than 300 PGRs as fully as possible in its research community. There is student representation on the PGR policy committee. All PGRs are research centre members. A research internship scheme was introduced in 2012 to promote the development of wider transferable skills and experiences. 17 paid internships have been provided, some with partners such as the NCTL and Pearson Education. These provide PGRs valuable opportunities for them to gain new experiences and develop wider research and employability skills, whilst partners obtain needed research support. PGR students also participate actively in Graduate School programmes

on employability. They are members of the editorial board of the School's own Jubilee Press; run PGR seminars; and organise the annual PGR research conference.

Regular supervisor development events are held, which draw on the School's long-standing research interests in the supervisory process. ECRs are encouraged to become involved as second supervisors in a mentorship relationship with experienced colleagues.

#### **d. Income, infrastructure and facilities**

##### ***Income***

More than £11 million in new research awards has been secured since 2008. This has included a number of major and prestigious grant awards made by external bodies on a competitive basis. 13 awards have been made by RCUK and other competitive funding has been secured from the British Academy (three awards), the Royal Society (one), Nuffield (two) and the EU (eight).

A proportion of the School's income has been generated as part of larger bids. The eight new EU FP7 bids were worth more than £10 million to consortia, whilst the School also participated in a £12.5 million project led by Computing Sciences, funded by EPSRC, and a £6.5 million project funded by the South African Department of Higher Education and Training. New collaborative awards with other Schools were worth £32 million to the University.

The School has responded strategically to the closure of a range of QUANGOs, such as QC(D)A and BECTA, which affected its funding streams. Whilst more than 50% of research income in 2008 came from UK departments and QUANGOs, this fell to 3% by 2013 as new income sources were secured. The largest funders since 2010 have been the EU, the Bill and Melinda Gates Foundation, the Bowland Trust and the ESRC. The roles of the Research Director and Centre Directors have evolved to include more proactive relationship management with strategic partners, and funding has been directed to supporting partnerships, as detailed above. **CRME** has been particularly successful in securing external funding, vindicating the decision to invest in this area.

Seedcorn money from the School, CAS and IGS has often preceded larger and successful bidding and bidding workshops have been well-attended by staff looking to develop new research ideas. More junior staff have been encouraged to take advantage of the experience of visiting professors, several of whom have given advice on bids or acted as internal reviews or external referees.

As shown in the impact case studies, there has been a clear relationship between securing research funding and delivering high quality research outputs. The case studies focus on research funded by a range of organisation such as Gates, DfES, NCTL and the Southern African Development Community, all of which has resulted in outputs returned in REF. Monographs arose out of ESRC, EU, British Academy, DfID and DfES funding.

##### ***School infrastructure and facilities***

The School has invested heavily in research administrative structures and staffing in order to deliver its research strategy. The expanded and reorganised Research Office (12 staff, 8.7 fte) provides responsive support to staff research and PGR students. The team supports internal and external funding applications (in conjunction with CAS) resulting in improved responsiveness to funding opportunities. It administers and monitors projects, ensuring reporting and invoicing deadlines are met and any risks to project delivery are identified swiftly. The team also play an important role in supporting dissemination, organising events such as the 2012 UK launch of the UNESCO Global Monitoring Report and facilitating social media usage amongst staff.

PGRs have access to School, DTC and Graduate School infrastructure and facilities. All full-time students have dedicated individual study spaces in shared student offices within the School. They have personal PCs and access to a computer training room and a shared staff/PGR common room. Where part-time students are in a position to use facilities for a more concentrated period of time, they are allocated study spaces with PCs. PGR students also have access to the training courses and common rooms of the Graduate School. All staff and student seminars and other events are live streamed and made available via YouTube. A grant from the University's Strategic Development Fund has allowed for the development of a portal bringing together full-time and part-time students. The Research Office supports PGRs through from recruitment to completion and support for post-doctoral funding applications. There is a competitive fund to support PGRs with conference attendance and research expenses. PGRs receive technical survey design and data analysis support from the School and the Faculty's Methods and Data Institute.

