Institution:
Sheffield Hallam University
Unit of Assessment:
UOA23 - Education

1. Unit context and structure, research and impact strategy

1.1 Overview and structure

Educational research at Sheffield Hallam University (SHU) aims to **improve outcomes for children and young people, and support educational professionals**. We develop and evaluate programmes, policies and innovations for educational improvement. Research taking place in the Sheffield Institute of Education (SIoE) draws upon complementary disciplines across the University. The unit comprises 44 staff (42.4fte). The Centre for Development and Education Research (CDARE), within the SIoE, is the strategic hub, providing leadership and support for researchers. During the last period we achieved **a step change** in the size of the unit and in research leadership capacity. We have developed a critical mass of researchers in new areas, helping secure new, sustainable income streams; strengthened impact activity; and enhanced our postgraduate offer, including doubling annual completions.

1.2 Research challenges

Our collegial culture encourages researchers to: collaborate, support the development of others, and capitalise on research income - to respond to four key challenges:

(i) Improving the effectiveness of educational professionals *by researching*: the practices, experiences and professional lives of teachers and educational workers, including in higher education; the role of professional development leadership, models of professional learning and mentoring; and the key features of effective professional learning, including evidence-informed practice.

(ii) Enhancing curriculum, pedagogy and learners' experiences *by researching*: language and literacy, reflecting the complexity, diversity and dynamism of communicative practices; the development and evaluation of curriculum and pedagogical innovations; learners' experiences in varied settings with a growing focus on Early Years; health and wellbeing in educational contexts, including formal and informal learning about gender, sex, sexualities, sexual practices and sexual health.

(ii) Promoting social justice by addressing disadvantage, discrimination and oppression *by*: researching educational practices that foster social justice, the impact of racism on educational outcomes and experience; researching the life-experiences of LGBTQ+ young people and adults; analysing higher education policy, participation and student experience; and problematising concepts, constructions and experiences of youth and disability.

(iv) Innovating in theory and methodology *by*: developing original perspectives on established, new, and emerging communicative practices; analysing materialities and digital technologies in educational practice; critically examining evaluation theory, methods and policy; enhancing anti-oppressive methodologies and creative research practices; and advancing randomised controlled trial, quasi-experimental and mixed methods methodology.

1.3 Research strategy successes and looking ahead

1.3.1 Research strategy 2014-2020

The research strategy since 2014 has sought to:
- grow research funding, particularly research gained through open competition
- increase research capacity, and staff engaged in funded research and capable of producing high quality outputs
- strengthen research leadership, including by supporting the progression of women research leaders
- increase research impact, particularly through strategic partnerships.

1.3.2 Strategic success

Implementation has involved three interlocking types of funded activities: commissioned (contract) research, researcher-initiated projects, and knowledge exchange activity. **External funding is supplemented with investment in research time for an increasing number of staff to pursue personal research interests, and support for researcher development through mentoring.** Consequently, we have developed an ecosystem that increasingly supports staff at different career points with a virtuous circle between publication, funded research, and impact and application. This has achieved the following eight outcomes.

(i) Sustainable income. Building on the 2014 platform, in which SHU was 11th in the UK for educational research income across 2008-2013, by **increasing the number and diversity of funders and developing new income streams** (see section 3.1), we have secured an average of £827k of research funding p.a., including **increasing grant funded projects from £91k p.a. average to £255k p.a.** This is complemented by £687k of funding p.a. for knowledge exchange activity for research application.

(ii) Significant growth in capacity. We have **increased staff returned in REF 2021 (42.4fte) substantially since 2014 (12.4fte)** and **doubled the number of outputs submitted.** Submitted outputs are selected from **a corpus of approximately 400 eligible outputs**, comprising 250+ peer-reviewed journal articles, 70+ reports, 60+ chapters and 12 authored or edited books.

(iii) Developing a critical mass of researchers in three areas.

- Language and Literacy. Professors Burnett and Merchant supported **Bailey, Bower, Daniels, Donaghue, McGrath, Moore and R. Taylor to progress to REF submission for the first time,** with the group producing 25 submitted outputs (compared with 8 in 2014), and whose esteem is indicated by more than 40 invitations to examine doctorates, many of these overseas.

- Professional learning and educational workforce. Led by four Professors (Boylan, Coldwell, Maxwell and Perry) and a Reader (Adams), the group has secured a total of **£4.7 million across 63 research and knowledge exchange projects**, a growing portfolio of publications, and contributed an impact case study (ICS2).

- Mixed-methods evaluation led by Professors Maxwell and Coldwell. We now have **14 researchers skilled in leading implementation and process evaluations.** This complements **the growth of our statistical team with expertise in trial methodologies and advanced statistical methods (from 1.5fte to 3.6fte).** This helps address a national skills gap and has grown income for quantitative research from a low base **to exceed more than £2.9 million** since 2013. Maxwell and Demack secured funding for methodological research in this area from the Education Endowment Foundation (EEF). With Coldwell, they have influenced trial research elsewhere (see section 4.4.1).

Investment in this team continues with the appointment of two Research Assistants.

(iv) Strengthened research leadership. **11 Professors were in post in July 2020 and submitted in the UoA, as compared with 6 in July 2013**.

(v) Enhanced support for researcher development and progression. We have identified and supported clear career pathways for academic and research staff (see section 2.1.1) through increasing time for research activity and targeted interventions, such as mentoring support, writing courses and internal peer review, **enabling outstanding researchers to progress to Principal Research Fellow, Readership and Professorship at SHU**, and to progress externally (e.g. Jay to the ESRC-funded centre for mathematical cognition, Stevenson to Director of Lifelong Learning at Leeds).

