

Institution: University of East Anglia
Unit of Assessment: 25 Education
<p>a. Overview</p> <p>Ranked 14th out of 82 schools of education in RAE2008, the School of Education and Lifelong Learning (EDU) has continued to concentrate its research on applied educational research. The School has advanced its educational research with a commitment to interdisciplinarity which underpins a substantial proportion of our research activity, most notably in the work of the Research in Mathematics Education (RME) and Literacy and Development (LDG) Groups. EDU is located within UEA's Social Sciences Faculty and is housed in the Lawrence Stenhouse Building, named after the first director of the Centre for Applied Research in Education (CARE) which pioneered action research in education in the 1970s. CARE has evolved into a broader institutional resource for supporting the dissemination and impact strategies for the School's research and also acts as a hub for methodological development.</p> <p>Since RAE 2008, the School has sought to enhance the quality and impact of its research by supporting and developing early and mid-career researchers and by strengthening links with international networks in its areas of expertise. CARE's expertise in facilitating intercultural and critical perspectives on methodology has led to innovative advanced doctoral education initiatives reaching across and beyond the University. Furthermore, substantial financial investment has transformed the research infrastructure of the School, in terms of workspace and IT facilities, particularly with regard to the working environment for doctoral students.</p>
<p>b. Research strategy</p> <p>Research strategy 2008-13: The School's research strategy for 2008-13 has been guided by its commitment to interdisciplinary applied research and to research that promotes participation, engagement and social justice in education. Its aims have been to:</p> <ol style="list-style-type: none"> <i>i.</i> expand the Literacy and Development Group (LDG) and the Research in Mathematics Education Group (RME), both established in 2003; <i>ii.</i> strengthen capacity through strategic appointments in its key areas of existing and emerging expertise and to further the research capacity of staff whose main role is within teacher education and who account for half of EDU's academic staff; and, <i>iii.</i> develop the role of CARE in supporting the School's research. <p><i>In relation to (i)</i>, both RME and LDG have grown their interdisciplinary directions, as follows. Through its collaborative research with the School of Mathematics at UEA and mathematics departments elsewhere in the UK and abroad, and through the engagement and participation of a wide range of mathematics education researchers and professionals in its research activities, the Research in Mathematics Education Group has consolidated its reputation in mathematics education research at university and upper secondary school levels. Its monthly meetings and regular seminars, often jointly with UEA's School of Mathematics, are attended by a membership consisting of eight faculty members, bringing together those involved in research and teaching and those involved with the delivery of secondary and primary mathematics teacher education programmes. Participants include an Emeritus Professor (Cockburn), Professors (Nardi, Rowland), a mid-career researcher (Iannone) and a newly appointed, early career researcher (Biza). The group's outputs focus on four specialist areas of post-compulsory mathematics education research: teaching, learning and assessment of advanced mathematics; affective and social issues relating to the engagement and achievement of secondary mathematics students; mathematics teachers' knowledge and beliefs; and, mathematical reasoning. The group has a growing number of doctoral completions (8 since 2008), contributions to major national and international conferences, and longstanding international research collaborations with groups in Canada, Brazil, New Zealand, Israel, Australia and Greece. Its research is supported by UK Research Councils, charities and government agencies, the EU, as well as research councils in collaborating countries (e.g.</p>

Canadian Research Council for Social Sciences and Humanities; New Zealand Council for Educational Research). Notable recent achievements in funding include Nardi's participation as co-investigator in the RCUK School-University Partnership grant led by UEA's School of Biological Sciences (2013-15, £150k) on improving secondary students' appreciation of and engagement with research and Iannone's Higher Education Academy grant (2011-12, £50k) on university mathematics assessment practices.