### **University infrastructure and facilities**

The School benefits from the overall University research strategy. In this, the University has committed itself to build upon its international reputation as a truly global institution, remaining firmly within the world's elite universities for research and knowledge transfer.

Four major University initiatives have led to important investments with benefits to the School:

1. *Establishment of priority groups* to enhance critical mass and promote multi-disciplinary research. This includes the establishment of IGS (detailed above) and CAS, both led by School staff. CAS provides leadership in the Arts and Social Sciences on Grand Challenges and strategic themes and builds research capacity at all levels of staff, but particularly for ECRs. It offers a number of funding opportunities to support the growth of new research activities and has Research and Business Development Officers to help the development of research projects. Both CAS and IGS promote interdisciplinarity and internationalisation of research, and champion new internal and external research partnerships.

2. *A continued focus on research internationalisation* has seen the appointment of four regional Assistant Pro-Vice Chancellors and regional committees charged with identifying international partnership opportunities. The existing role of international research business development officers in securing EU funding has expanded to other regions. IRBDO support has assisted the School in securing new projects in Azerbaijan and Brazil.

3. *Continued development of institutional support for Early Career Researchers and PGRs*. The School participates actively in the Social Sciences DTC, as noted above. The DTC, in turn, sits within a larger University framework centred on the Graduate School. The Graduate School has responsibility for the development and delivery of the institutional Researcher Development Programme which is mapped to the national Researcher Development Framework. The programme, which aims to foster and improve the skills required by postgraduate and early career researchers in their research and future careers, consists of a suite of around 60 courses. Some provision is tailored to specific disciplinary needs, and some is of a more generic nature. The Graduate School also runs a number of schemes which encourage mobility within the researcher community, such as travel prizes which fund conference attendance, and a fund enabling researchers to spend up to three months at a centre of excellence relevant to their research. All ECRs and contract researchers are entitled to University support in career development and there is a large suite of courses as well as advisory services.

4. *The launch of the Nottingham Research Leaders Programme* for senior academics. This programme aims to support and advance identified key academics in their strategic research leadership roles and development, in order that they can deliver "world leading research with impact", in line with the University's Strategic Plan objectives. **McGrath** is part of the first cohort, which includes mentoring by senior external and internal researchers, international study visits and individual career coaching.

### **e. Collaboration or contribution to the discipline or research base**

*External networks and collaborations:* As noted above, the School has developed a strategic focus on building external collaborations beyond the HE sector, which has been pursued in various ways by the Centres. **CRME** has worked particularly with organisations such as the Gates Foundation, the Bowland Trust and the Royal Society to influence mathematics education practice in schools in the UK, Europe and the US (see case study for US impact). **CRSC's** partnerships have included regular work with the National College for Teaching and Leadership. They have collaborated on work for the Malaysian Government and in the establishment of an International Centre for School Leadership, based at the Ningbo campus, in partnership with the Ningbo Education Bureau. Creative pedagogies partnerships have included those with the local Papplewick Trust and Broadway Cinema, with Severn-Trent Water, the British Film Institute, the Tate Gallery and the Royal Shakespeare Company. **HAVE's** partners include research councils in China, Russia and South Africa, and international development organisations, most notably UNESCO. The **LSRI** has done work for organisations such as NESTA, BECTA, Microsoft and NATO, as well as participating with numerous industry partners in the EPSRC-funded Horizon Digital Economy centre.

The range of national and international research partnerships has been outlined in section b above. These include partnerships with UK universities and large numbers of EU partners through 13 EU FP7 projects active since 2008. Collaborations with Azerbaijan, China, Russia, Rwanda and

## Environment template (REF5)

South Africa have taken place under the ESRC-Hong Kong, ESRC-DfID, DIUS Education Partnerships with Africa, DfID DeLPHE, BIS England-Africa Partnerships, British Academy International Mobility and Partnerships and British Council Researcher Links programmes.