(vi) Research quality. **External indicators of increasing research quality include journal prizes** (for example, outputs O1781/O1815) and a **greater number of research outputs in highly regarded journals**, for example four in the *British Educational Research Journal* (O1825/O1872/ O1873/O3513), and in the *Reading and Research Quarterly* (O1868), Journal of Pragmatics (O1830); *Educational Studies in Mathematics* (O1804); all leading journals in their fields.

(vii) Improved postgraduate research. We have **doubled the rate of completion to 10 p.a.**, more than **tripled scholarship funding,** and **improved our quality rating in the *Postgraduate Experience Survey* to achieve top three positions** nationally (see section 2.3).

(viii) Enhanced impact strategies. We have strengthened engagement with policymakers, influential educational bodies and research users (see sections 1.5, 4.1 and 4.2).

1.4 Interdisciplinarity

In addition to successes against our 2014 goals, we have also enhanced interdisciplinary collaborations*.* SHU was appointed to **the *Behavioural Insights Research Framework Panel* for the UK government** and to the **What Works Centre *Youth Endowment Fund* (YEF) evaluation panel** (focussing on reducing youth crime). These appointments were underpinned by strengthened relationships of CDARE with the SHU *Centre for Regional, Economic and Social Research* (CRESR, UoA13) and *Centre for Behaviour Science and Applied Psychology* (CeBSAP, UoA4). A further example of outcomes of our interdisciplinary approach is the joint CDARE-CRESR Children's Communities Evaluation (Save the Children UK, £349K, co-PIs Coldwell, UoA23 and Pearson, UoA13). A key **interdisciplinary vehicle is the *Sheffield Institute for Policy Studies*, supported by institutional funding, with McCaig and Formby co-directors**. Improved interdisciplinary collaboration has benefited our PGR provision and, by 2020, **10 funded PGR students, with interdisciplinary foci, benefited from cross-UoA supervision**, in addition to similar numbers of part-time PGRs.

1.5 Impact strategy

1.5.1 Overview and case studies

We are a leading provider of research and evaluation to key UK policy-making bodies, educational trusts and organisations whose missions focus on social impact. Thus, **a substantial proportion of our research addresses current societal needs.** In REF2014 feedback, the panel noted that strategies of partnerships with policymakers, funders and user groups were successful in securing impact, but also noted variability in the relationship between research quality and impact. As a response to panel feedback, we developed our impact strategy **to more consistently secure impact in relation to areas of research strength**, focusing on **five distinct pathways.**

The four impact case studies focus on:
- improving understanding of LGBT+ lives at the personal and individual level, within schools, in public policy and within professional practice (ICS1)
- improving teacher professional development by shaping policy, encouraging investment and developing practice (ICS2)
- influencing public and practitioner debate about toilets and accessibility including in school contexts (ICS3)
- supporting access and widening participation in higher education (ICS4).

Notably three of these case studies focus on the impact of research that explicitly **promotes social justice**.

1.5.2 Impact pathways

(i) Influencing policy

We **engage directly with policy makers through parliamentary inquiries** and similar. Stevenson (SHU 2014-2019) was invited to make written and oral submissions to the *House of Commons Women and Equalities Committee* on the under-representation of Muslim students in H.E., informing the Committee's 2016 report. In 2017, Macaskill made an invited contribution to the *House of Commons Scientific Select Committee* on Research Integrity. In 2018, Hirst was invited to provide expert opinion on relationship and sex-education. ICS1, ICS2, ICS4 and section 4.2 provide further examples of our policy influence.

(ii) Maximising research impact through funded knowledge-exchange activity

In 2016, investment supported the appointment of Perry to lead knowledge exchange in education (an intention flagged in 2014 REF3a). This has underpinned securing **over £4 million funding since 2014 across 50+ KE projects** and so supported the translation of research outcomes into impact. For example, funding by the *Education and Training Foundation* (ETF) supported FE teachers to access Mastery pedagogy in mathematics informed by the Mathematics Teacher Exchange evaluation (O1886/O3678).

(iii) Developing national, regional and local partnerships and networks to support research impact

We have **developed new strategic partnerships with key actors in education**, including *Wellcome Trust*, *ETF*, the *Chartered College of Teachers*, the *Teacher Development Trust*, the *Institute of Physics* and the *Education Policy Institute*. A number of these partnerships were important pathways to improving teacher professional development provision (see ICS2)

SHU's South Yorkshire Futures (SYF) **is an important focus for regional and local partnerships in education.** Initiated in 2017, SYF was established by SHU to: improve the recruitment and retention of teachers (drawing on the research detailed in ICS2); increase participation and access to higher education; and to improve outcomes in Early Years. SHU research expertise is an integral element of the SYF, with McCaig, Maxwell, Perry and others supporting development, and Coldwell is a SYF strategic board member.

Collaborating with four Local Authorities, CDARE (providing evaluation) and SYF (providing delivery) **secured £1.1m funding for the Early Outcomes Project to improve early speech and language in South Yorkshire**, with both our evaluation and language and literacy expertise crucial to funding success. Additionally, SHINE (£46K) is supporting application of Demissie's research on Philosophy 4 Children (O1828), to improve early language development in the city region. SYF has helped **secure £345K DfE capital funding** to create an innovative *Early Years Community Research Centre,* **in collaboration with a multi-academy trust and *Save the Children UK.*** This will be an important route for future impact.

iv) Developing partnership with users to support research engagement

Informed by our research on practitioners' research engagement (O1882/O1891), we recognise the need and our responsibility to develop partnerships with users to support research engagement. Examples are **two University-funded Impact Fellows.** Complicite Theatre Company's educational lead worked with Boylan on equitable mathematics teaching practices, leading to a successful funding application to the *Paul Hamlyn Trust* and O3510. A headteacher of a local SEND school worked with Hodge and Reidy, with the impact fellow later successfully undertaking an EdD, and initiated PG research that led to O1896.