Having established an international reputation for interdisciplinary approaches to literacy and development research, the ten core faculty members of the **Literacy and Development Group (LDG)** (including Honorary Professors Rogers and Street) have engaged actively with key policy institutions in the UK and internationally through commissioned research since 2008. Examples include: the mid-term review of the UN Literacy Decade (carried out by Robinson-Pant and Maddox in 2008) and Robinson-Pant's role as Global Research Coordinator for IFAD/UNESCO project 'Learning knowledge and skills for agriculture and rural livelihoods' (2013-14). Within academic communities, the group is particularly recognised for introducing interdisciplinary perspectives and methodologies on literacy and international development through collaboration between anthropologists and economists. This has been achieved through organising international symposia to stimulate critical cross-disciplinary theoretical debate and investigation into literacy and participation – for instance, the group's (2009) British Academy and UNESCO-funded 'Literacy Inequalities' conference led to a book and special issue of the *Journal of Development Studies*, edited by Robinson-Pant, Maddox and Kaushik Basu [Chief Economist, World Bank and Professor of Economics, Cornell University]. Originally set up to bring together researchers in the Schools of Education and International Development, LDG has broadened its scope since 2008 by developing links with the School of Language and Communication Studies. A new focus on researching across languages and cultures has emerged through this collaboration (and led to an advanced doctoral training day course in 2013). LDG runs a seminar series on Education and Development every year encouraging and facilitating collaboration across the University (with 47 seminars held since 2008).

In relation to (ii), the census period has seen the strengthening of EDU's research base partly through the progression of early and mid-career researchers, but also through new appointments. Examples of research emanating from these developments include studies that interrogate trends in policy and community engagement, and explore patterns of participation resulting from the expansion and internationalisation of the higher education sector (see, for example, outputs by Lebeau and Hinchliffe). Other researchers have examined issues of engagement, participation and social justice from the perspective of pupils, teachers and schools, focusing on inclusion strategies, pupil motivation, transitional experiences, pupil voice and the effects of curriculum and policy developments on pupils', teachers' and trainee teachers' participation and engagement. This work included a longitudinal study of the influence of peer and teacher climates in Physical Education (2011, British Academy-funded), research into pupil attitudes to, and post-14 take-up of history as a school subject, and interdisciplinary research with the Norwich Medical School on physical activity behaviours and motivation (see, for example, outputs by Haydn and Warburton).

These areas of focus were strengthened through five new appointments (with Themelis and Godoy-Pressland contributing outputs to this submission) and the availability of pump-priming research funding for piloting research initiatives. The appointment of Carrington in 2010 added to the critical mass of researchers working in the field of cultural studies in education, with her exploration of the ways in which children, young people and education are represented in popular culture, media and other public pedagogies and the ways in which these representations are folded into larger cultural and social narratives (see also outputs by Priyadharshini).

Furthermore, since 2008, and as part of EDU's commitment to research-led teaching and teacher education, six staff members have successfully completed their doctorates, and been mentored to publication and promotion (e.g. Gordon). This capacity-building objective has been achieved through mentoring, paper and bid peer review, and an annual review process.

In relation to (iii), CARE (directed by Robinson-Pant) has built on its reputation in innovative qualitative research methodology in education, and developed its profile further as a hub of pioneering dissemination and research impact strategies. This has included the advancement of applied educational research methodology and theory: for instance, using interdisciplinary theories

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drawn from post-colonial and post-structural criticism to offer insights into everyday educational practice with a view to improving the quality of engagement and participation of academics, teachers, students and administrators (Priyadharshini) and new approaches to working with children as action researchers (see also Impact Case Study: *Children's participation in decision-making in primary classrooms*). Critical engagement with educational evaluation and policy is a continued strength of CARE research (see also Impact Case Study: *Measuring the working atmosphere in the classroom: The Haydn Scale*) and an important new direction is the contribution of CARE to internationalising research and teaching cultures (exemplified by the CARE symposium on intercultural perspectives on research ethics, which underpinned a 2013 *Compare* Special Issue).

Through focusing methodological exploration on these areas, CARE is a valuable resource. Initiatives include: a partnership with Cambridge University on 'Internationalising Educational Research Cultures and Graduate Training' (2009-10, 3 doctoral symposia with 35 invited participants at each); hosting the British Association for International and Comparative Education (BAICE) conference on Education and Justice in Challenging Times (2010, 100 delegates), the Lawrence Stenhouse Symposium (2012, 40 delegates) and the Internationalising Research Ethics symposium (2011, 35 invited participants); and the on-going writing-for-publication programme with BAICE/*Compare*. Further, mechanisms for communicating research news were strengthened through publication of a bi-monthly CARE newsletter, annual report and CARE serving as a focal point for research requests from the public (see also Impact Statement, REF 3a).

