

Institution: Ulster University
Unit of Assessment: Education UOA 23
1. Unit context and structure, research and impact strategy

Context

Education at Ulster is a vibrant unit that is recognised for enabling the achievement of impact through local engagement and internationally excellent research. Having marked its **50th anniversary** in 2019, the School of Education has an established tradition of leadership, developing audiences beyond the academy through regional, national and global partnerships. Part of the Faculty of Arts, Humanities and Social Sciences, the Unit's collaborative, interdisciplinary, dynamic and innovative approach to research and impact embodies Ulster University's mission of "addressing issues of global relevance but with meaningful local impact on the social, economic and cultural life of Northern Ireland". The School aims to ensure its **research is impactful** by taking dimensions of education in the Northern Ireland (NI) community as points of departure and contextualising the challenges, contributing expertise in the service of education as agent of change, and facilitating responsive and productive impact on policy and practice at local, national and international levels. Since 2014, the Unit has been **awarded £5.5M in research and development grants** from a very wide range of funders including research councils, government departments and charities (cf. **£2.2M million**, 2008–14). As detailed in section 1 below we have met the three objectives set out in the last REF submission around increased funding, collaboration across the unit and building staff capacity (in section 2).

UNESCO Centre

The local and international work of UNESCO Centre staff underpins our two Impact Case Studies. The UNESCO Centre is home to the **longest continuously operating UNESCO Chair in the United Kingdom (Smith, 1999) and the first on the island of Ireland**. The Centre has **achieved its foremost aim as identified in REF2014** by obtaining more than **£2.7M of funding "to develop, monitor and research intervention programmes in conflict-afflicted states"** through partnerships with UNICEF and the International Committee of the Red Cross (ICRC) and through the development of the Political Economy of Education Research (PEER) network funded via the AHRC from the UKRI Global Challenges Research Fund (GCRF).

The research which was the basis of the UNESCO Chair's outstanding REF 2014 ICS led to increasing demand for the Centre's expertise in conflict analysis to be applied to the work of education donors and international development organisations in conflict-affected countries. Research projects have included the UNICEF Peacebuilding, Education and Advocacy programme (2011–16), a **€150 million initiative** funded by the government of the Netherlands across fourteen conflict-affected countries. A particular contribution to the development of the theory base is the *4Rs Framework* (Novelli, Lopes Cardozo and Smith, 2017) which has been used by key development organisations – UNICEF, UK Department for International Development (DFID) and Oxfam – to analyse education's contribution to sustainable peacebuilding in conflict-affected contexts. The application of this framework by UNICEF and other international development organisations is the focus of one of the Unit's REF 2021 Impact Case Studies.

Smith (PI) was awarded £2M from GCRF to establish the four-university (Ulster, Cape Town, Nazarbayev and Sussex) PEER Network (2020–23). **Looking forward, the PEER Network's core aim is its research impact:** to help national, regional and global level policymakers and practitioners make socially just decisions about investments in education that benefit children in contexts of conflict and crisis. The Network's activities include establishing two regional hubs of Political Economy Analysis (PEA) of education expertise across conflict-affected countries in Central Asia and Africa, inviting policymakers, practitioners and academics to co-produce and develop online PEA tools, knowledge and expertise, and commissioning of up to ten small

(£30,000) research studies which will facilitate locally owned knowledge bases in each hub location.

The UNESCO Chair at Ulster is featured in two case studies in a report by the UK National Commission for UNESCO, which highlighted an estimated £151M per year financial benefit to the UK economy from UNESCO. Professor Smith's work was the basis for a Commonwealth Day keynote presentation at the Houses of Parliament, Westminster and was recognised with the award of an OBE for services to education in the 2020 New Year's Honours list.

Research and Impact strategy and Achievements

Our research is underpinned by the Ulster University (UU) Five & Fifty strategic priorities and the Research and Impact Strategy (2017–22) which designates four strategic priorities: social renewal, sustainability, healthy communities, and creativity and culture. **The Unit's long-standing research strategy has a janiform outlook: building on sustainable research from the past and developing innovative, impactful research for the future.** This is built on a foundation of **compulsory online training for all research staff**, PhD Researchers and Masters students on Ethical Integrity in Research - **100% of REF eligible staff have completed this.**

Ulster University is a signatory of DORA and a supporter of the principles of the Leiden Manifesto and the Metric Tide. The Unit recognises and values that their research should be openly accessible to all. **Researchers are encouraged to publish in open access outlets. Our research is published publicly on the PURE database.**

Our Unit's development strategy centres on three core impact-oriented themes

- Theme 1: Professional Education, Policy Development and Pedagogical Practice
- Theme 2: Education, Conflict Transformation and Peacebuilding (International)
- Theme 3: Education, Conflict Transformation and Peacebuilding (Northern Ireland)

Each of the themes have been long-standing focal points, where the Unit has developed capacity to achieve impact both from research it initiates proactively and from its response to emerging challenges. The sections below point towards the future development of each theme and UNESCO Centre works across Themes 2 and 3.

Theme 1: Professional Education, Policy Development and Pedagogical Practice

Building on collaborations that were commended in REF 2014, the Unit continues to provide both **proactive and responsive research-based leadership and collaboration** for teacher and librarian education, locally, nationally and internationally. As Chair of the Universities' Council for the Education of Teachers Northern Ireland (UCETNI), Clarke initiated a novel research collaboration in which she led a team of colleagues from all the local (competing) HEIs, who were commissioned to undertake two research studies. Firstly, as part of the roll out of the Department of Education's Learning Leaders Strategy, the Teacher Education branch of the Department commissioned UCETNI to conduct a study and identify principles which would inform a framework for teacher professional learning in NI. This innovative framework (Clarke et al, 2019) will underpin the implementation of the Learning Leaders Strategy over the next six years. Secondly, to establish a baseline for the development of a Strategy for Digital Education in schools, NI Screen funded UCETNI for a two-phase empirical study of teachers' perceptions of Information and Communication Technology (ICT) and professional learning in this area. A full time PhD researcher (McCafferty-Lau) is taking this work forward and has used the disruptive effects of the COVID-19 pandemic to probe the nature of teachers' education technology skills and ambitions.