In the 2014 impact strategy (REF3a) we identified an aim to strengthen relationships with groups of schools/academies in relation to research use. The *Research Engaged Practice Network (REPN),* established in 2014, has supported this. **The REPN works with 50 schools, MATs, Teaching School Alliances and practitioner researchers in the region**. Meeting regularly, SHU researchers, PGRs and practitioners share research outcomes and develop collaborations.

We develop research-focused communities amongst groups that might not traditionally be considered or see themselves as research users, with particular **success in supporting engagement of LGBTQ+ and disabled groups**, exemplified in ICS1 and ICS3. A further example is the *Sheffield Hallam Autism Research Partnership* **(SHARP), which includes autistic people and the autism community** (parents and carers/family members and their supporters).

v) Contributing to national debate and dissemination events and activities

Researchers engage with national, educational and social media to disseminate research, and influence public debate. **The SIoE formed a strategic partnership with the *Education Media Centre***, who lead training for researchers and provide individual mentoring support, with approximately **25% of submitted staff benefiting**. Examples of researchers' successful engagement with media are detailed in section 4.2. **Researchers have access to funds to support dissemination**, for example for travel expenses supporting Formby's impact work (see ICS1). **SHU benefits from ESRC funding for a Sheffield programme as part of the annual *Festival of Social Science,* with a local application route.** Since 2013, 14 submitted staff, as well as PGR, collectively led **20 events with approximately £15K of total ESRC funding**, with the following contributing: Adams, Boylan, Burnett, Daniels, Formby, Harris-Evans, Hodge, Jay, Merchant, Perry, Pluquailec, C. Taylor, R. Taylor and Slater.

1.6 Open access

Researchers comply with UKRIs open access policies in accordance with the University's protocols (see REF5a). We regularly **achieve 95% compliance**, after exemptions are applied. Researchers are supported to **publish gold open access through funding article processing charges** where required (e.g. output O1832). Maxwell edited an open access special issue on evidence mobilisation. Where publishers provide e-vouchers for access to limited numbers of full publication e-prints, researchers prioritise distribution through practitioner networks and social media to maximise access. Staff deposit their work in **the SHU Research Archive, an open access repository** containing scholarly outputs and publications authored by researchers at the University and, where appropriate, in the SHU data archive.

1.7 Data management and research integrity practices

Educational researchers benefit from an online platform to support timely ethical review. Research projects that involve large teams and/or external collaborations routinely will have publication plans and agreements to ensure publication integrity.

Due to the nature of research undertaken in the UoA, specific ethical issues arise from undertaking trials and quasi-experimental designs in education, particularly with regard to the *Youth Endowment Fund*, focused on at-risk vulnerable young people. To foster excellent practice, **a SHU cross-disciplinary ethics forum focuses on evaluation of innovations and trials,** considering emerging and challenging ethical issues.

All research projects have data management plans, and follow GDPR legal obligations and the Concordat on Open Research data; alignment with these is supported via peer review, overseen by CDARE's information governance group and governance lead. Where appropriate, data is archived for access by other researchers. For projects with external partners, data sharing agreements are mandatory. **Data that is particularly sensitive is stored with additional security with highly restricted access.** Researchers managing such data undertake additional training, appropriate to their roles, **certified by the Office for National Statistics**.

1.8 Future strategy for research and impact

Over the last period we have focused on growing the size of the unit, developing critical mass of researchers in key areas, and strengthening research leadership to underpin sustainability and vitality. To extend our contribution, to addressing our focus challenges, we will:

1. **Grow total research and knowledge exchange income** to £2.5 million p.a., further increasing the proportion from international, UKRI and charity grants, *by:* increasing researchers' capacity to secure funding through mentoring and internal secondments; building our partnerships with research funders and strengthening internal and external partnerships with other research units, including maximising interdisciplinary opportunities

2. **Increase the number of UoA staff with significant responsibility for research** by at least 25%, whilst further enhancing research output quality, reflected in the proportion of outputs published in leading journals *by:* allocation of research time, mentoring, and practices that embrace equality, diversity and inclusion

3. **Enhance pathways for research careers** *by:* providing seed-corn research funding with a minimum investment of £40k over 5 years for researchers with potential to develop as leaders in the discipline, providing development opportunities with work-plan allocations for roles that enhance the research culture and contribute to research leadership, with at least 8 researchers benefitting each year

4. **Increase the impact of our research** *by:* developing the capacity of all researchers with significant responsibility for research to engage in our five research impact pathways through workshops and mentoring, and investing in a portfolio of at least 8 research application projects across our four challenge areas, with one focused on the new Early Years Community Research Centre

5. **Further enhance our PGR offer** *by:* improving the integration of both full- and part-time PGRs into our research community, growing the size of the PGR community by 25% over five years and improving recruitment to increase numbers from under-represented groups

6. **Strengthen our senior research leadership to meet our strategic aims** *by:* staff progression, promotion and external appointments - building on two appointments currently planned - and through the appointment of at least four visiting professors or research fellows over the next five years

7. **Increase international collaborations** to enhance research environment vitality and to address global research challenges *by:* developing at least four new international

partnerships with research units that are world leading in one or more of our research challenge areas.