The School has 31 visiting chairs, several of whom have been research collaborators in large projects. Others are senior staff of strategically important organisations, such as the National Institute of Adult Continuing Education, the OECD and UNESCO. Seven visiting lecturers include NCTL staff and community arts practitioners linked to the School's creative pedagogies work. The School has hosted 19 visiting researchers since 2008. 11 staff hold 16 visiting chairs in other institutions and **Day** and **Morgan** have been awarded honorary doctorates. **Day** was elected to the Academy of the Social Sciences and **Morgan** to the Learned Society of Wales.

*Journals, Conferences and Professional Work:* Staff edited nine journals since 2008. A number of events were hosted including the inaugural conference of the European Society for Research in the Education of Adults Network on Policy Studies on Policymaking in Adult Lifelong Education (2012). As a direct result of this conference, three journal special issues and an edited book are in press. The School also hosted the 2012 UK launch of the UNESCO Global Monitoring Report.

Staff have contributed to a range of professional associations and learned societies, and to developmental initiatives within the discipline at both national and international levels. This includes participation by several staff on the executives and leadership of working groups of organisations. For example, **Morgan** chairs the UK National Commission for UNESCO and is co-chair of UNESCO's Senior Experts' Group on Rethinking Education in a Changing World; **Noyes** is the only Professor of Education on the Royal Society's Advisory Committee on Mathematics Education; and **Gu** is Vice-Chair of the British Association for International and Comparative Education. **Holford** was an invited member of an EU expert network on Indicators of Active Citizenship.

11 staff have reviewed bids and/or project completion reports for research councils in the UK, the EU and 12 other countries internationally and two (**O'Malley** and **Thomson**) have served on RCUK committees. **Crook** was Chief Examiner of the Qualifying Examination of the British Psychological Society, 2002-2010. Staff have led academic publishing workshops in 14 countries on four continents.

*CPD Activities:* Delivery of research-based CPD is an important emphasis of the School's overall work. The School annually awards two teacher fellowships to support local teachers to conduct research designed to impact on their schools and communities. **CRSC** works closely with Teaching School Alliances and the School's initial teacher education partnership with over 150 schools, and staff are also engaged in school-based Masters delivery and knowledge exchange activities with partner schools. CPD is also a particular emphasis of the design education approach of much of the funded research in **CRME**, as detailed in an impact case study. Examples of their broader work include a partnership with the Bowland Trust that resulted in new CPD materials being distributed to all schools in England and EUFP7 funding to develop materials for inquiry-based mathematics and science for 12 European countries. Key members of the **CRME** team also continue to be active in initial teacher education at Nottingham; and research from other centres, for example in creative pedagogies, impacts upon professional practice in education through work with students from ITE through to PGR. The opening of the International Centre for School Leadership in China (see REF 3a and impact case study) offers leadership development to Chinese headteachers; whilst **HAVE's** Masters' programmes have been targeted at university administrators. Both programmes combine teaching from senior academics and practitioners. More than 40 PGRs have been engaged in doctoral work on CPD issues across a wide range of educational levels and settings. More broadly, work by the School has influenced policy and practice debates in CPD. This includes **LSRI** research on harnessing technologies in teaching and learning, such as work on the use of tablets, smartphones and web 2.0 in classrooms; **CRSC** work on the creative arts; and **HAVE** work on higher education pedagogies.

*PGR Collaborations:* The School is part of the 15-institution Marie Curie Initial Training Network on Education as Welfare, hosting a doctoral researcher, jointly supervised with the Technical University of Valencia. It has doctoral partnerships with the University of Hong Kong, Beijing Normal University and Beijing Foreign Studies University. It participates in the Malaysia Nottingham Doctoral Programme (MNDP), funded by the Malaysian Government to support Malaysian university staff to participate in split-site PhDs between their university and Nottingham.