

Institution: Newcastle
Unit of Assessment: 25 Education
a. Overview

Education, submitting 16.7 staff FTE, is a distinct Unit in the School of Education, Communication and Language Sciences (ECLS) in the Faculty of Humanities and Social Sciences (HaSS). All staff devote their research expertise and energy either to the Centre for Learning and Teaching (CfLaT) or the EGWest Centre. CfLaT specializes in three long-standing interdisciplinary research strands: innovative pedagogy and professional learning; the role of schools and other agencies in responding to educational disadvantage; and the use of new technologies in education. This last, named iLab:Learn, straddles both research centres and has dedicated facilities. EGWest (Professor West examined the role of government in education) focuses on development of knowledge of non-state education's role in achieving 'Education for All'. Links and synergies permit flexible collaboration between the two research centres. The Unit co-ordinates postgraduate teaching (PGT) and postgraduate research (PGR) supervision in education and the selection of ESRC DTC studentships in Education. Since 2008 there has been significant capital investment in education research, including space designed specifically for education. Education has its own Head of Unit and Research Director who are responsible for the management of research. They work with Research Centre Directors and School, Faculty and University Research Committees to ensure that colleagues have the time, resources and support to fulfil their research potential. Refurbishment has included technological investment in technological facilities e.g. iLab:Learn.

b. Research Strategy

The Unit has directed efforts to the strengths we outlined as 'future strategy' in RAE2008, whilst enabling emerging areas to develop. We aimed post-2008 to build research infrastructure and sustainable capacity. In addition we have acted strategically to ensure impact. Our strategy post-2008 has therefore been in three interconnected areas:

i) *the concentration of effort on substantive societal matters in which we have expertise*

Being a relatively small Unit, our strategy has been to enhance our contribution to knowledge by securing funding in particular areas of substantive societal interest post 2008. Newcastle's world-leading research excellence in education post-2008 is founded upon its strategy to contribute to the development of equitable education systems. Our main themes all have strong research leadership. In EGWest, Tooley and Dixon lead investigations of the impact and conceptualisation of private education in the developing world. In iLab:Learn, straddling both research centres, Mitra has led research in the use of new technologies in education examining the conditions of SOLEs (Self-Organised Learning Environments). In CfLaT there are a number of themes: Leat and Lofthouse have led the investigation of curriculum frameworks that challenge learners and also of epistemological objects that advance professional learning; Todd has led investigations into the role of schools, other agencies, parents and young people in responding to educational disadvantage. Key emerging research themes in the current REF period in which we already have funding and impact are the study of teaching and learning in HE with a focus on internationalization, led by Robson, and the built school environment, led by Woolner. Our work in the Unit is characterized by rigorous innovative co-design methodology (such as mixed (and visual) methods within a theory of change or within our own model of action research), robust theoretical frameworks (drawing eclectically on the ideas of, for example, Bernstein, Bakhtin, Barkty, Engestrom, Sen and Wersch) and intellectual curiosity, affirmed by funders such as Joseph Rowntree Foundation, Arts and Humanities Research Council, Department for Education, John Templeton Foundation and Orient Global Foundation.

ii) *strategic growth of research infrastructure* (and section ci)

The two Research Centres play a key role in evolving a collaborative and discursive culture that is an essential component in our strategic growth. This culture is developed through (for EGWest Centre) termly meetings to plan research, and (for CfLaT) monthly activities for all in strategic development, to meet with external research partners, to develop scholarship, and to mentor bid and output writing. Substantial financial investment has provided dedicated accommodation for both centres and for the different technologies researched in iLab:Learn which gives access to meeting space, equipment and libraries.

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iii) *the intertwining of research with impact*

Main drivers of impact in the Unit are distinctive collaborative approaches to research design and our strategic development of relationships with organisations outside academia. The Unit's pivotal role pre-2008 in the University's developing strategies for engagement has led to our being instrumental in the University impact strategy. We have sought to collaborate with academics in other disciplines and with partners external to the university through each of the university's three post-2008 institutes formed to address the key societal challenges of (respectively) an ageing society, sustainability and social renewal. We play a strategic role in one of these challenges, in the Newcastle Institute for Social Renewal (NISR), with Todd as one of the institute's 10 theme champions, for the theme, 'Learning for Change'.