2. People

2.1 Staffing strategy and staff development

2.1.1 Staffing strategy

Our staffing strategy has underpinned our success in meeting our goals. It has five objectives, to:

i. Support existing research active staff to pursue research excellence, as demonstrated by indicators such as: high-quality outputs; research income and impact; and career progression. Since 2014 there have been **2 promotions to Principal Research Fellow** (Bevins, Demack); **6 to Reader** (Adams, Barley, Formby, McCaig, Rowlett, Slater); and **10 to Professor** (Burnett, Hodge, Boylan, C. Taylor, Jay, McCaig, Coldwell, Maxwell, Bower, Perry).

ii. Make strategic investments to enhance capacity and to support succession by external appointment of Readers/Associate Professors and Professors. Since 2014, there have been **3 external appointments**: a Reader (Jay, following retirement of Simkins) and 2 Professors (Stevenson to a new post, and Ingram to succeed C. Taylor); see also ECR appointments in Section 2. 2. In addition, knowledge-exchange activity benefited from the **DfE seconding a senior civil servant to lead the South Yorkshire Futures partnership** and the appointment **of Impact Fellows** (see section 1.5.2). Further, the appointment of Laws, the **Chair of the *Education Policy Institute* as Visiting Professor** has commenced.

iii. Create gateways to research activity. We **appoint post-doctoral staff to teaching positions** wherever possible. We support other staff to engage in doctoral research by **fully funding staff PGR fees and providing up-to one day per week for time for study**. Consequently, we have **increased the number of SIoE academics with doctorates from 32% in 2014, to 50% in 2019**, thus further building on a strength highlighted in REF2014 feedback. In addition, **a further 15% of staff are current PGRs.**

iv. Foster in CDARE a stable, experienced and skilled team of dedicated researchers. Currently **95% of funded research is undertaken by researchers on permanent contracts.** Temporary research contracts are used judiciously to increase capacity and often **provide opportunities for doctoral and post-doctoral researchers to gain experience** of working on research projects (see section 2.3.5).

v. **Support early career researchers** by fostering a culture of research excellence and providing the resources and support needed to produce high quality outputs, to secure income and take leadership roles in funded projects (see section 2.2 for examples of ECR successes).

2.1.2 Staff development

Our approach is aligned with the **Academic Careers Framework** (see REF5a), which provides a **University-wide recognition and reward structure with a specific research and knowledge exchange strand, mapping profession pathways** from Grade 6 to Grade 10 (Professorship). Our staffing strategy is underpinned by promoting an inclusive and collaborative research environment, which supports staff needs with differing methodological and discipline specialisms

at different stages of their careers.

Research objectives are recorded in individual *Research and Innovation Plans* **for all staff with significant responsibility for research**, and for those aspiring to this designation, and are the focus for **mentoring meetings with a designated Professor**. Staff annually identify, medium and long-term research development objectives and the support needed to achieve these. Current institutional arrangements for allocating research time ensure **staff with significant responsibility have at least one day per week for research** (see REF5a). These build on previous UoA policies, including for sabbaticals.

At least **15 SIoE staff have benefited from informal apprenticeship to lead funded research projects** through a pathway - from team membership to co-investigator roles - and, then when taking PI roles, benefitting from Professors as project advisors. We support the **path from ECR to PI by staff secondments to CDARE for 1-2 days per week,** with five staff currently benefiting (since 2018/19, Daniels, Moore and PGR Boodt, with Pountney and Harris-Evans joining in 2019/20). CDARE secondments also support succession planning.

Staff and PGRs access the SHU Researcher Development programme, aligned with the Concordat to Support the Career Development of Researchers. A research mentoring scheme supports research quality, income generation and career progression. Between 2013/14 and 2019/20 a total of **33 staff with significant responsibility for research accessed the formal mentoring scheme**. In addition, all staff can access informal support, through **our network of research and special interest groups, where researchers with shared interests coalesce to access focused support sessions**. Group activity maps to the unit's key challenge areas.

A programme of seminars by SIoE staff and external speakers (approximately eight p.a.) supports our research culture, research skills development and methodological expertise. **External speakers are often professors of international significance**. For example, a series of six workshops 'rethinking theory: critical perspectives on theory and methodology in education research' were co-led by researchers from the unit, with James (Cardiff), Young (UCL-IOE), Rata (Auckland), Brennan (Victoria), Sikes (Sheffield) and Fenwick (Stirling).

To support academic publication**, an annual programme of writing support** comprises stand-alone workshops, writing courses, monthly one-day writing retreats and annual longer summer writing events. The programme is open to all researchers and **attracts PGRs, post-doctoral researchers, readers and professors.** Publication events have led to specific outputs, for example output O1815 was initiated at a writing retreat, and O1793 arose from an auto-ethnographic collaborative writing group. This comprised researchers across career stages from PGR to professors, led by Gannon from West Sydney University whilst visiting. **All researchers have access to pre-submission review of outputs** through research groups, individual mentoring and pre-publication peer review groups.

Between 2014 and 2020, **more than 400 grants totalling £300K were made to support conference attendance and for research expenses.** Examples of resulting benefits of this support are: McGrath forging links with Nordic scholars leading to bids and collaborative outputs (O1860/O3507/O3685); support for Hodge over a number of years to build international collaborations, leading to a successful bid for Canadian Insight Grant and publication in the *International Handbook of Autism Research* with a PG researcher, Connolly, a co-author.

2.2 Early career researchers

As noted above, support for ECRs is embedded in our staffing strategy, with specific support focused through a tri-annual post-doctoral forum, led by a Professor. Overall success is evidenced by **eight submitted staff having published outputs based on doctoral research** since 2014**,** with 13 outputs submitted.