Further evidence of the Unit's vitality and agility is found in **studies of home schooling and school leadership during the pandemic** that have been undertaken across all school sectors, both locally and with colleagues across the island and within the UK (O'Connor, Bates, Finlay,

Roulston & Taggart, 2020) and within the UK (Beauchamp, Hulme, Clarke and Hamilton, 2020). The research also included a study of the distinctive needs of newcomer pupils and their parents during the pandemic, findings of which are to be disseminated by Skinner and two PhD researchers (Stewart and Kelly) in a British Educational Research Association (BERA) webinar in September 2020. Roulston is to share key outcomes of the post-primary parents' study at the Standing Conference for Teacher Education North and South (SCoTENS) webinar for which Clarke invited Neil Selwyn of Monash University to provide a keynote address – eight members of Department of Education staff, including the newly appointed Chief Inspector for NI, took part in lively panel discussions.

In July 2020, **O'Connor was invited to participate in a high-level working group to mobilise research evidence to support recovery from COVID-19.** Led by the UK Government Chief Scientific Adviser and the Executive Chair of the ESRC, the working group identified a range of areas of research interest for the Re-building a Resilient Britain programme. O'Connor convened the Supporting Services sub-group, which is to complete its reports before the end of 2020. Austin, with partners in the Irish government Department of Education, Dublin City University, the University of Cyprus and the VisMednet training organisation in Malta, has developed a bid to the EU for the 'Repurposing Education through Blended Learning' (REBEL) project, supported by Roulston, Taggart and Skinner, which will provide professional development in digital skills for teachers and teacher educators from 2021–2023 to enable them to meet the challenges of COVID-19.

The **use of ICT to enhance teaching and learning** has been part of this research theme since 2008. By 2014, projects had examined the use of laptops (Austin, Clarke, Abbott), Virtual Learning Environments (Lambe, Clarke) and E-Portfolios in Initial Teacher Education (McNair). Continuing to build on a twin-track trajectory of innovation and critique around successive waves of technology, Clarke and Abbott undertook an appraisal of the use of iPads in a local primary school, and McGill is carrying out PhD research on the use of tablets in teaching mathematics in primary schools and within teacher education. Taggart and Roulston are developing the use of **Virtual Reality and Augmented Reality (using VIAR 360)** in teacher education, with colleagues in the School of Nursing and in the School of Computing and Engineering who co-supervise a PhD researcher (Murtagh). A further interdisciplinary part time PhD researcher has begun a project (supervised by Irwin from FE sector Teacher Education and Chen from Computing) examining the use of AI to evaluate students' engagement during online classes.

Staff research has included the interdisciplinary deconstruction of aspects of professionalism using Clarke's innovative interdisciplinary Place Model (Clarke, 2016, 2019; Clarke and McFlynn 2020) and of managerialism (Skinner and Leavy). The Place Model is a novel interdisciplinary conceptualisation which draws on, and develops, geographical and sociological understandings of place, particularly Massey's notion of Geographical Imagination, providing an innovative lens with which to deconstruct the concepts of profession and professional. Dissemination of research using the Place Model has been via invited keynotes at UCET and Teacher Education Advancement Network (TEAN) Conferences in the UK, and the Australian and New Zealand Teacher Education Networks (TEFANZ/A TEA) Conference in Auckland. Publication highlights include a Special Issue (SI) of the *US Journal of Education Sciences* (edited by Clarke, 2020) with a foreword by Professor Howard Gardner of Harvard University, director of the Good Work Project, who describes the research as "timely and useful". Contributing authors are researchers (both PhD students and academic staff) from across the University and international authors in a range of professions including social work, speech therapy, midwifery, policing, journalism and teacher education (Clarke and McFlynn, 2020). The Place Model is used as part of course induction for all PGCE students and for postgraduate students in social work, and the social work article is one of the elements of McDermott's PhD by published work.

The Unit's research in teacher education was recognised as a key underpinning for the recent **Education Training Inspectorate's (ETI) 'Outstanding' grading of Ulster course provision and has paved the way for the research-led development of the first Campus School on the**

island of Ireland, which is in the early stages of planning with local schools, the Education Authority and the Department of Education. The **Campus School Research Group** is interdisciplinary, comprising current and former staff and PhD researchers, and builds on Moran and Clarke's (2012) analysis of the historical Model School approach in Ireland, which they contrasted with current practice in Finland.

Theme 2: Education, Conflict Transformation and Peacebuilding (International)

The Unit's approach to research related to education, conflict and peacebuilding emerged in the 1970s through engagement with education providers during the conflict in NI and has developed to support work on the role of education in community relations, religiously segregated and integrated schools, and research-informed curriculum change in areas such as history and citizenship education.

Austin led a ten-year ICT-enabled project, Dissolving Boundaries (in conjunction with the National University of Ireland (NUI) Maynooth), which involved 600 schools north and south of the Irish border working on topics common to school curricula. The project was the basis of an outstanding REF 2014 ICS and Austin's co-authored Routledge book (Austin and Anderson, 2013) was described by one reviewer as representing a paradigm shift in how public education should be viewed. Since then, he has applied the lessons of the project to blended learning in Shared Education, the government policy on promoting collaborative links between schools (Austin and Turner 2020). Building on this in turn, Hunter and Austin's latest Routledge book (2020) on blended learning in intercultural education has distilled insights from the project into theoretical models for inter-school collaboration and introduced new case studies, such as a study of linguistic and cultural issues in Spain/Catalonia and Israel/Palestine.

Shanks has conducted research with application to post-conflict stabilisation and peacebuilding agendas in countries including Iraq (the focus of her well-received Routledge book (2016)), Ukraine, Somalia and Syria, through projects commissioned by key development organisations including the UN Assistance Mission for Iraq, Office of the UN High Commissioner for Human Rights and US Agency for International Development (USAID). **Shanks is an invited contributor to debates at government and intergovernmental level**, such as those convened by the FCDO on improving ethical research standards in fragile environments. **This is a key part of Shanks's ongoing role as UKRI GCRF Challenge Leader for Education.** Smith and Shanks have a partnership with the International Committee of the Red Cross (ICRC), Geneva involving analysis of the inclusion of education as a priority in humanitarian response to the needs of children in conflict.