These interconnected strategic areas (i, the focus on substantive societal issues; ii, strategic growth of research infrastructure; and iii, intertwining of research with impact) respond to common drivers, some more one area than another:

- University strategy post-2008 on our leading contribution to societal challenges (i and iii);
- Deeper staff involvement in collaborative research projects and/or international networks (i);
- Tactical selection of funders, with scrutiny of bids to raise external funding success rates (i);
- Our collaborative research design (i, ii and iii);
- The discursive culture of our research centres (i, ii, and iii);
- Investment in early career researchers' publication and grant capture trajectories (ii);
- Writing coaching sessions to ensure priority to publication with greatest visibility and impact (ii);
- Development of networks of research partners, helping us shape policy and practice, through conferences/workshops with academics and the potential beneficiaries of our research (iii);
- Collaboration with disciplines with alternative non-University avenues for influence (iii);
- Greater synchronicity between research and teaching (iii).

We can highlight the following ways that we have pursued these strategies (see also section e):

Cross-disciplinary initiatives involve several staff and a successful example is the iLab:Learn initiative, a joint venture between ECLS and the Newcastle School of Computing Science's Digital Institute. Started in 2009 to develop the next generation of educational technology, iLab:Learn is a practice-based research laboratory with technology-enhanced learning installations including multi-touch and pen-based table-tops; a Self-Organised Learning Environment (SOLE); mobile learning devices; and an instrumented kitchen for task-based language learning. ECLS and the HaSS Faculty contributed space and installations, whilst Computing Science contributed digital technology and expertise.

Our sustained attention to **discursive culture and collaborative research design** has led Mitra, through iLab:Learn, to substantially develop his pre-2008 work in SOLEs. SOLEs are models of learning in which students self-organise in groups and learn using a computer connected to the internet with minimal teacher support. Mitra now involves other members of staff within the Unit and the University from a broader range of disciplines supported by funding from EPSRC, the Orient Global Foundation and One Lap Top Per Child. Demonstrating our intertwining of research with impact, Mitra was awarded the \$1M TED prize in 2013 for his research: 'Help me build a place where children can explore and learn on their own - and teach one another - using resources from the worldwide cloud'. EGWest and CfLaT, through Mitra, Clark, Dolan, Leat and Thomas, developed the initial SOLE idea for application within schools.

CfLaT's **collaborative model of working with research partners (leading to and supported by our school networks)** such as the Enquiry School Network and the North East Project Based Learning Network) informs our research into enquiry-based learning (Leat, Lofthouse, Hall, Robson and Tiplady) and a more active role for learners in constructing knowledge. It involves a close university/practitioner relationship, mobilises teacher support networks, uses reflective research cycles and encourages peer coaching. An example is Lofthouse and Leat's CfBT/National College for School Leadership (NCSL) funded research project on Improving Teacher Coaching in Secondary Schools (2007-9), that found a clash of cultures between coaching and the routine performative management of teachers' work and identified tools and language which support coaching. Lofthouse and Leat's coaching manual based on the research is a top 10 NCSL download. The high quality of Todd, Laing and Woolner's JRF project on youth participation was

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marked by the award in 2013 of Membership status with the children's human rights organization 'Investing in Children (IiC)', the first university research centre to be so recognised.