Five-year objectives, post REF2014. The School's main objectives in this period will be:

- *To strengthen the School's distinctiveness in research*, particularly in current areas of strength in *mathematics education* and *literacy and development*. The School will support existing and emerging research strengths, particularly building on the specialism of new staff. One example of this is the appointment of Biza in RME in 2013 which sharpens the profile of the group in upper secondary and tertiary mathematics education. Another example of how this objective will be achieved in the coming years is the recent, orchestrated effort towards building critical mass in the area of expertise of Carrington (appointed in 2010), through the appointment of early career researchers (e.g. Godoy-Pressland in 2013). The School will support these developments through targeted studentships, pump-priming research funding and new appointments.
- *To improve research income*. The School will further diversify sources of external funding, and increase the number and quality of applications to larger schemes. Strengthening of international networks (e.g. LDG's established relationship with UNESCO) will facilitate reaching out to new funders, such as the EU whose recent programmes (Horizon 2020) for funding collaborations beyond the borders of Europe suit EDU's international networking and contacts. We will pursue external funding from UK and international Research Councils through collaborative bids with other institutions (capitalising on the excellent prospects of initiatives such as the Eastern Academic Research Consortium (ARC) launched in 2013 by UEA and the Universities of Essex and Kent). Early career researchers will be steered towards pilot projects through pump-priming research funding, available internally in EDU and centrally by the University, as the stepping stone for larger external funding applications.
- *To build research capacity*. EDU will develop its 'career escalators' for staff further. Currently these include: the development of publication and grant application plans as part of annual Personal Research Plans; the equivalent of 40% workload allocation to research; progress monitoring and support through mentoring, annual Appraisals, regular research meetings with the Research Director and through meetings of the School's Research Forum; and, one-semester of Study Leave every six semesters. The research groups and CARE will strengthen the frequency and intensity of provision of mentoring, peer review for publications and funding bids, research planning, networking opportunities, seminar participation and presentation, and strategies for ensuring dissemination and impact of research. We will develop the research capacity of staff whose work is mainly in teacher education by encouraging collaboration with EDU's experienced researchers as well as appropriate workload allocation.
- *To embed dissemination and impact*. Research will be disseminated widely by the already strong programme of support for conference presentations, growth of the School's research website, as well as further engagement with social media. We will make full use of the

international and national networks built over time by the research groups and CARE, and through delivery of the School's high quality initial teacher education programmes. Regular and timely impact monitoring and planning will become a core School activity, overseen and monitored by the Research Committee and the Director of Research.

c. People, including:

i. Staffing strategy and staff development

The School's recruitment objectives since 2008 have been to:

- sustain research strength and critical mass in key areas (mathematics education and literacy)
- expand staffing in strategic new areas (see Section b(ii) for examples from the areas of higher education research, research in physical education pedagogy and cultural studies in education)
- implement clear quality thresholds (such as REF-returnability) for new research appointments
- appoint early career researchers to sustain and build future research activity.

The success of these measures in the assessment period is demonstrated by the promotion of early career (ECR) and mid-career staff (e.g. promotions of Priyadharshini, Iannone, Lebeau to Senior Lecturer), the progression of mid and later career staff through promotion to Professor (Cockburn, Haydn, Robinson-Pant, Nardi), the confirmation of appointment of recently appointed ECR staff (e.g. Warburton), new appointment of ECR staff (with Biza and Godoy-Pressland included in this submission) in strategic areas and senior appointments in areas of emerging expertise (Carrington – cultural studies in education). The three appointments made in 2013 reflect the above strategy: Biza replaces Cockburn (following retirement) in RME, whilst Themelis and Godoy-Pressland reinforce areas of emerging strength in higher education (see also outputs by Lebeau and Hinchliffe) and cultural studies in education (see also outputs by Carrington and Priyadharshini). The School's staffing profile is also shaped by the University's strategy, which has adopted a two-strand approach to academic employment: Academic, Teaching and Research (ATR) and Academic, Teaching and Scholarship (ATS). Both strands have opportunities for promotion but different expectations of the balance of duties between teaching and research: ATR staff are expected to dedicate 40% of their time to research, with PhD supervision allocated separately. Both ATR and ATS staff (the latter as part of the expectation to engage with scholarship) are expected to develop PhD supervision experience, with less experienced supervisors working as a second supervisor.