Examples of success of our approach for staff defined externally as ECRs are:

- Bailey (PhD University studentship) was appointed to a teaching and research post; Bailey is developing an international profile with invitations to offer keynotes and workshops (11 since 2015), has won a journal prize, contributed to an International Handbook and is co-editing a special issue of *International Studies in the Sociology of Education* with Burnett (his PhD Director of Study) and colleagues from the University of Bristol;

- Culliney (2016) and Reaney-Wood (2018) were appointed as Research Fellows as part of the expansion of our statistical team, with both progressing to PI and to doctoral supervision;

- Research Fellows, Willis, Stevens and Wolstenholme, all designated ECRs, are undertaking PI or Co-I roles in projects funded by the Youth Endowment Fund.

We also support staff already in academic posts who complete doctorates part-time, thus **our ECR strategy extends to all post-doctoral staff**. Notable examples of research progression of such staff are:

- Daniels, appointed as a teacher-educator, completed the EdD in 2018, is developing a publication profile, has gained UK Literacy Association research funding and is now co-investigator on an EEF funded project (value 268K), and was appointed in 2020 to lead the EdD.

- Adams, appointed whilst completing her doctorate, has led a series of research projects commissioned by *Mathematics Education and Industry*, gained ERASMUS+ and BA/Leverhulme funding, led our PGR provision and was promoted to Reader in 2019.

2.3. Postgraduate research students

This has been an area of considerable success. We have **increased the average number of completions from 5 to 10 per year**, indicating that **our contribution to doctoral completions in education is now likely in the top 20% of HEIs nationally**. The high quality of provision is evidenced by independent assessments. In the **Postgraduate Research Experience Survey in 2019, we scored 92% on progress and assessment, 3rd nationally in research culture and research skills, and 2nd for progression, responsibilities and professional development.** These outcomes represent significant improvement over the last five years. The EdD is consistently praised by external examiners with **feedback quality noted as 'a real strength of the programme'**. Further **external recognition is demonstrated in external prizes**: Boylan supervised Truelove who was runner-up in the BERA PhD prize; and Burnett and Merchant supervised Bailey who was awarded the UKLA student research prize.

2.3.1 PGR provision

We attract high calibre applicants from H.E., schools, colleges, education charities and elsewhere, with **90 currently registered**, of which 48 are undertaking the Doctorate in Education (EdD). The number of **scholarship-funded students joining the programme increased from an average of one pre-2014 to three p.a.** There are 11 students currently funded by the University, ESRC or other external scholarships. As well as employer sponsorship for part-time PGRs, funding is secured from a variety of sources, such as the *Edge Foundation* and the *British Council Commonwealth Scholarship* programme.

Completions	13-14	14-15	15-16	16-17	17-18	18-19	19-20
PhD	3	5	7	5	5	2	6
EdD	5	6	4	5	6	7	4

2.3.2 Foundations for vitality and sustainability in our PGR provision

Improvements in our PGR programme are based on five key factors.

(i) Strengthening our PGR leadership team. **The team has grown from one role in 2013 to three**: the UoA PGR strategic lead, the Postgraduate Research Tutor and EdD course leader. This has supported improved quality in recruitment, support and progress monitoring, undertaken in partnership with the University Doctoral School.

(ii) Our collaborations within the **ESRC White Rose Doctoral Training Partnership (WRDTP) Education, Childhood and Youth pathway.** Since 2017, **five full time PGRs in education have received ESRC funding.** WRDTP **training events are available to all education PGRs, regardless of funders or routes**. Participation has benefited UoA researchers through extending opportunities for PGR supervision and supporting greater alignment between PGR activity and areas of research strength. For example, McCaig has supervised a series of PGRs focused on widening participation, these PGRs benefitting from cross-cohort support.

(iii) The pedagogical and research interests of staff. For example, McGrath is engaged in an **on-going research programme on PGR academic writing** (see O1860/O3507); Adams has led a series of **institutionally-funded projects developing PGR practice**; and we have benefited from Handforth's studentship-funded **doctoral research into gender and doctoral study.**

(iv) Postgraduate researchers as partners in programme development. We **strengthened PGR student course representation and established a tri-monthly education PGR Forum** that brings together PGRs and supervisors to focus on particular research issues and skills, but also **examine ways to enhance the programme**.

(v) Developing our PGR culture. **PGR events and activities are accessible to part-time students** and we encourage PGR participation in research and special interest groups and researcher development events, including SIoE writing retreats. We have increased interdisciplinary opportunities through the Doctoral School, including a cross-SHU PGR research conference. Important too is the **SIoE Doctoral Research Conference, planned independently by PGRs, exemplifying a well-established postgraduate community** with responsibility passed from cohort to cohort.

2.3.3 PGR recruitment, support and progress monitoring

Admissions criteria align with the QAA and UKBA guidelines. Annual induction at University and College level is supplemented by resources on the **Research Student VLE.** PGR regulations and procedures are managed by the Research Degrees Committee (RDC). Opportunities are promoted through the WRDTP, doctoral training opportunities registers, as well as social media, academic and other networks, and by collaborators. **Prospective applicants are supported to make high quality applications through workshops and access potential supervisors to discuss proposals.**

In keeping with the SHU Code of Practice, progress is formally monitored and assessed early in studies and progress checked at 12 months (full-time) or 24 months (part-time) through written and oral assessment, with mandatory independent ethical review. Thereafter, **we continue to monitor progress by annual review,** including an on-line questionnaire for students and

supervisors.

Supervisory teams are appointed by RDC on the basis of research and supervisory expertise. The **SHU-wide Research Supervisor Development Programme is mandatory for all supervisors** and complemented by annual research degree examiner workshop, with **15 submitted UoA staff attending the supervisor development programme and/or starting one or more supervisory roles since 2014.** We apprentice less experienced staff with those more experienced in supervisory teams. Additionally, **education PGR supervisors meet three times per year**, to ensure supervisors are updated with national, institutional and local policy and practice, and for collaborative professional development.