Collaboration with other disciplines leading to avenues for influence is demonstrated by an important commercial spin-out from Leat's research in innovative pedagogy with Newcastle academics in computing science. A digital methodology of philosophical enquiry (digital mysteries) on tabletop computers has been developed through iLab:Learn and marketed by Ahmed Kharrufa's company, Reflective Thinking, for use in schools and other organisations, putting choice and creativity in the hands of both teachers and students. This company developed from Leat's pre-2008 work in Thinking Skills and Learning 2 Learn (L2L), and post-2008 L2L research with Campaign for Learning, the Cambridge Primary Network (NE centre), and CfLaT's own networks of schools (Enquiry Schools Network and the North East Project Based Learning Network). Todd's edited book in Video Interaction Guidance (VIG) has led to VIG being named in 3 sets of NICE guidelines (social and emotional well-being, 2012; autism, 2012; and children's attachment, 2013).

Combining the development of networks of research partners with tactical selection of research funders (John Templeton Foundation, Orient Global Foundation) has led to the considerable theoretical contribution of Tooley and Dixon with Stanfield and Longfield (in EGWest Centre) to understanding the relationship between school regulation, funding, impact, choice, access, and the role of entrepreneurs in achieving high quality education for the developing world. For example, Optimus Foundation funded action research exploring financial/business models of low-cost private schools and bringing schools together in networks and branded chains in order to encourage investment and effect educational improvements. Tooley's monograph 'The Beautiful Tree' won the 2010 Sir Antony Fisher International Memorial Prize. The high quality of the research in the EGWest Centre has led to six prestigious international awards during the REF period, including the above-mentioned Sir Antony Fisher Memorial Prize and the Leonardo European Corporate Learning Award 2012. Mitra was invited to work in MIT's media laboratory with Professor Negroponte for academic year 2011/12, exploring technological approaches to improving learning in sub-Saharan Africa, Latin America and South Asia.

Todd's work looking at the role of schools in relation to economic disadvantage is an example of **deeper staff involvement in collaborative research across universities** (notably with University of Manchester) and **international networks** (ie visiting professorships/keynotes in the Netherlands, Spain, Sweden, Switzerland and Germany). This work has demonstrated the effects of extended school provisions on children and families, clarified facilitating and inhibiting factors in developing extended schools (such as achieving rather than raising aspirations), and has demonstrated the need for a strategic approach to schools' role. There was external recognition: Todd's 2011 Routledge monograph with Cummings and Dyson, 'Beyond the School Gates', gained the award of highly commended by the esteemed Society of Educational Studies in 2012.

Dissemination and interdisciplinary networking has greatly increased since 2008 and is demonstrated by the attendance by staff to present papers during the REF period at more than one hundred and fifty international conferences. **Our international esteem** is demonstrated by yet more invitations than 2001-07 to deliver keynote addresses; 12 colleagues have been asked to give more than one hundred keynote addresses. Interdisciplinary dissemination, through iLab:Learn, has led to high quality outputs including Pattison's co-authored paper on using interactive systems to facilitate the counselling of children, which won a best paper award at ACM Designing Interactive Systems conference 2012.

Investment in early career researcher capacity has been highly effective following substantial staff changes pre-2008. This is demonstrated by PhD awards for five staff members since 2008 (Barrow, Edwards, Hall, Jones and Robson). Two members of CfLaT have been awarded National Teaching Fellowships by the UK Higher Education Academy: Humphrey in 2011 for his contribution to interdisciplinary doctoral research training; and Robson in 2013 for work on the internationalisation of higher education and redefining teaching excellence in the sector.

Our tactical selection of funders, and processes to scrutinise bids has led to an increase post-2008 in submitted and awarded bids, in the conversion of reports and conference presentations to papers, and in the development of rich active academic networks. We increased average project income by at least 33% to £400K by extending existing comprehensive but flexible mentoring systems to support staff in preparing research. We have produced 17 books and 150 research papers and secured over £5M in research income (£2,426K spend), 2008-13.

