

Institution: University of Nottingham
Unit of Assessment: 25
<p>a. Context</p> <p>The School of Education is committed to producing and communicating high quality education research that is oriented towards improving the learning and well-being of all. The School's research serves the needs of a diverse range of users, beneficiaries and audiences, stretching from young people in Nottingham with low levels of educational participation to international policymakers. In order to maximise the desired impact, the School's research strategy focuses on the development of influential partnerships, in which research quality and impact are intertwined, with a range of strategic change agents at the local, national and international levels. This strategy is operationalised through four centres, each of which has a distinct approach to impact.</p> <p>The Centre for Research in Mathematics Education focuses primarily on improving mathematics teaching and learning through the development of new classroom materials. To maximise the uptake of these materials, the Centre has developed partnerships with the Bill and Melinda Gates Foundation, the Bowland Trust and the US National Council of Supervisors of Mathematics (NCSM), all of whom were looking for practical ways to improve performance in mathematics. These partnerships have facilitated the wide use of CRME materials in schools across the UK and US (e.g., more than 76 000 downloads a month during 2012-13 for materials developed for US schools). Pearson has commissioned the Centre to develop these materials further to create their first interactive curriculum for tablet computers. The Centre's work has directly contributed to an improved approach to teacher development for all US mathematics teachers through its partnership with NCSM (see impact case study). The Centre has also contributed to policy in the UK through research conducted for the Qualifications and Curriculum Agency and the Nuffield Foundation on participation and attainment in mathematics, and through Noyes' role as the sole Professor of Education on the Royal Society's Advisory Committee on Mathematics Education.</p> <p>The Centre for Research in Schools and Communities works in partnership with influential actors in the schooling sector, most notably the National College for Teaching and Leadership (NCTL). CRSC research has influenced school leadership policies and has been incorporated into training curricula for headteachers internationally (see case study). The School and NCTL have jointly established an International Centre for School Leadership in China. CRSC also focuses on creative pedagogies and has built partnerships with arts and cultural organisations locally (e.g., Papplewick Pumping Station) and nationally (e.g., the Tate Gallery). Collaboration on practical projects has improved understandings of the role of arts in education; generated new creative pedagogies; and increased educational utilisation of cultural and historical collections and archives.</p> <p>The Centre for Research in Higher, Adult and Vocational Education focuses upon influencing international post-school education policies, particularly through its strategic partnership with UNESCO. Staff have been centrally involved in transforming UNESCO's technical and vocational education and training policy (see case study) and reviewing its overall education vision. Centre staff have undertaken policy work for South Africa, the EU and the Southern African Development Community on a range of aspects of post-school education policy.</p> <p>The Learning Sciences Research Institute has worked closely with key organisations nationally and internationally (e.g., BECTA, NESTA and US National Science Foundation) to enhance learning and teaching through developing innovative pedagogies using new technologies, and to inform educational policy and practice with the latest insights from the learning sciences. The LSRI undertakes design research that produces classroom resources (e.g., there have been more than 13 000 downloads of the CoFFEE learning platform from 127 countries). It also makes major contributions to national and international policy, for example through co-authorship of the ESRC Technology Enhanced Learning report, and advice to NATO, Sharp Laboratories and Microsoft. School research on doctoral pedagogies has informed academic writing workshops internationally and extensive social media engagement with ECRs. Thomson's blog on academic literacies (www.patthomson.wordpress.com) averages more than 800 hits per day and, globally, her approach has been incorporated into several institutions' doctoral training models.</p>
<p>b. Approach to impact</p> <p>The School's Research Strategy Group identifies and invests in strategic partnerships with key change agents through an annual planning process. The Research Director has a discretionary</p>

Impact template (REF3a)

partnership fund and works with the Centre directors to identify ways to build existing and new partnerships, e.g., funding visits to key partners; exploring internship possibilities; appointing special professors; etc. Strategies for increasing research impact are discussed at staff development events and staff are supported to identify and engage with end-users. Discussions about partnerships and impact form part of annual research meetings between individual staff and the Research Director (see REF5). Research students are inducted into this culture through the use of internship opportunities and studentships linked to partnerships (e.g., AHRC, ESRC and school studentships for work with the National Trust, Broadway Cinema and British Film Institute). The School's research is explicitly designed to inform change in educational practice at local, national and international levels. **Locally**, CRSC works closely with Teaching School Alliances and the School's very well established initial teacher education partnership with over 150 schools. These offer opportunities for collaborative improvement of educational practice. For instance, in 2013 Day secured ESRC Knowledge Exchange funding to work with headteachers on using research findings to improve leadership in the new schooling environment in England. The partnership with Broadway Cinema, which operates across secondary teacher education routes, generates community film projects that link schools, the university and the cinema. The DfID-funded link with the Kigali Institute of Education has shaped the teaching of genocide in History in England and Rwanda. A Teacher Fellowship Scheme and a school-based Masters programme centred on developing practitioner inquiry promote school/university collaborative research in local communities. Overall, these partnerships, with a large network of teachers and schools in the East Midlands and beyond, contribute to improved teaching and learning.

Nationally, the NCTL link has been supported by University senior management, particularly in making the case for the NCTL to be located on The University's Jubilee Campus. Senior NCTL staff have been appointed as visiting academics, and School staff are members of NCTL advisory groups. Internships have built capacity in both institutions. International collaborations have taken place in Malaysia, India and China. The programmes for UK and Chinese teachers developed by the ICSL joint-venture in China draw directly on the School's research findings. CRSC research has helped the NCTL to strengthen evidence-based policymaking on school leadership reform; has directly influenced the reform of English school leadership programmes; and has assisted the NCTL's internationalisation strategy through links to international academic networks.