The **GCRF PEER Network is funded by AHRC** to establish two regional hubs of education expertise across conflict-affected countries in Central Asia and Africa and make all tools and resources freely available to students, researchers and practitioners. **An important element of the Network's impact will be in supporting and enabling a new generation of researchers to analyse and influence education systems in their own contexts.**

Theme 3: Education for Conflict Transformation (Northern Ireland)

This theme contributes particularly strongly to the University's civic mission, with impacts on policy and practice in linking schools and their communities, while building theory for future application and **addresses the 2014 aim of developing the UNESCO Centre as a hub for the UOA by fostering collaborative projects focused on inclusion by synergising the expertise of unit members.** The approach to work under this theme is distinctive in its emphasis on communicating findings in cogent and user-friendly ways that are accessible to a range of audiences. An ICS derives from the application of the novel Community Conversations approach in a range of contexts (Bates et al, 2020) and the work of the Transforming Education project.

The Transforming Education Project carries out research into policies related to: integration and separate schooling; pupil demography and enrolment patterns across school types, sectors and geographic areas; current arrangements for school governance; and teacher education, recruitment, and employment practices, including implications for fair employment and statutory requirements for religious education and worship in schools. Recent studies have involved the innovative interdisciplinary application of Geographic Information Systems for the spatial analysis of issues such as levels of integration and segregation, and school planning and transport arrangements (Roulston (Education) and Cook (Geography)). The project's **infographic-rich briefing papers** have already achieved considerable traction with a wide local audience, for example influencing debates relating to NI legislation on the employment of teachers and the appointment of school governors. Hunter, McCully and Bates examined the sustainability of small rural schools including the novel and controversial concept of employing 'Shared Teachers' across inter-communal school partnerships (Bates and McCully, 2020). Findings from the Transforming Education project have received significant attention from local media (BBC NI, newspapers and social media), politicians policy-makers and education stakeholders and **will form part of the evidence base to inform an 'external, independent review of education provision' being established by the NI Executive in 2021**. Collated findings from the Transforming Education project will be published in March 2021 and Milliken and Roulston have been invited to **provide evidence to the NI Education Committee**.

The **Community Conversations methodology**, (Bates & O'Connor-Bones, 2020) an innovative, participative method for consulting the community about planned changes in education provision, was developed to facilitate community engagement in decision making around the area-based planning of schools, which has been a prominent and contentious issue in NI in recent years in the context of efforts to build a more sustainable education system. The research has frequently been applied to the intensely debated closure of small schools of various (competing and communally divided) kinds, but the methodology has also facilitated planning for new/extended provision in places where there are strong communal and intra-communal tensions.

O'Connor-Bones' (PI) ESRC project is part of the UK-wide Secondary Data Analysis Initiative enabling researchers to engage in large-scale secondary analysis. This novel, interdisciplinary eighteen-month project will enable comprehensive mapping of SEN and disability in NI for the first time. Using Department of Education school census data (2010–19) and regional census data (2001 and 2011), researchers have adopted a two-phase approach: (i) to explore SEN incidence and prevalence rates in educational terms and (ii) to explore the relationship between disability and wider socio-environmental factors. Two PhD researchers (Mullholland and Curran) are currently exploring this on either side of the Irish border.

The Unit's researchers have played a key role in the development of the distinctive Local and Global Citizenship component of the Northern Ireland Curriculum (CEA, 2007). Reilly, Bates and O'Connor-Bones obtained funding (£25,000) from the **UU Research Challenge Fund** for the study *Children and Young People's Political Literacy: Twenty Years after Signing the Good Friday Agreement*, which included interviews with key stakeholders from statutory policy, teaching and academic sectors involved in the development, design and implementation of the Citizenship curriculum. The study informed the design of two new modules for inclusion in the Kids' Life and Times and Young Life and Times surveys, which have for the first time provided large-scale data on pupils' views on the local citizenship elements of the curriculum.

Clarke and Abbott were commissioned to conduct an evaluation of DfID's Global Learning Programme in NI, seeking the views of pupils in primary and secondary schools. This study (Clarke and Abbott, 2019) provided hard evidence of the benefits for participating local schools, teachers and pupils but also highlighted systemic challenges for sustaining global learning practice, such as competing curricular demands, particularly at post-primary level where 'subject silos' persist. The Unit also provided PhD supervision for a **Commonwealth Fellowship Scholar** (Namphande, a former senior school inspector and an academic at Chancellor College Malawi) examining citizenship education in Malawi, where a newly introduced social studies curriculum

aims to promote learning for democracy following a period of dictatorship. A joint paper in *Compare* was a well-received first academic publication in this distinctive national context (Namphande, Clarke, Farren, McCully, 2017).

Future research and impact strategy

Moving forward to our future research strategy, our focus over the 2014-20 cycle has now solidified into a shared commitment to critical, ethical, open, impactful and collaborative education research that:

- Informs policy and practice in education in Northern Ireland through inclusive approaches to learning and research which support direct engagement with policy-makers, users and practitioners.
- Continues to develop monitor and research intervention programmes in conflict affected states, in particular through the development of the PEER Network.
- Purposively, and from the outset, builds the research capacity and careers of staff and PhD researchers across the unit providing opportunities and support for impactful, interdisciplinary approaches.

2. People

Unit Staffing Strategy and Staff Development – key elements and exemplars

The Unit's staffing strategy is closely linked to our strategic objectives for research and impact – **from recruitment and career-long support through to the succession planning noted in the REF2014 aims.**

The Research Director is a member of all academic appointment panels in the Unit and all panels are mixed gender. We aim to recruit a diverse range of highly talented academics with deep professional experience and expertise gained by working in, or with, the public sector and civic society.