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The substantive societal areas on which we will focus to develop contributions to theory, policy and practice are where we have built existing expertise, as well as in emerging areas. New awards (2013) of TED (Mitra, \$1M), ESRC-DFID (Dixon, £100K), FP7 (Clark, €1.9M) and JRF (Todd, £90K) will feature in the next REF cycle. Our discursive culture and our collaborative model of research design will remain central to our research strategy. We will value highly, as before, the development of our research infrastructure, in particular encouraging the leadership of early career researchers. We will take a more strategic approach to:

- Leadership in the university's response to societal challenges in all 3 institutes but particularly through Todd as theme champion for 'Learning for Change' in the Institute for Social Renewal;
- Links across disciplines in the university and with other universities (national and international) and within networks of non-university partners; and
- Cross-disciplinary supervision of postgraduate research students capitalising on the university's support for the RCUK's Doctoral Training Centres, matching postgraduates and partnership opportunities (e.g. with KTPs) supplemented with other local funding sources.

We can highlight the following ways that we have already started pursuing these strategies:

We will continue our strategic contribution to equitable education systems and work in new technologies in learning. Through iLab:Learn, Mitra's \$1M TED Prize will test a range of cloud-based, scalable approaches to self-directed learning in physical buildings in four areas in India and two in North East England. In a related set of projects, Thomas and Leat in CfLaT are in partnership with five schools in the North East, funded by EPSRC through Newcastle University's Culture Lab, to research the impact of adult skype mediators in different projects (e.g. a reading club, language learning). Tooley and Dixon will explore in depth the learning environments within low-cost private schools, through action research aimed at improving learning outcomes for the poor. Dixon has received £100K from ESRC/DFID to look at the identification and nurturing of high ability students in the slums of Dar es Salaam, Tanzania. In partnership with the Apollo Studio School in Peterlee and USA Charter school, HighTechHigh, Leat, Lofthouse, Tiplady and Thomas are researching the community-based curricula through school-wide project-based learning and regular employer involvement. Robson leads a growing Teaching and Learning in HE Research Group linked to the transformative potential of the internationalization of HE, with over 30 research-active staff and postgraduates across all three faculties in the University. Todd, Laing and Mazzoli Smith are working across disciplines through Newcastle's Institute for Sustainability to look at 'fairness', and across universities from the USA and Ireland (Cornell, Skidmore College, Pennsylvania State University and National University Ireland) to look the concept of vitality in extended services in rural communities. CfLaT is working with Universitat Ramon Llull in Spain on university-community partnership research on the effects of poverty on education.

c. People, including:

i. Staffing strategy and staff development

The primary aim of our research strategy is to ensure that all colleagues can in time develop leadership in research. Thus our staffing strategy is distinctive in supporting independent research careers of research associates, post-doctoral research fellows and staff on teaching only contracts (e.g. Jones's supported achievement of PhD and publications). Clark is a member of the Research Associate Concordat working group and implementation of the concordat is given high priority.

Staffing numbers have remained relatively constant since 2008. Four research active staff have left and were replaced by new appointments to reinforce our areas of strength through new methodologies and theoretical ideas rather than introduce new themes. Appointments post-2008 have been Burford, Hall, Young and Woolner, all at lecturer level. Potential staff candidates outside the University are encouraged to make early steps in research careers through joint work (e.g. appointment of KTP worker Reid as CfLaT research associate; Todd's writing with Barrow, teaching associate). Several Unit staff (Clark, Lofthouse, Mroz, Robson and Todd) have accessed award-winning University staff development programmes such as the Development Centre (for top managers), Faculty Futures (for those early in their career) and 'Unpacking your Chair' for new professors. Our strategy has led to the promotions since 2008 of existing research staff to lecturer (Hall, Woolner), lecturer to reader (Dixon, Gibbs), and senior lecturer to professor (Robson, Todd). Other staff have been similarly nurtured and have therefore been entered in the REF (Clark,

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Lofthouse, Tiplady). Several new researchers have become PI (principal investigators) including Lofthouse, Laing, Cummings, Thomas and Tiplady. Notably, five staff have been awarded PhDs since 2008 (Barrow, Edwards, Hall, Jones and Robson).