At the **international level**, the close relationship with UNESCO, centred on a UNESCO Chair, is the key partnership. Senior UNESCO educationalists have been appointed as visiting professors. The School has covered Morgan's time commitments to UNESCO, including his role as Chair of the UK National Commission for UNESCO and his co-chairing in 2013-14 of its Senior Experts' Group on Rethinking Education in a Changing World. During 2011, McGrath was seconded half-time to lead the writing of the UNESCO World TVET Report and the University is co-funding his continuing work supporting the development of a new UNESCO TVET policy and strategy. He has also been encouraged to participate in South African policy review and implementation activities.

Wider University external partnerships have supported the School's work. For instance, the BFI studentships are linked to a larger partnership around the educational utilisation of the national film archive. More generally, impact activities have been supported by the broader University framework. Business Engagement and Innovation Services support knowledge transfer and national and international partnerships. Participation in the Integrating Global Society priority group and the services of the Centre for Advanced Studies have also supported external engagement, particularly through seedcorn funding and advice.

c. Strategy and plans

The School plans to maintain the current strategy of prioritising change-oriented research which improves educational policy and practice. Its approach will be aligned with the University's new Knowledge Exchange Framework for the period 2013-18, which recognises KE as a core activity. It builds on existing successful KE mechanisms being utilised throughout the University and brings forward new priorities for action to increase effective external engagement, income generation and impact.

Partnerships will remain central to the School's strategy. A new role of Partnership Coordinator has been established in 2013 to lead this work. Internal funding will continue to be used to support strategic partnerships and individuals' partnership work will be reflected in workload calculations. The School recognises that long-term partnerships with change agents, e.g., NCTL and UNESCO, typically begin with small interactions. Staff are encouraged to be alert for possibilities to build

partnership, supported by the Centres and the Research Director. For instance, in 2013 an initial invitation to tender from the International Baccalaureate Organisation was made. Though the funding was limited, the relevant Centre Director and the Research Director decided there was strategic merit in tendering. This bid was successful and led to two further research contracts with IBO in the following six months. Given the potential to have impact across the more than 1 million learners in 143 countries in the IBO network, the School is cultivating this relationship through investing senior staff time in both the projects and relationship-building.

Strengthening strategic partnerships in China and Malaysia will be prioritised. New professorial appointments were made in 2013 to lead research and partnership work at both campuses. One early outcome is an agreement with the Ningbo Education Bureau (China) that it will fund 60 teachers' participation in an EdD focused on teacher development and school improvement. Long-term relationships will be supported, with staffing plans aiming to maintain strategic partnerships when senior staff retire. Attention will continue to be given to involving younger colleagues in the partnerships.

Improving the quality of teaching and learning in schools and other educational settings will be a continuing commitment. This will be supported through the strengthening of research-informed activities including initial teacher education and continuing professional development.

The development of individual approaches to impact will be encouraged. All staff will be supported to develop impact plans and their progress will be monitored. There will be increased investment in technology-enhanced approaches to dissemination and impact, including open access and web 2.0 tools. Whilst pursuing funding for theoretical work remains important, staff will be encouraged to explore possibilities for research funding from educational change agents so as to maximise impact. At the same time, the School will build on two successful RCUK knowledge exchange bids. An Education-specific KE bid writing workshop run by a CAS Research and Business Development Officer is planned for December 2013.

New staff appointments have been targeted towards areas of existing and potential income and impact generation (e.g., in CRME) since 2008. A criterion for senior appointments has been a strong track record of partnership with end-users. The School's policy on appointments for visiting staff has increasingly focused on brokering relationships that support positive educational change, and this has been made a key criterion for (re)appointments. These policies will continue.

Research students will be supported to focus more on the potential and actual impact of their research, through the design and dissemination of their doctoral studies as well as internships.

d. Relationship to case studies

Each case study exemplifies the School's commitment to working with strategic change agents to maximise the impact of its research and the success of each has shaped the overall School understanding of and approach to impact. Each case is located in a particular Centre's long-standing relationship with key partners, built on senior academics and supported by Centre directors and the School. All case studies have been supported through appointing visiting academic staff and funding partnership development activities, including exchange visits. The School took the strategic decision in 2008 to form CRME, identifying the potential to expand its existing work with schools in the UK and US. Two professorial promotions and further appointments have facilitated the expansion of the team's work, particularly with respect to growing research partnership activities in the US, Europe and Japan, which extend considerably beyond what is reported in the case study. The research that underpins the teachers and leadership case study has benefited from School and University support to the NCTL partnership, including the joint ICSL initiative, and senior staffing in this area has been increased. Important aspects of the TVET case study developed because of the existing high level partnership with UNESCO and were made possible by the School's funding of McGrath's secondment to UNESCO and allocation of time to policy and implementation work in South Africa.

The development of the strategic international partnerships exemplified in the case studies is mirrored by strategic partnerships at the local and national levels, reflecting a common approach to impact across the School's research activity. The Research and PGR Directors, Centre directors and Research Strategy Group are committed to developing partnership work that includes research collaborations, internships, joint publications and events. The School is responsive to changes in the educational landscape and the emergence, demise and reform of key partners, such as academy chains, BECTA and NCTL, and how these affect the potential impact of its work.