The School has well-embedded frameworks and procedures to support research careers:

- All ATR members of staff are expected to complete an annual research plan setting out research goals for each academic year. This plan is discussed individually with the Director of Research or Head of School and is the basis for mentoring, applications for study leave, conference funding and pump-priming research funding. This planning links to the annual Appraisal process that highlights achievements, objectives and training/support needs.
- Annual Research Plans and appraisal processes feed into the annual promotions and study leave application procedures.
- Each early career member of staff is provided with a mentor.
- Criteria for the confirmation of appointment for new staff are clearly articulated by the University and embedded in the annual research plans.
- A shift (established in 2009) from a three-year probationary period to a five-year one offers newly appointed lecturers a better timeline for developing a sustainable research programme.
- Staff members are entitled to apply for one semester of study leave every seven. Study leave applications are encouraged and applicants are supported towards presenting sufficiently detailed plans that focus on generating new research outputs and funding proposals.
- The School actively incorporates the principles of the UEA Concordat to Support the Career Development of Researchers for all staff, including support for fixed term contract researchers, as well as support for equality and diversity (UEA holds a Bronze award as part of the Athena Swan Charter).

The School's Research Ethics Committee provides ethical guidance and approval of research undertaken by staff. The Committee has established a clear set of procedures and guidelines to help staff and students ensure that their research is conducted in accordance with best practice in

ethical standards and is consistent with the University's ethical guidelines. The School recently made major revisions to its procedures for providing ethical guidance and approval for research proposals.

ii. Research students

Since 2008, the School has admitted 101 doctoral students, supervised by over 30 primary and secondary supervisors. 76 students completed their doctorate in this period (this includes: 20 EdD, Doctorate in Education, not included in REF4; and, 2 PhDP, Doctorate by Publication). The School distributed 15 fully-funded studentships, which are awarded based on applicants' qualifications, experience and proposed study, potential to strengthen an area of strategic interest, and fit with supervisory expertise. Students become vital members of the research community through involvement in research group activities, seminars, mentoring for publication, organisation of the cross-faculty, biennial EDU PGR (post-graduate research) conference, presentations at conferences, and sharing of their expertise through teaching. High quality doctoral applications are also generated by graduates of our Masters programme which offers specialist pathways in areas of strategic interest such as adult literacy (directed by Robinson-Pant) and mathematics education (directed by Nardi). The School provides a year-long fortnightly seminar programme for new PhD students and involves a wide range of research active staff (co-ordinated by Carrington). The EdD programme (directed by Priyadharshini) comprises intensive 'taught' weekend sessions and is open to all part-time doctoral students in the Faculty. From 2012-13, as part of UEA's successful Advanced Doctoral Training programmes which attracted participants from 22 universities, the School, also drawing on CARE's methodological expertise, offered three Advanced Doctoral Training sessions (co-ordinated by Priyadharshini), on participatory research methodology, researching across languages and cultures (in collaboration with the School of Language and Communication Studies) and critical approaches to analysis of public texts. The School will build on this success, as UEA integrates its doctoral training programme with those of the Eastern ARC Universities (see Section (b)). Doctoral students complete 10 days of Faculty-level personal and professional development activity each year, which enhances IT, academic and professional skills, employability and engagement with staff and students from other disciplines. The School awards two annual prizes for the best doctoral thesis, including the Terry Philips Prize for the most creatively written thesis. The School's doctoral students also present their work to the public as part of UEA's annual research showcase day and have won the 'Public's Award' on three occasions in the census period.