The commitment of School resources has also supported the development of a thriving research infrastructure. School Research Committee (SRC) administers conference funds and research leave, and works with other school mechanisms (and through school research days) to ensure a workload model that is strategic and research-enabling. To enable research contributions at all levels to flourish, mentoring is both individual and in a group, within the context of performance reviews but also in less performative contexts and available at every level. Peer and group mentoring takes place in the two research centres in weekly meetings alternately on paper writing and the preparation of bids, in monthly reading groups, in strategy meetings and seminars, in informal discussion of research at 'research teas' and in termly ECLS away-days, with both centres focused on the achievement of research strategy. Active research partnerships in bidding and writing have continued with ex-colleagues (e.g. Baumfield, Dyson, Higgins and Wall) and with Briggs, who following retirement is Emeritus Professor and continues joint-writing with Clark.

The UoA supports diversity and equality in line with the University's diversity strategy. The university regularly monitors data and other evidence related to staff and students in our Key Performance Indicators and reports on these in the Equality and Diversity Annual Report (<http://bit.ly/1jsLzvn>). In the recent Equality Analysis in the REF Code of Practice, HaSS was found to be comparable in terms of age distribution to the other faculties in the University with a higher percentage of younger staff likely to be submitted to the REF. Disability and black and ethnic minority levels were comparable. There is a higher number of REF-eligible female staff (44%) than in the University as a whole and this pattern is reflected in the Unit's submission rate. Equality of opportunity is continually affirmed so that research support is available to part-time and research associate staff and this is reflected in our REF submission of Cat A staff.

The research quality is maintained by multiple peer review of proposals at faculty and school level, and financial incentives. A rigorous two stage ethical approval procedure is in place for all research projects, with a School Ethics Coordinator a member of the Faculty Ethics Committee.

The Unit has benefited from a number of visiting fellows in the REF period: Professor Helen Timperley, Drs Helen Dixon and Gillian Ward, University of Auckland; Dr Thien Lwin, National Network for Education Reform (Burma); Christine Brown, University of Wollongong; Dr Adam Handelzalts, University of Twente; Patricia López Vicent, University of Murcia; Hermína Gunnþórsdóttir, University of Akureyri; Mary Metcalf, Director General, Department of Higher Education and Training, Government of South Africa; Ernst Thouthenhoofd, University of Nijmegen; Dr Roseanna Bourke, Wellington University; Marilyn O'Neill, Sydney Narrative Therapy Centre; and Professor John O'Neill, Massey University.

c. ii. Research students

The Unit's research directly feeds into student experience producing graduates who critically engage with both practice and research. Our research postgraduates (PGRs) make a vital contribution to the vitality and sustainability of our research environment. Of the 81 completed doctorates (a substantial increase on the 69 in RAE 2008) 58 were research-based professional doctorates (DAppEdPsy and DEdPsy). Academic progress of PGR students is ensured by: optimizing supervisory fit with PGRs' supervisory team; HEA award-winning Faculty Postgraduate Research Training Programme; additional specific academic skills development for PGRs in ECLS; on-going progress monitoring via e-portfolio and ensured via formal project approval and annual progress panels; CfLaT's design and delivery of the HaSS Graduate Skills Programme; regular training of staff in supervision; and a re-structured EdD. Woolner, Gibbs and Pattison are programme leaders on doctoral courses. Staff appointments as external examiners (25 since 2008) contribute to a high level of PGR supervision expertise and quality.

Degree Type	2008-9	2009-10	2010-11	2011-12	2012-13
PhD	7.07	3.64	2.31	1.82	7.82
Professional	2.00	18.00	10.00	13.20	15.00
Total	9.07	21.64	12.31	15.02	22.82

Our sustained excellence in PGR training now feeds into and is supported by an ESRC Doctoral Training Centre (DTC) in collaboration with Durham. The North East DTC (NEDTC) emerged from

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rigorous peer review and guarantees a minimum of 28 funded studentships annually in social sciences (2011-15, > £9million). CfLaT provides the Director of the Postgraduate Research Training Programme, Humphrey, who played a key role in the NEDTC application. In the first two years of the NEDTC, Education secured 2 studentships. The Unit is leading on 'digital community learning', one of 3 strands in the recently awarded (November 2013) EPSRC CDT that will involve 60 PGR students over 5 years.