The strength of PGR support for progression, and effective process and systems, was evidenced **when tested by the Covid-19 crisis: we rapidly undertook risk assessment of threats to progression and agreed mitigating plans** - including no fee extensions, revision of data collection protocols and implementation of online supervisory arrangements.

2.3.4 Training and support

PGRs draw on expert academic English support tailored to doctoral students. In addition to discipline-specific training and support, students participate in a range of College training opportunities and through the SHU Doctoral School and the WRDTP. Individual programmes of supporting studies, **including participation in MRes in Social Science modules**, are determined through a **Development Needs Analysis using the Vitae Researcher Development Framework** (RDF) Planner. **PGRs are able to access grants for conferences, travel, and research expenses, with up to £1500 available per student during their studies**. Noon (University scholarship) has used this funding to develop European collaborations. PGRs are encouraged to engage with research users, for example, **autism PGRs have contributed to the ESRC Social Sciences Festival, hosted community showings of films and discussions, and presented to** the Sheffield Autistic Society Adult Group, Research SEND and the Scottish Autistic Society.

2.3.5 Support for progression

Students are encouraged to take the **Professional Skills for Research Students module** to support future employment. **All PhD students, regardless of funding source, are given an opportunity to develop their teaching skills and/or contribute to funded research**. Guest (PhD University scholarship) contributed to the Mathematics Teacher Exchange evaluation and two other projects, including a BA-funded research grant led by Burnett. Squires (PhD ESRC studentship) contributed to the OFFA-funded Understanding the Evaluation of Outreach Interventions study, led by McCaig. During their doctoral studies, or shortly after, a number of **PGRs have been successful in making a transition to academic roles.** Those doing so before completion maintain their research alongside teaching, for example Hannam-Swain (PhD) and Campbell (PhD, sponsored) employed as Lecturers. **Examples of progression on completion** are: Noon (PhD, University scholarship) as a Research Assistant in the SIoE; Quickfall (EdD) appointed to lead the primary and early years programme at Bishop Grosseteste; Elonga Mboyo (EdD) to Teeside University; Doak (PhD, University scholarship) to Nottingham Trent University; and Otieno-Menya (PhD, Commonwealth scholarship) as the Director of the African Institute of Mathematical Sciences Teacher Training Programme in Rwanda.

2.4 Equality and diversity

The UoA's commitment to equality, diversity and inclusion is supported by our research programmes that address disadvantage and oppression, including related to LGBTQ populations, disability, and addressing racism. Colleagues researching in these areas contribute

their research-informed perspectives to UoA policies and practices. Our approach takes place against a background of SHU commitments (see REF5a), evidenced by engagement in Athena SWAN (institutional Bronze award 2017, with a local lead), implementation of the Race Equality Charter, recognition as a Stonewall Diversity Champion. The **SloE supports a cross-institutional, independent and interdisciplinary Disability Research Forum (DRF)** by hosting events.

A key aspect of SHU's mission is to support students from non-traditional backgrounds, and students with protected characteristics, to progress from undergraduate into research degrees. This is reflected in our approach to PGR recruitment. **Institutional quality analysis of under-representation** with respect to four equality groups - gender, race, age and disability - inform local strategy to ensure that under-representation is reduced, and specific targeted actions are implemented aiming to address this. For example, **SHU initiated a project in the WRDTP to increase applications from BAME candidates for doctoral studentships and brokered support from the Stuart Hall Foundation**, with Madriaga currently the UoA lead for this initiative. Our Autism Centre attracts PGR applications from researchers to work with **staff with expertise in the supervision, support and examination of doctoral researchers who identify as being autistic.**

The UoA staff development strategy for research careers is underpinned by a commitment to equitable support for staff regardless of type of employment contract ('research' or 'research and teaching'), at all stages of their careers and tailored to their different needs. **All Professors and other members of the UoA research leadership group are required to undertake research-specific ED&I training.** All applications for support for research, such as for additional research time, conference funding, support for research expenses and proposals for funded PGR students are invited in open calls to mitigate potential bias that might come from any ring-fencing or informal processes. For example, **our conference funding criteria allows for reasonable adjustments that will enable disabled colleagues to attend conferences**, including funding additional travel costs and, if needed, a personal assistant. **Colleagues who are part-time workers are able to apply for the same level of conference funding as full-time colleagues**. Staff can change contracts to address health issues or new disabilities without penalty to their independent researcher status. **Well-being is supported by a group of well-being champions in CDARE**. Key research events are timed to support part-time attendance, including repeating events to support access.

The success of these policies is evidenced by analysis of available data on protected characteristics and type of employment contract, which indicates that **staff returned in the REF2021 reflect the diversity of academic staff in education**, who, in turn, reflect the diversity in the Sheffield city-region. **The gender balance in promotions and external appointments** noted in section 2.1.1 met the equality and diversity goal identified in the 2014 REF5.

3. Income, infrastructure and facilities

3.1 Income

3.1.1 Income to support research activity: aims and overview

Our strategy has been effective in **securing and growing funding from a variety of research streams.** Since 2013, the total HESA identified **research income was £5.8 million** and income for research application through **knowledge-exchange was £4.8 million.** We have increased grant income for researcher-initiated funding, with average **research council income increasing** from **9k p.a. to 46k p.a., and charity funding** through open competitive processes increasing from **81k p.a. to 209k p.a.**

Our approach to sustaining and growing income is guided by our intent to:

i.   **Secure sustainable income** *by*: diversifying funding streams; maturing relationships with funders; focussing on our key research challenges; and improving external partnerships with other research units to increase capacity for bids of scale

ii. **Enhance the relationship between income and research quality** *by*: securing funding for longer studies; connecting studies as programmes of research; and building our grant portfolio

iii. **Increase staff capacity to generate income and lead projects** *by:* creating career development opportunities and mentoring by experienced researchers

iv. **Enhance the impact of our research** through the development of income for funded knowledge-exchange activity for research application.