Yearly supervisor training and refresher workshops are provided at Faculty level with required attendance by staff once every 3 years. New supervisors take on second supervisor roles (mentored by experienced colleagues) before moving to full supervisory duties after satisfactory completion of these responsibilities. Practical resources (including a DVD and manual for supervisors) as well as input to University level supervisor training/induction programmes have originated in the findings of UEA Teaching Fellowship research projects on internationalisation and doctoral-level teaching and supervision (e.g. Magyar and Robinson-Pant, 2009-10; 2012-13). The School's PGR Director oversees supervision arrangements, with the Director of PGR Admissions appointing appropriate supervisory teams. The mandatory Annual Progress Report, completed by doctoral students and their supervisory teams, helps to ensure quality supervision.

d. Income, infrastructure and facilities

The School is situated in award-winning, purpose-built premises, the Lawrence Stenhouse Building, which provides space for research seminars and collaborative work. Since the last assessment period, significant infrastructure investment has been made in relation to the research student and academic visitor study space: major improvements have created an attractive, large, modern hot-desk environment with additional lounge, locker and meeting room areas. ICT facilities, along with dedicated photocopy, printing and scanning facilities, are regularly upgraded. Staff and students have access to the UEA library and ICT facilities, including a large online collection with subscriptions to all key journals, interlibrary lending services, as well as an extensive and well-resourced collection of hard copy texts. Campus-wide wireless internet and off-campus access allows staff and students to conduct research related activities at any location. The School has a library liaison representative and staff and research students make extensive use of this service to

request purchase of texts and resources. IT equipment – including digital recorders and cameras – is available for loan for fieldwork and the on-site CARE library holds a collection of articles for higher degree students on methodology. ICT rooms and facilities are available campus-wide, and innovative e-Hub suites have been introduced in the UEA Library for collaborative research work by staff and research students.

The School's Research Committee convenes six times a year to develop and oversee research strategy and to operationalize Faculty and University policies. It is chaired by the Research Director and its membership includes the leaders of RME and LDG, the CARE Director, the Director of post-graduate research admissions, the Chair of the Research Ethics Committee as well as representatives from emerging clusters of faculty with shared research expertise. In addition, a School-wide Research Forum is convened twice a year to discuss topical aspects of School research strategy (such as Open Access policy, bidding priorities and impact strategy).

The School's Research Budget includes spend on Study Leave (at least one semester per ATR member of staff since 2008) and approximately £10,000 per FTE in the census period dedicated to ensuring support for:

- Participation in conferences, international and UK, for research dissemination and networking.
- Research seminars. Three programmes run concurrently: since 2008, there have been 109 Public Seminars with both external and in-house speakers from all research groups and are well attended by staff and students. This includes a seminar series on Philosophy in Education, and Education and Development, which often draw additional audiences from across and beyond the University. LDG and RME seminars are run jointly with UEA's Schools of International Development and Mathematics.
- Research proposal development. Staff can apply for small funds to support pilots in areas of strategic investment. See also further income generation strategies listed below.
- Research output production acceleration. Staff can access small funds to accelerate the completion of research outputs (for instance, to support data transcription).

External funding for research has come from UK and international research councils, including: ESRC, British Academy, Nuffield Foundation, and the Australian Research Council. The School's strong track record on action research and evaluation is reflected in the wide range of Government, NGO and multilateral organisation sources of funding, including: Higher Education Academy, Department for Education, UNESCO, International Fund for Agricultural Development, CamFEd International, Teacher Development Agency, Sport England, Norfolk Children's Services, Opportunities West Norfolk, Pears Foundation and Aim Higher.

The School has developed and is embedding further strategies for income generation:

- *Pump Priming Research Fund*. In addition to the research budget, the School uses income from conference organisation and other activities to seed fund research and to support the hosting of conferences and development of partnerships, particularly of early career staff. For example, in 2012 there were eight successful applications, all aiming at high quality publications, conference presentations or larger bids.
- Peer review of grant proposals and research outputs. The School has implemented an internal review process for funding bids, overseen by the Research Director. UK Research Council applications undergo a second, mandatory review at University level. Peer mentoring provides review of research outputs, systematically and regularly carried out within the research groups or CARE and, where necessary, at individual level by mentors.
- Planning and incentivising research income generation. The processes of annual research planning, appraisal, study leave and promotion are used to focus staff energy on generating research income.