PGRs benefit from dedicated workspaces and common rooms in ECLS and participate actively in our research culture in a number of ways. The ECLS annual PGR conference is now in its 12th year, an electronic journal of student work in its 10th year and a monthly staff/student research seminar started two years ago. Both encourage academic presentation and publishing skills, providing good CV additions for doctoral students. PGRs are actively encouraged to take part in national and international conferences (e.g. through Gibbs' collaboration with DAppEdPsy students at British Psychological Society conferences). Joint writing between PGR students and staff is encouraged in order to develop student research careers. Nine such joint international quality papers/book chapters have been published since 2008 by Hall, Woolner, Pattison, Leat, Gibbs, Dixon and Todd. ECLS provides PGR bursaries for those in financial difficulties.

Gibbs has secured more than 30 bursaries for educational psychology doctoral training from a range of partnerships between schools with different governance structures and also with LAs. The Institute for Humane Studies and Jolly Learning Ltd have funded EGWest students and there are opportunities for overseas student placements, such as the Ghanaian PGCE visit of 20 students. Two MEd pathways are based around Tooley, Dixon and Mitra's research predominantly in developing countries. A student placement module allows them to contribute to EGWest Centre initiatives in these countries. Humphrey led a successful bid (ESRC International PhD Partnering Scheme, 2012, £14K) for collaborative doctoral supervision with a Brazilian university.

Our flagship programmes have had considerable civic impact. We have one of only 13 professional research doctorate programmes nationally that train educational psychologists (42 completions since 2008). Our suite of PGR programmes frequently produce leaders in their fields e.g. leadership positions in colleges, schools and other organisations. Particular examples include a former PGR student now administering £100k of HEI funding for innovative teaching and learning projects; a former IPhd student now in a key management role at a university in Saudi Arabia; a former PhD student now on the National League for Democracy Education Committee in Burma; and a former Masters student who became the first ever female Secretary General of a national teachers' union in a West African state.

d. Income, infrastructure and facilities

Education has secured over £5M in research income since 2008 (£2,426K spend). Our tactical selection of funders and greater support for high quality bid writing has been successful. During the REF period, in comparison with the RAE period, both research centres have secured higher average project income (£400K) with a smaller number of projects focused strategically on our key themes. CfLaT's success rate in applying for bids has risen from 1:3 pre-2008 to 1:2 leading to a growth in research income post-2008.

The EGWest centre has raised £3 million in peer-reviewed research. These include: \$2 million from Orient Global Foundation, under whose auspices Mitra created his innovative Self-Organised Learning Environments (SOLEs), linking these with the research of Tooley and Dixon on competition in education markets; £267K from the John Templeton Foundation, focusing on education in poor areas of conflict and post-conflict countries in Africa; £630K from UBS Optimus Foundation, researching extending access and improving the quality of education for the poor; and £60,000 from DfID on poverty and school choice in Lagos State.

CfLaT has generated £2.5M from a range of white list and peer-reviewed funders including Nuffield, Joseph Rowntree Foundation, Esme Fairbairn Foundation, Technology Strategy Board (KTP), AHRC, DfE, CfBT education trust, the Helen Hamlyn Trust, Open Futures Trust and Campaign for Learning. Examples include: Clark £29K (two awards) from the AHRC Connected Communities programme for a review of the evidence within criminal justice about the participation of young people; Hall, Leat, Lofthouse and Tiplady £171K from Campaign for Learning for L2L projects; Lofthouse and Leat £57K from CfBT education trust to look at coaching in schools; Todd, Laing, Woolner £40K from Joseph Rowntree Foundation (JRF); and Todd £400K from the DfES for Evaluation of Extended Services Programme.

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In addition to Mitra's recent TED award of \$1M the Unit has had research awards (in 2013) from ESRC-DFID (Dixon, £100K), FP7 (Clark, €1.9M) and JRF (Todd, £90K). These are new awards, with 'banked income' the spending of which will feature in the next REF cycle.