In a transitional phase during which several senior researchers (Moran, Pritchard, Austin and McCully) have retired and Reilly has been appointed to Head the Doctoral College in Coleraine and Magee. In a commitment to building vitality and sustainability across all of the thematic areas has ensured **the appointment of their successors to full-time, permanent contracts, ensuring a stable staff profile.** This commitment is particularly evident in the Teacher Education team, where five new subject/phase experts with strong local professional reputations have been added since REF2014. Three Teacher Education staff have completed doctorates since 2014, each focused on aspects of teacher education (McFlynn, McAuley, McGill). Marlow and McQueen are completing interdisciplinary PhDs, focused on English Education (teaching poetry) and Music Education (teaching composition) respectively. The 'Outstanding' outcome of the recent PGCE inspection particularly commended the underpinning of this teaching excellence by research, and by the commitment to ensuring that all new Teacher Education staff are supported in becoming research-active. **The Inspectorate commended the ways in which staff conduct research in collaboration with a wide range of stakeholders.** The Unit aims to support the undertaking of shared action research for the purpose of enhancing both practice and policy, with an approach reflected in the **globally significant BERA-RSA Review** of the Role of Research in Initial Teacher Education (2014) to which Clarke was commissioned to contribute.

The appointment of Shanks to the UNESCO Centre is part of a succession plan supported by senior management to facilitate the flexible retirement of the current UNESCO Chair. A

newly appointed professor will take on a significant leadership role for international development research, including responsibility as PI for current ICRC and GCRF research projects and extending the range of countries (particularly in the conflict-affected parts of the Middle East and Africa). This transition is well underway and includes new research applications and appointment of research staff. **Recent PhD graduates**, Milliken and Finlay, have been brought in as postdoctoral researchers to assist on key UNESCO Centre projects and both have contributed to the Impact Case Studies.

Support for developing research careers

Working alongside the UU Doctoral College, the UOA supports early career staff (ECR) and PhD researchers and their supervisors. **All new academics develop their research capacity with the help of the Unit's three-pronged approach.** ECRs:

- work together in a New Researcher Support Group led by the Research Director and are also mentored by an Honorary Fellow within the Unit (Abbott). They meet with Visiting Professor Ian Menter to develop small-scale but high-impact research projects, to consider their individual training needs and to begin to shape the foci for their PhDs.
- are given opportunities to discuss nascent ideas and to share draft papers and proposals with more experienced colleagues across the Unit, and, before external conference presentations, to present papers at lunchtime seminars.
- are encouraged (and funded) to undertake part-time PhDs and to join more experienced researchers as members of project teams, co-authors of reports and papers, and as advisors on PhD supervisory teams as detailed elsewhere in this document.

The following research career vignette illustrates the success of the staffing strategy in underpinning the Unit's research strategy. Davidson's work demonstrates both the janiform reach across time and the interdisciplinary and geographic search for impact which are characteristic of the Unit. She is working with a Visiting Professor (Farren, a former Teacher Educator at Ulster and former Minister for Further and Higher Education) to write the first history of Teacher Education for Home Economics in NI. She is collaborating with colleagues in Food Technology at Ulster to examine student teachers' changing awareness of food poverty through a longitudinal study across their ITE course. She has also collaborated with St Angela's College in Sligo (a specialist Home Economics College, affiliated to NUI Galway) to undertake the first cross-border comparison of Home Economics as a curriculum component. These projects will feature in outputs submitted for the next REF exercise.

All colleagues who are research-active receive support for their research. Annual meetings are held with the Research Director and Head of School to discuss yearly plans and individual needs in respect of support, training and personal research development. Research is an integral part of the Development and Appraisal Review (DAR) system, a process conducted with all staff at least every two years (and involving both the Head of School and the Research Director). **Staff have protected time for research** through keeping teaching and administrative loads relatively low and equal - research active staff have between 2 and 3 hours less teaching per week. The average number of teaching hours per week is 12. Discussions are had explicitly focus on **career progression and how staff might meet promotion criteria.** Staff completing PhDs are encouraged to take part in the Researcher Development Programme (RDP) training provided by the Doctoral College. Small grants are also made available for capacity building and staff are eligible to apply for Ulster's Distinguished Research Fellowships and the **Ulster Research Challenge Fund (pump priming which has supported the work of Bates and O'Connor-Bones (£25,000) and fed into ICS 2).** These awards provide both recognition of achievement in research, and resources to enable impact.

Ulster's **sabbatical policy** has enabled us to extend sabbatical opportunities to all academic staff. Three members of the Unit (O'Connor-Bones, Irwin and Bates) have each had a period of sabbatical leave, used to conduct research, develop ICSs and write for publication.

Outreach for impact

The University's Department for Research and Impact provides guidance on funding agencies and regular updates on funding sources are circulated to staff. The majority of staff have taken part in Ulster's SOARING, RIGOUR and **Impact Development Series**, to network within the wider academic community as well as with key stakeholders in government, statutory, non-statutory and voluntary sectors, and to present papers at local, national and international conferences. **A conference budget is available for staff presenting papers** – these are initially presented in lunchtime seminars and research days within the Unit and are all developed for submission to peer-reviewed international journals.

The Unit has active social media accounts to **increase visibility and opportunities for engagement** and staff are encouraged to contribute to relevant research blogs – for example, Clarke was invited to contribute to the Harvard Good Project blog on Professions and to the British Curriculum Foundation/BERA Blog on Teacher Education curricula in NI. A team of Ulster researchers (O'Connor-Bones, Bates) including a PhD researcher (Finlay) and a Visiting Professor (Worden) published a BERA Blog piece on "Implementing citizenship education in a post-conflict society: Lessons from Northern Ireland". Several thought pieces for the *Sluggie O'Toole* blog about controversial aspects of the Transforming Education Project (Roulston, Milliken) have brought over 1,000 replies and stimulated some intense online debate around these issues (ICS 2). Milliken has published two articles on aspects of the Transforming Education Project on RTE Brainstorm, the Irish national broadcaster's thriving online platform for the research community's contribution to public debate. The annual away day, held each June, has become an integral feature of the Unit's work, affording opportunities to strengthen the research rationale, build research capacity, share research activity and outputs, and foster professional relationships.