The University's Research and Enterprise Service (REN) provides centralised administrative support for research grant activities. It supports the development and submission of funding applications, peer review and ethical review processes, contract negotiation and externally funded staff appointments. REN staff are members of the Association for Research Managers and Administrators. Project financial management is undertaken by REN's dedicated Finance Office.

e. Collaboration and contribution to the discipline or research base

The School has drawn on strong national and international networks of researchers from across diverse disciplines, professions and cultures to develop innovative approaches to applied research

and explore issues around participation, engagement and social justice. Whilst several of these networks have their origins in LDG, RME and CARE, within the last decade and the recent recruitment of key researchers have led to new collaborative relationships that have strengthened and widened our contributions to the discipline. The School supports long and short-term academic visits and since 2008 has hosted 36 visiting academics from Greece, Spain, China, Malaysia, Saudi Arabia, Romania, New Zealand, Israel, USA, Iran, Canada, Brazil, Australia, Ethiopia, Pakistan, Thailand and Tajikistan. There has been strong involvement in Erasmus, Comenius and Socrates exchanges and projects around transnational cooperation, intercultural awareness and reinforcing knowledge of the European community (e.g. Haydn's E-Histo project associated with the EU Lifelong Learning Programme).

Faculty serve as committee or board members on numerous professional associations, learned societies and funding bodies. These include: ESRC Peer Review College, UK Literacy Working Group, National Council of the UK Literacy Association, International Society of History Didactics, Higher Education Academy. Several of the School's professors hold esteemed positions in national and international organisations: for example, Elliott is Elected President of the World Association for Lesson Studies; Rowland is Chair of the UK's Joint Mathematical Council in 2012 and Vice-President of the International Group for Psychology in Mathematics Education.

The School emphasises interdisciplinary research, facilitated by flexible University administrative mechanisms for researchers to collaborate across Schools and Faculties on doctoral supervision, research bids and conference organisation. LDG and RME exemplify this approach, as detailed in Section (b). RME has established links with the School of Mathematics through research and research-led teaching of post-graduate courses and undergraduate modules. LDG has become known for introducing ethnographic approaches into literacy and development policy and planning. The growing links between the School's physical education researchers and the Norwich Medical School also demonstrate potential for strong interdisciplinary collaboration in this area that the School is keen to grow further.

During the assessment period, faculty have fulfilled 25 editorial board membership roles for academic journals and book series (for example, Carrington is Series co-Editor of the new Springer series *Cultural Studies and Transdisciplinarity in Education*). Ten faculty members have served as editors of academic journals: *Compare* (Robinson-Pant); *Research in Mathematics Education* (Nardi, Rowland), *Journal of Mathematics Teacher Education* (Cockburn), *Journal of Higher Education in Africa* (Lebeau), *Cambridge Journal of Education* (Norris, Priyadharshini); *Discourse: Studies in the Cultural Politics of Education* (Carrington); *International Journal for Lesson and Learning Studies* (Elliott), *International Journal of Children's Spirituality* (Watson – Book reviews editor), *International Journal of Basic Education* (Cockburn – Consulting Editor).

Faculty have also acted as expert reviewers for national and international funding or research assessment national organisations, including: *ESRC Peer Review College*, *Nuffield Foundation*, *Austrian Social Science Foundation*, *Singapore Research Councils*; *Hong Kong Research Council*; *Hellenic Republic Quality Assessment in Higher Education*, *Council for the Development of Social Research in Africa*, *Social Sciences and Humanities Research Council of Canada*, *Fonds de la Recherche Scientifique* (Belgium); *Excellence in Research for Australia*; *Australian Research Council*.

Academic staff members have delivered more than 60 invited seminars and lectures since 2008, of which at least 20 were keynote/plenary addresses at international events, for example:

2013 Sweden: Elliott. World Association of Lesson Studies Annual Conference.

2013 Portugal: Rogers. International Conference 'The Non-formal and Informal in Education'

2012 South Africa: Rowland. Association for Mathematics Education of South Africa.

2011 Hong Kong: Carrington. 2nd International Conference for Popular Culture.

2010 Greece: Nardi. 27th Annual Conference of the Hellenic Mathematical Society.

2010 The Netherlands: Haydn. Institute for War, Holocaust and Genocide.

2008 Mexico: Nardi, Rowland. 11th International Congress of Mathematics Education.

Finally, in addition to the highly selective set of research outputs included in this submission, faculty have authored several monographs, edited or co-edited numerous edited books and contributed more than a hundred book chapters in peer-reviewed edited volumes, including a dozen contributions to highly regarded international handbooks.