Education research is assisted by an able School research administration office with additional training and readily available support from both the Faculty research office and the University's European research office. The research administrators assist in bid preparation and take minutes at the key meetings (SRC, bid writing groups). Strategy outcomes are reviewed regularly at SRC. We have made strategic use since 2008 of more than £200k of university research funding that has supported: research funds for ECRs; European networking visits; the co-ordination and writing of large bids; teaching cover for writing high quality papers; strategic fund for research centres; conference pump-priming; individual conference budgets (£1K per annum); research training; and resources for visiting fellows. Small grants have also been available from the NISR to develop research engagement activity which maps onto University priorities (e.g. Humble £2K for organising 'Maths in the Malls' with 600 children from 14 schools in Gateshead's MetroCentre).

Education has its own areas in the building, substantially refurbished since 2008, with individual offices for staff, shared offices for full-time PGRs and a dedicated computer cluster for PGTs so most staff, many PGRs and a significant proportion of PGTs do much of their work in the building. We host our seminar series, research group meetings, postgraduate events and much of our PGT teaching in our building, which enhances our sense of being a genuine academic community. The NEDTC has a dedicated postgraduate training suite and computer cluster, which provides additional high quality facilities for our PGs, while the School provides dedicated IT support and specialist software for staff undertaking advanced quantitative methods research. Refurbishment has included substantial investment in technological facilities e.g. iLab:Learn.

e. Collaboration and contribution to the discipline or research base

Collaborations nationally and internationally both within the discipline of education and across disciplines is central to the Unit's strategy and influence in research. Vibrant cross-institutional collaboration is maintained by both Centres within the UK and overseas. CfLaT continues to engage distinctively in research that enables the creation and translation of knowledge about teaching and learning through research partnerships. The EGWest Centre has created strategic international research and development partnerships across the world. Education researchers at Newcastle lead and are involved with major academic networks; key examples are provided below.

iLab;Learn, which grew out of **interdisciplinary research collaborations** between researchers in education, digital communication and applied linguistics (Leat, Mitra, Olivier, Pattison and Seedhouse) is the hub of our growing reputation for expertise in cutting edge educational technologies. Key discipline contributions have been Mitra's work on 'minimally invasive education' pedagogy (SOLEs), Pattison's table-top technology in school-counselling, and Mitra, Leat and Clark's EPSRC-funded 'Skype Seniors' project. The latter is also linked to the University societal challenge area in the Medical Faculty on 'Changing Age'. Mitra's work has developed exponentially in the last few years and has involved numerous international interdisciplinary partnerships. Robson's emerging research area of teaching and learning in HE is the most interdisciplinary of CfLaT's themes, spanning all faculties and collaboration with speech, computer science, geography, English, law, architecture, health and society and genetics. Specialist input in research design by Hall to Northumbria University's Law staff and students has led to the Dean of Law becoming involved in Robson's network in Teaching and Learning in HE. Todd has collaborated with an economist from Tecis Ltd for the last decade of research on educational disadvantage.

Running existing networks of collaborations between academics and external organisations is central to our collaborative model of research design. Since 2008 this has taken the form of 15 conferences on: the built school environment; enquiry-based learning; visual research methods; video interaction guidance; and extended schools. We have shaped regional policy networks in: Enquiry Schools (Lofthouse, Leat and Thomas); North East Project Based Learning (Lofthouse, Leat and Thomas); Extended services (Laing and Todd); and Supporting Children and Families in NE (Laing and Todd). The latter involves academics, schools, local authorities and charities such as Children North East and Schools North East.