Visiting professorships

Visiting Professors are an integral part of capacity building, hosting seminars and providing advice both formally and informally, on campus and online. They also **contribute to the vitality of our research environment**. Ian Menter (University of Oxford) has worked with staff across the unit to shape papers and PhD projects. Elizabeth Worden of American University, Washington DC, has co-authored both papers and funding bids (with Bates, O'Connor-Bones and Reilly). Professor Judy Pace, from the University of San Francisco, used part of her Spencer Foundation funding to conduct research with McCully on History Teaching in NI which is the focus of part of her forthcoming book. The UNESCO Centre has hosted Meenakshi Chhabra, a Fulbright Scholar from Lesley University, Massachusetts (where she is the Director of the Global Interdisciplinary Studies Program), who is working with McCully to compare high school history textbooks and teaching on events of violence in three countries: India, NI and South Africa. The study combines the lenses of peace studies and history education, and theories of social psychology related to trauma, violence, and collective memory. As a visiting PhD researcher in 2015–16, Tom Kavanagh of the University of Waikato was supervised by McCully and Stringer (Psychology) for his study of sectarianism, masculinity and racism in an NI rugby club.

Research Students

In this REF period, the Unit has produced 12.95 successful PhD completions relative to 11.67 in 2014, an 11% increase. This completion figure is set to rise as we currently have ten full time and eight part time PhD researchers within a newly flourishing postgraduate community of doctoral candidates, **40 percent of whom have interdisciplinary supervisory teams**. The Doctoral College supports PhD supervisors with a development programme to enhance their understanding of their roles and responsibilities. Each semester, workshops are provided for new and experienced PhD supervisors to encourage them to explore the key features of an effective supervisor–PhD researcher relationship, consider common challenges faced by PhD supervisors and discuss potential solutions. These workshops ensure a shared common understanding of the PhD process, including the associated timelines, milestones and assessment procedures from

enrolment to graduation. The workshops are mandatory for all PhD supervisors who wish to apply for studentship funding. Bates was **nominated for UU Students' Union PhD Supervisor Award (2019)**. Results of the Postgraduate Research Experience Survey indicate rising levels of satisfaction amongst our researchers – increasing year on year, from 83% in 2017 to 88% in 2019, when UU was ranked eighth out of 103 UK universities for postgraduate researcher satisfaction and third out of 103 for research culture.

Recruitment

PhD recruitment is aligned to the research strategy with a growing focus on encouraging interdisciplinarity (**40 per cent of our projects have interdisciplinary supervision teams** – including Nursing, Computing, Social Policy, English and Languages) and the involvement of new staff members and external experts (including a member of the ETI, our Visiting Professors, and academics from other HEIs) in advisory roles on one third of the PhD projects. The Unit has provided 13 fully-funded PhD scholarships during the current REF cycle. These include tuition fees, a stipend (£15,100 p.a.) and a research training grant (£900 p.a.). PhD research projects are proposed by supervisors and funded on a competitive basis, with the Research Director considering the strategic fit of the research to the Unit and ensuring that appropriate supervision is in place. Clarke and Ferguson (English) have succeeded in attracting a **Northern Bridge** PhD scholarship focused on Ulster Scots Education and the music of Sam Henry, (Milner-McLoone) and a **Marie Skłodowska-Curie Fellowship** (focused on the political economy of teacher education) is shared between Social Policy and Education (Shanks).

Induction, environment and ongoing support

At the start of their studies and annually thereafter, PhD researchers, in consultation with their supervisors, undertake a **Training Needs Analysis** (TNA) leading to a bespoke training plan. The TNA is structured around the Vitae Researcher Development Framework domains and is used to develop a Personal Development Plan, which is mapped on to the courses within the **Researcher Development Programme** (RDP) which provides workshops, online training and other development opportunities facilitated by both internal and external trainers. It provides PhD researchers with opportunities to gain the experience and skills to complete their PhD and become professional researchers with transferable skills that are valued by both academic and non-academic employers in an increasingly interdisciplinary and international context. The workshops include a career focus from the outset with an early session focus on 'Life Beyond the PhD: Planning for an Academic Career'.

As part of the RDP, the Doctoral College provides a comprehensive **two-day induction programme** for new PhD Researchers at each campus. This induction is complemented by a local induction where an interdisciplinary welcome lunch allows new researchers to meet supervisors, former and current researchers. Within a more formal local induction the Research Director provides a face-to-face workshop. As part of the Doctoral College development, the PhD journey at UU has been reviewed to ensure a consistent university-wide approach to postgraduate research education and training. **Clearly established milestones** (initial, confirmation and final assessments), assessment criteria, annual reviews and close monitoring by supervisors and the postgraduate tutor are facilitated through the introduction of the **PhD Manager workflow software**.

PhD researchers benefit from having a superb working environment in a **dedicated suite of rooms** on the top floor of our new building. Researchers from other parts of the Faculty share the suite, which encourages the development of interdisciplinary networks, including a lively, **researcher-instigated group** who provide supportive critiques for each other's presentations in advance of assessment seminars and conference presentations. Research students also have the support of the Postgraduate Tutor who provides additional pastoral care. Researchers are encouraged to take part in Doctoral College events and competitions and other celebrations of success.