Research and KE income came from over 100 diverse funders. The **majority of our funders were new since 2014**. Our top 10 funders span grant funders (*AHRC);* What Works centres (*Education Endowment Foundation* and *Youth Endowment Fund*); government (*DfE*); charities and third-sector bodies (*Wellcome Trust, The Education and Training Foundation; Mathematics in Education and Industry*); a private foundation linked to industry (*Wipro Limited*); and funders with international remits (the *British Council* and *European Commission*).

We have secured **an overall increase in larger projects as measured by amount of funding and length of research projects.** This has helped to enhance the quality of research undertaken and provided opportunities for more researchers to contribute as co-investigators.

New funders have enabled increased grant funding including: *AHRC* support for Slater; *Leverhulme Project Grant* stream supporting Jay collaborating with Habgood (UoA11); Taylor, Adams, Povey, Burnett, Merchant and Formby through *British Academy/Leverhulme* Small Research Grant); Boylan via the *Paul Hamlyn Trust*; Maxwell, *Welcome Trust*; and EEF - Demack and Maxwell.

An important sustained partnership over 7 years is with the *EEF*. We were **an early member of the EEF evaluator panel and until recently the only post-92 HEI member**.

3.1.2 Income mapped to the four research challenges

(i) Supporting the effectiveness of the educational workforce

Over £2 million income was secured over 28 projects. Income generation is supported by a longstanding relationship with the *DfE*. Generic programmes include evaluation of the *DfE's Teaching and Leadership Innovation Fund*, targeted on areas of social and economic disadvantage (with NFER, £485k SHU income). The *DfE* also funded research on teacher supply including: *A study of international teacher recruitment* (Stiell, £70k); evidence informed teaching (*Evaluation of progress towards an evidence-based teaching system,* £135k, Coldwell and Maxwell). Maxwell led research into science teachers use and engagement in research under a grant from the *Wellcome Trust* (with total funding of approximately £200k), including studying mentoring STEM teachers in FE and researching the development of subject-specific modules for FE STEM teachers, with the University of Brighton.

The *EEF* funded two evaluations of their campaigns to engage schools with evidence to inform the deployment and training of Teaching Assistants (led by Maxwell, £140k total). One of the largest areas of research activity focuses on professional development and learning, in particular evaluating policy orientated programmes. We undertook a series of evaluation of the *Further Mathematics Support Programme* and related research on post-16 mathematics study, funded by

Mathematics in Education and Industry (variously led by Boylan, Coldwell, Demack, Stevens, Adams, with total funding exceeding £150k).

(ii) Enhancing curriculum, pedagogy and learners' experiences.

A total of £2.8 million was secured across 31 projects, with the most important funder **the EEF** **awarding £1.1 million** for six evaluations. Two of these focused on language and literacy - *Integrating English*, and *Evaluation of Reach Primary* - a programme based on the simple view of reading delivered by teaching assistants; two on mathematics education - *ScratchMaths* and *Evaluation of Realistic Mathematics Education*; as well *Evaluation of Adventure Learning intervention*; and an evaluation of dialogic teaching, *Improving Talk for Teaching and Learning.* These have provided a rich area for the application of the apprenticeship model for developing investigator capacity (see section 2.1.2), with PIs Coldwell, Boylan, Demack and Jay, supporting R Taylor, Moore, Culliney, Daniels, Willis, Wolstenholme and Harris-Evans to take on co-I responsibilities.

With the establishment of the *YEF* in 2019, a new funding stream has grown - already gaining £372k in income - focused on school-based programmes to reduce engagement in youth crime. Four evaluations have been commissioned so far: *DARE 25 Primary Programme*, *Branching Out - Multi Activity Programme with Challenge and Support*, *Advanced LifeSkills Programme,* and *Nurturing Empathy Before Transition.*

Other significant funding in the area included £110K from the *Leverhulme Trust* for research on a games-based mathematics tool, led by Jay collaboratively with Habgood (UoA11). The *DfE* funded the longitudinal evaluation (2014-2019) of the Mathematics Teacher Exchange, the centrepiece of the government's national Mastery policy in mathematics in England (Boylan PI, Maxwell and Jay co-I, approximately 350k).

(iii) Promoting social justice by addressing disadvantage, discrimination and oppression

Although relatively smaller than the above research areas, the **£862K of income** has supported researchers to undertake highly impactful research. This included support for Formby's ongoing programme focused on children and young people experiencing discrimination, oppression and bullying as a consequence of their sexual and/or gender identity. This is funded by the *Government Equalities Office (GEO)* and third-sector funders to a total of £283k, with the largest project an evaluation of six different approaches to addressing homophobic bullying (*GEO*, £241k). This research funding, building on research undertaken during the previous REF period, has led to impact that is reported in ICS1. In collaboration with the University of Huddersfield, Formby was also commissioned to undertake an evaluation of a project for LGBT youth in Kirklees (£38K). *AHRC* funding has supported Slater to co-lead a series of projects with a variety of partners focused on access to safe accessible toilets, including in school spaces for those with a variety of visible and invisible disabilities, and whose gender identity is not well served (total funding of £135K, and underpinning ICS3).