We lead and are active participants in many **international and national collaborations**; indeed 85% of the Unit's collaborations involve a partner outside Newcastle and 60% of those are international. Notable examples of international collaborations are given below. Tooley, Dixon and

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Mitra have created research collaborations with a range of universities and think tanks, including with University of Juba (South Sudan), University of Sierra Leone, University of Liberia, University of Cape Coast (Ghana), University of Ibadan (Nigeria), India Institute (New Delhi), Centre for Civil Society (New Delhi), and MIT, USA. Tooley was Visiting Professor at Beijing Normal University 2012, and Adjunct Scholar, Cato Institute, Washington DC 2010.

Leat, Lofthouse and Thomas convene project-based curriculum work with the USA Charter school, HighTechHigh, and teachers in North East England. Robson's CfLaT network to research innovations in teaching and learning in response to internationalization has been enriched by invited international visiting scholar, Christine Brown from Wollongong University. Robson now leads the HEA (Higher Education Academy) internationalisation SIG (special interest group). Young and Robson were involved in international networks between Newcastle and Syria, and Young in Nigeria and Angola training university staff in teaching. Humphrey's international collaborations include: invited consultant by Mykolo Romerio University, Lithuania, for their European Social Fund project, 'Quality in Doctoral Programmes'; involvement with the European University Association in the third (Doctoral) cycle of the Bologna Process, and work with the British Council (Japan) developing doctoral skills workshops.

Notable national examples include Humphrey's lead role with Durham University in the ESRC funded doctoral training course 'Writing across Boundaries'. Woolner has been advisory group member for two recent research projects investigating the design of the physical environment: EPSRC's Designing New Schools at the School of Architecture, University of Sheffield (2007/10) and HEFCE's evidence base for productive academic workplaces, Dept. Civil and Building Engineering, Loughborough University (2008/09). Smith and Todd are working with educational academics from the universities of Oxford, Leicester, Oxford Brookes and the Institute of Education on 'Poverty and Teacher Education', with a symposium in the BERA (British Educational Research Association) conference 2013.

We have made a major contribution to the discipline through **editorial work**, including:

Journal editorships: *Journal of School Choice: Research Theory and Reform* (Dixon); *Educational and Child Psychology (E&CP)* (Gibbs); *International Journal of Research and Method in Education (IJRME)* (Todd).

Board membership: *Transforming Business: International Journal of Enterprise Solutions to Poverty* (Tooley); *International Journal of Mentoring and Coaching in Education* (Leat and Lofthouse); *British Association of Play Therapists Journal* (Pattison), *Narrative and Conflict* (Todd).

Special issues edited include: *IJRME* (Hall and Woolner on participatory and visual methodology); *E&CP* (Todd, on narrative and educational psychology).

Most staff review international peer review journals and are members of RCUK review panels (mostly ESRC but also AHRC). Pattison is joint editor of the commissioned Sage Handbook for Counselling Children and Young People, 2013, promoted by British Association of Counsellors and Psychotherapists.

Inter-disciplinary conferences were convened, for example, in: Social Renewal and Education-The Great North Curriculum; Community Curriculum Making researching Voice and Inclusion; Integrated Mixed Methods Research (with Prof Green, Cornell); Visual Research Methods; Comparative Research; the Built School Environment; and Video Enhanced Reflective Practice (100 people from 20 countries).

All staff take active **developmental positions in appropriate professional associations**. Examples include: Robson represents Newcastle on the national University Council for the Education of Teachers Council, Hobbs is president-elect of the British Psychological Society's Division of E&CP and Todd is an elected BERA council member. Those co-ordinating international SIGs include: BERA research SIG in educational research methods (Todd); Inclusive education in EERA European Educational Research Association (Todd) and EARLI SIG (Hall). More than half the Unit's staff are members of BERA. Other, of numerous, association memberships include Geographical Association (Leat), Mont Pelerin Society (Tooley), Association of Teachers of Mathematics (Wright), the New York Academy of Science (Mitra) and SAPERE (Jones).

The Unit delivers the **collaborative PGR training programme** in educational psychology, nationally accredited and commended by both the British Psychological Society and the Health Professions Council, in a consortium with the universities of Manchester, Sheffield, Bristol, Exeter, Nottingham and Birmingham.