The Doctoral College organises a week-long Annual Festival of our PhD research across all four campuses. The Festival brings together PhD researchers and research staff in a programme that includes keynotes, poster and oral presentations, and social interaction. The conference programme is developed entirely by PhD researchers, supported by Doctoral College staff. Since 2018, UU has taken part in the Three Minute Thesis (3MT®) Competition with the 2019 Ulster winner being selected for the UK final. The 3MT finalists from UU and Queen's University Belfast deliver a public engagement event showcasing the value of a PhD to society. **Unit successes include a runner up in the inaugural university-wide 3MT competition (Milliken, 2017–18) and the winner of the Campus Festival of Research competition (Stewart, 2018–19).**

Equality and Diversity

The Unit has a proactive and enabling approach to equality of opportunity, supporting capacity building, and **ensuring that all colleagues have the requisite mentorship, skills training and time to realise their potential.** Staff recruitment occurs within the tightly regulated frameworks for fair employment in NI and the University's promotions process is designed to promote equality and diversity, recognising and rewarding staff fairly for achievements in research and creating impact. **The Unit has equality and diversity heavily embedded in its teaching and research,** for example as part of the teacher education focus on Local and Global Citizenship Education in NI and Malawi, the cultural awareness built into our projects in Ulster Scots Education, and PhD research focused on newcomer pupils and their parents. Ulster researchers are rising to the challenge of improving understanding of the impacts of a gradual increase in the diversity of the school population in Northern Ireland. Skinner and Hou have also been examining student teachers' use of language and its impact on learners. Those involved in REF have had specific REF equality and diversity training.

Support for staff with family and carer responsibilities ensures that there is sufficient **flexibility in working arrangements** for them to sustain their careers and their families (particularly at times of crisis when sympathetic leave arrangements come into play) – the understanding and support of research colleagues and PhD supervisors is crucial here. The DAR process offers opportunities to discuss career development with individual members of staff, including opportunities for career breaks. Two staff in the Unit have availed of **flexible working arrangements.** Recent promotion rounds have seen two research active colleagues (Bates and Irwin), both female, become Senior Lecturers. The Unit is at an early stage of developing the **Athena SWAN initiative:** The School has **seconded** an Athena SWAN lead and appointed a Self-Assessment Team who are currently developing an action plan for a Bronze level submission at the end of 2021.

3. Income, infrastructure and facilities

Income

The Unit's research income of **over £2.4m comes from a wide range of sources.** Our income strategy has been to focus on projects which facilitate local (e.g., the Integrated Education Fund), national (e.g., SCoTENS Seed funding) and international (e.g., AHRC) partnerships of enquiry and development around our key themes. Cumulative totals and breakdown by source are shown in Figures 1 and 2. Our varied funding sources range from SCoTENS Seed Funding grants (c. £1,000-£5,000, jointly with partner researchers in Ireland) to the AHRC/GCRF Full Award for the PEER Network (£2.02M across the project lifespan).

Fig. 1 Education (UOA23) Research Income by Year

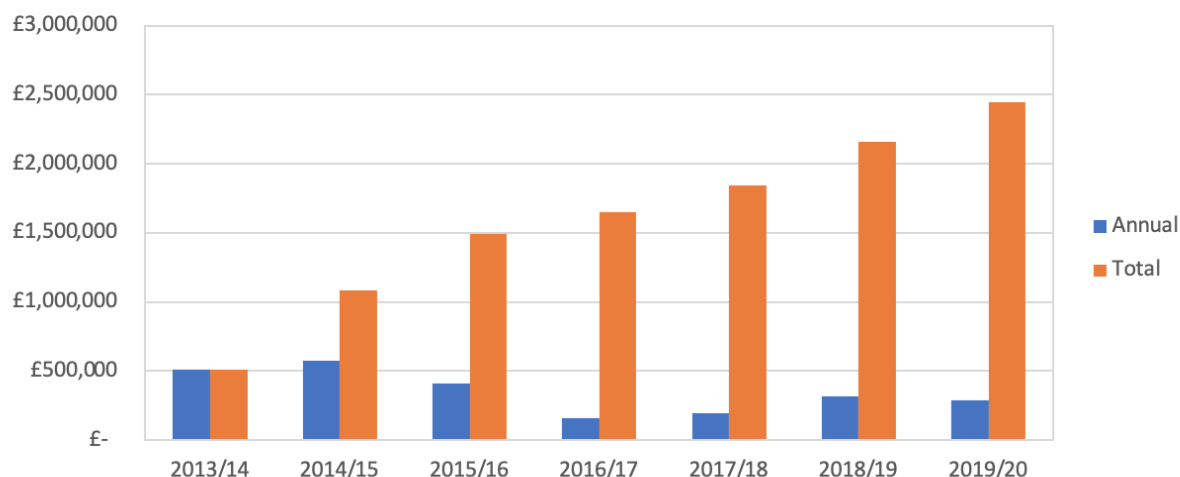
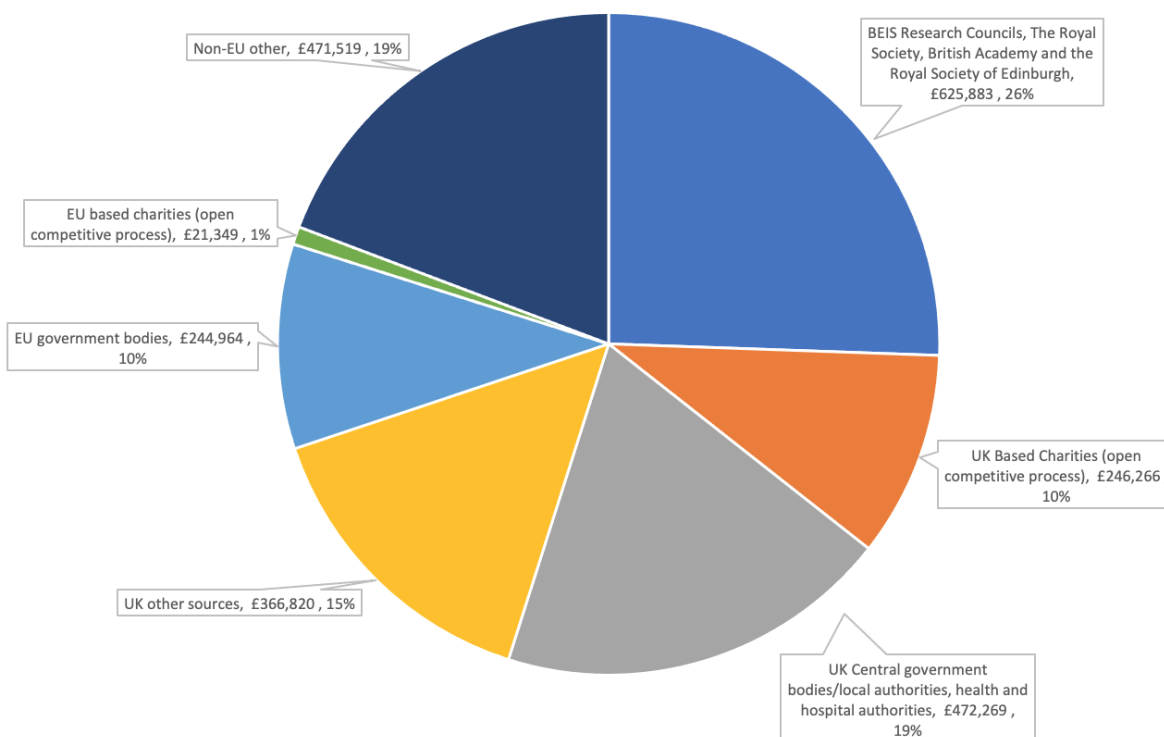


Fig. 2 UOA INCOME TOTALS 2014-2021



Infrastructure and facilities

During this REF period, a full time **Research Director** (Clarke) has been appointed to drive, direct and support the Unit’s research in collaboration with colleagues at all levels, and to support and manage PhD researchers (a **Grade 5 Administrator** assists this role). A **Postgraduate Tutor** supports PhD researchers, and a Grade 3 Administrator assists with this role. At Faculty level, the **Associate Dean for Research and Impact’s (ADRI) Research Directors’ Forum** meets monthly to drive strategy and to facilitate interdisciplinary understanding and collaboration, and a peer review panel supports the development of significant grant applications. Thus, the Faculty provides the core infrastructure and support for staff, while Ulster’s **Doctoral College** provides a focal point

for doctoral training and researcher development: offering centralised support for researchers, advising on individual and collective research activity, and coordinating postgraduate admissions to the subject. Individual researchers are also provided with guidance on possible sources of funding, and on postgraduate level employment which utilises both their research skills and subject expertise. The University Research and Impact Committee and its associate support team oversee Unit activity in relation to outputs, impact and environment.

The Unit's budget is devolved from the ADRI to the RD who has disbursed **£82,397 since 2017** in the newly formed faculty. Funding is used for conference attendance, research events, purchase of research services (e.g., coding, data collection, transcription and analysis), seminars and academic visitors. The University provides access to competitively awarded internal funding streams, the **Research Challenge Fund** in particular. The Fund has enabled Unit staff (Bates, O'Connor-Bones, Reilly) to undertake research on Local and Global Citizenship in NI, to publish articles in international peer reviewed journals, and to make successful funding applications beyond the University (to Leverhulme, December 2020). These outcomes are products of the expertise of individual staff, but they also reflect the collaborative mentorship and peer review processes within the Unit and the **University's Department for Research and Impact, which offers support by contributing to training courses during research events, by screening opportunities, and by providing guidance on meeting and exceeding funders' criteria.**

The University Library provides support for research in the form of access to books, journals and other information resources. Specialist faculty librarians on each campus support staff and PhD researchers in conducting systematic literature reviews and accessing more difficult to reach resources from local repositories and from institutions worldwide. The Faculty provides technical support for both staff and PhD researchers in the form of a highly experienced technician, and the Unit provides funding for specialist hardware and software such as the **VIAR360 software for new studies on AR and VR.**

More experienced staff are encouraged to engage at the highest levels in interdisciplinary research infrastructure initiatives across the University. For example, Bates led the development of the University-wide Citation Strategy while Clarke is a member of the Project Board developing the WorkTribe online workflow system for research funding applications, due for roll out in Spring 2021. The Unit has also piloted a new online workflow system for ethical approval.

4. Collaboration and contribution to the research base, economy and society

Ulster's Education researchers are serial collaborators, identifying and building synergies that enrich the research environment, the discipline and its local, national and global impact. The Unit makes substantial and sustained contributions to education while collaborating across disciplines, within and beyond communities and institutions. For instance, Smith chaired the ESRC Assessment Panel and Interviews for the GCRF Education as a Driver of Sustainable Development Call (Sept 2019). Smith was also a panel member for AHRC Networking Grants (Nov 2019) and GCRF Follow-on and Impact awards (Nov 2019). He is Co-Investigator (Co-I) on a successful ESRC-ODA award to the School of Nursing on maternal health in Myanmar (£1.7m for three years from 2020) and a Co-I on an EPSRC interdisciplinary project on inequalities in public services for health, education and the justice system, led by the School of Medicine at the University of Leeds. Smith has undertaken peer review for the Medical Research Council (MRC). Additional evaluation invitations from across Ireland include the NUI Travelling Studentships Proposal Evaluation (Clarke, O'Connor-Bones), Review of Subject in University College Cork, Revalidation of Undergraduate Provision at Marino Institute of Education, Advice on Senior Appointments in University College Cork (Clarke) and Dublin City University (McCully).

West-East links to other parts of the UK are long-standing and numerous. **Skinner has been appointed to the Council of BERA** while Davidson (previously Clarke) is a Co-convenor of the

Teacher Education and Development BERA Special Interest Group Hunter is a member of the Executive Board of the Educational Studies Association of Ireland, the national education research organisation in Ireland.

Ulster took the Northern Ireland lead in the creation of the Standing Conference for Teacher Education North and South (SCoTENS) following the signature of the Good Friday (Belfast) Agreement in 1998. **This unique network of teacher educators, working across a contested border**, has provided seed funding for over 100 projects, organises an annual cross-border student teacher exchange and runs a highly successful annual conference, which includes a Doctoral Workshop for PhD researchers from across the island. As Northern Chair of SCoTENS (2013-2016) Clarke welcomed Professor Etienne Wenger-Trayner back to Ireland as a keynote speaker for the 2016 SCoTENS conference. His first visit (including a well-attended seminar at Ulster in 2013) had also been organised by Clarke as part of her TLRP Meetings of Minds Fellowship. This time, in the context of Brexit-related discussions of cross-border networks, Wenger was intrigued by SCoTENS itself and advised a collaborative team of academics (SCoTENS Committee members, led by Clarke) who designed and implemented an innovative evaluation of the work of this unique network as a boundary object. This has led to a joint publication (accepted for a Special Issue of the *Oxford Review of Education*, Clarke, et al, 2020) whose authorship comprises academics from across the island, and to collaborative presentations by the SCoTENS Committee at conferences in Ireland (ESAI), Europe (ECER) and the United States (AERA).

Ulster researchers won the first two inaugural SCoTENS **John Coolahan Prizes** with their collaborating partners from QUB and ROI institutions (Austin and Roulston, 2018 and McGill, 2019). Bates was the recipient of **The Maynooth University Library/New Review of Academic Librarianship Award for Academic Writing** sponsored by Taylor and Francis (2016). McFlynn's co-authored paper, based on a collaborative cross-border SCoTENS project on the use of photos in teacher educators' professional learning, was awarded **Paper of the Year 2020** in *Curriculum Studies in Health and Physical Education*, while Shanks' co-authored paper, "Education as site of memory: developing a research agenda" was awarded the **Article of the Year Award** in 2020 by *International Studies in Sociology of Education*.

The Unit contributes regularly to **sustaining the national and international scholarly community** through involvement in editorial boards, peer reviewing, membership of learned societies and PhD examining. Editorial board membership during the 2014–21 period includes Clarke (*Technology, Pedagogy and Education, Journal of Education Sciences*), Pritchard (*Compare, Technology, Pedagogy and Education, Carrefours de l'Éducation* and the *Malaysian Journal of Education and Development*), Smith (*Education Studies Association of Ireland Journal of Education, Citizenship and Social Justice, International Journal of Development Education*) and Bates (*New Review of Academic Librarianship*). Since 2013, Unit members have examined doctoral work in Newcastle (Skinner), Northumberland, Glasgow, QUB, Liverpool, Cork (Clarke), Oxford, Utrecht, York, Dublin, East Anglia, Amsterdam (Smith).

Members of the Unit **contribute regularly to prestigious national and international conferences**. These include: the American Educational Research Association (McCully, Reilly, Clarke), the British Educational Research Association (Clarke), the European Association for Institutional Research (Roulston, Roulston and Taggart, Clarke), the British Association for International and Comparative Education (Smith), UKFIET Conference on Education and Development (Smith), IS Academie for International Development (Smith), Comparative and International Education Society (Smith and Roulston Reilly, O'Connor) BELMAS (McCauley), and contributions to the ESRC Festival of Research in Belfast (O'Connor-Bones and Bates). Keynote contributions to conferences include Geographical Association, TEAN, UCET, TEFANZ/ATEA (Clarke), DFID, UKFEIT, IOM, UNICEF (Shanks) UNICEF, USAID, World Bank, Pan-African Symposium for African Ministers of Education International Committee of the Red Cross, Prioridades de construcción de paz para la Educación, Bogota and Commonwealth Day, Houses of Parliament Westminster (Smith). Staff contribute to the organisation of national (ESAI: McCully,

O'Connor-Bones, Hunter; (SCoTENS: Clarke) and international (GCRF, UNICEF: Shanks; BELMAS: McAuley) conferences.

Through the UK Teacher Education Group (TEG), Clarke was commissioned to contribute to the BERA-RSA Enquiry (2014) into the Role of Research in Teacher Education, a rare opportunity for collaboration at the highest levels and a chance to **contribute to the building of the theory base in an under-theorised field**. Other outputs by Clarke have critiqued NI Initial Teacher Education structures, practice and policy in a comparative home-international context. This work led to an invitation to attend the Oxford University Department of Education's Global Teacher Education Consortium (GTEC), which aims to establish a global research agenda to investigate the impact of teacher education policies and practices. Clarke and McFlynn (a capacity building co-authorship) have contributed a chapter to the forthcoming (2021) GTEC Springer book, 'Teacher Education Policy and Research: Global Perspectives' amongst chapters from Australia, Belgium, Canada, England, Finland, Hong Kong SAR, the Netherlands, New Zealand, Portugal, Scotland, the USA and Wales and will co-present in an invited panel for Division K (Teacher Education) at AERA's annual meeting in 2021.

Clarke has collaborated with a former Minister for Further and Higher Education (Farren, who is a Visiting Professor) and the Principal of a HEI in Rol to write an innovative and well-received book (launched at the 2019 SCoTENS conference by Professor Marilyn Cochran-Smith), which provides the **first *History of Teacher Preparation in Northern Ireland***, tracing developments from the formation of the state in 1921 to the present day. It will be of considerable value for future reviews of teacher education, particularly those conducted by external advisors who are unaware of the influence of NI's distinctive socio-political landscape on teacher education infrastructure. Clarke's 'home international' collaborations with the TEG include the seminal Policy Press book, *Teacher Education in Times of Change* (Beauchamp, Clarke et al. 2015) and a recent study which demonstrated the challenges which face expert review panels, emphasising both the transgressive competence of the reviewers and the countervailing significance of localised political strategies in shaping policy choices and prospects for implementation.

The Unit's contributions to the research base, economy and society are informed and enhanced by engagement with the diverse communities and publics that ultimately, we seek to serve. A research-informed, inter-school debate at the 2016 Imagine Belfast Festival focused on contentious aspects of Citizenship Education (Reilly) and in 2017, Young People and News (Reilly) was the focus of a series of workshops and resources in local schools for pupils, parents and teachers. Austin's contribution to the Stormont Knowledge Exchange Seminar Series on Enabling Society through Interaction (2018) focused on how new research evidence can be used to make shared education more sustainable and more accessible for more children, prefiguring the launch of his latest book (Austin and Hunter, 2020), which adds further local and international case studies. Increasing access to education and enhancing participation in education decision making, as exemplified by our Community Conversations ICS, are impacts the Unit is proud to enable researchers to achieve.