McCaig has led large-scale programme evaluations of outreach to support widening participation in H.E. Since 2014, he continuously engaged in research for *HEFCE*, the *Office for Fair Access* and the *Office for Students*, with a variety of partners (total of £229k of income and underpinning ICS4). Stevenson (SHU 2014-2018), Madriaga and Stiell were funded by the *Social Mobility Commission* to research the impact of discrimination on young Muslims (£20K). The importance of workforce development in addressing disadvantage was the focus of *Primary Science for All,* researching effective professional development for teachers and teaching assistants to support students with special educational needs and disabilities, and particularly pupils with autism (£50k, *Primary Science Learning Trust*).

(iv) Innovating in theory and methodology

Most activity in this area has occurred alongside and as part of other research activity noted above - for example methodological innovation in Slater's research - or supported by **institutional and QR funding.** Additionally, **external funding has been important in supporting individual research programmes.** Funding from *British/Academy Leverhulme* Small Research Grant scheme supported C Taylor's (at SHU until 2018) development of post-humanist methodologies (leading to outputs O1940 and O1941), and Burnett and Merchant's methodologically innovative *Doing data differently* (see O3513). Burnett and Merchant were funded participants of a *Canadian Social Sciences and Humanities Research Council* project in 2017 - *Affect, Embodiment, & Place in Critical Literacy* (Canadian dollars 50k), led by the University of Calgary.

Demack has received two grants from *EEF* for methodological work in on trial design (total £30k) and, with Maxwell, another to review the impact and implementation and process evaluation findings and methodologies across the *EEF* corpus of completed evaluations (£73k).

3.2 Organisational, and scholarly Infrastructure and investments

A **new £32 million building**, designed to support collaboration, was opened in 2015 as a home for education - designed to bring together what were, at that time, four independent units to form the SIoE. This allowed nearly all UoA researchers to be located in two adjacent, linked buildings, where previously they were based across several distantly located buildings. **This supported closer cross-institutional working, including collaborative bidding, writing and supporting impact work; and enhanced the research culture.** Concurrent with investment in physical infrastructure, investment in internal and external research appointments from this period underpin the growth in research leadership roles within the UoA (section 2.1).

Details of University-wide professional services support from SHU's *Research and Innovation Services* (RIS) is detailed in REF5a. Educational research, including PGR, is **supported by dedicated administrators** managed locally through the *Social and Economic Research Institute* (SERI), with the UoA benefitting considerably from co-location of an administrative team with CDARE researchers and Professors. Skilled research managers based in CDARE, working with experienced research administrators, support PIs in all stages of research projects. **The academic quality of research, progress and integrity is monitored and evaluated through**

tri-annual and end of project review meetings.

A programme of workshops and critical review support bids grant funding through open competition, supporting the increased number of staff who submit proposals and secure funding. Since 2014, the programme of six workshops - each up to two days long - has comprised events led by UoA researchers, RIS staff and external speakers and trainers. **Central to our funding success is a weekly research and KE income meeting** at which bids, proposals and funding opportunities are considered, and research teams and internal and external collaborators identified. This meeting is attended by all CDARE located researchers, including secondees, and representatives from South Yorkshire Futures (to develop impact) and the SERI (supporting interdisciplinarity), as well as researchers engaging with opportunities being considered. Weekly attendance is 15-20 researchers.

Support for researchers' planning for and achieving impact is organised through RIS interdisciplinary training. This is followed-up by regular peer review events of impact activity. Academics are supported in dissemination by SHU's press office and through support from the *Education Media Centre,* an SIoE strategic partner (section 4.3 provides examples of outcomes).

As detailed in REF5a, **the library is very well resourced, integrating electronic and hard copy formats with excellent IT facilities**, in a range of different learning environments, to meet the varied needs of researchers. A fast and effective document supply service obtains items for researchers not held in the University's collections. Information Specialists provide expert help in sourcing and using information resources and information literacy skills training. As noted in section 1.6, the SHU research archive supports open access of research outputs.

During Covid disruption researchers were provided with work-at-home equipment, as needed, and priority access to buildings where needed for research activities, e.g. for trial management.

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

4.1 Research collaborations, networks and partnerships with other HEIs

Collaboration with key research partners is strategically designed to secure income by complementary expertise and capacity, mobilised to meet stakeholders' and funders' needs. This approach has led to **a total of 51 collaborative projects, securing 31% of research income (£1.8 million).** The benefits of collaboration extend to outputs, **with 35% of REF2 submissions having co-authors employed elsewhere** at time when the outputs were published, with **25% of these having an international co-author**.

Partnerships supported research in evidence-informed teaching, including collaboration with Durham University and UCL-IoE; and with the NFER on teachers of science engaging with, and carrying out, research. Collaborations have been important to work on educational opportunities in HE described in section 3.1.2, led by McCaig, funded by the *Office for Fair Access* and the *Office for Students*, with a variety of partners including Oxford University, King's College London and Exeter University. These collaborations led to the publication of a collection co-edited by McCaig. Maxwell's collaboration with Hobson (Brighton) secured funding for research on mentoring STEM FE teachers and the international teacher recruitment study (see section 3.2), as well as publications including outputs O1850 and O2547.

Demack's on-going collaboration with Gillborn (Birmingham) and others has supported research on the effects of racism on learners (with O1827/O1883/O3510 submitted). Recently, we have formed a new strategic partnership with the Education Policy Institute. Early fruits of this collaboration include Perry, Coldwell and Booth working with EPI and Chartered College to study regional teacher retention in spring 2020, in partnership with South Yorkshire Futures.

European funding has supported **international collaborations in STEM education with 20 University and other partners** across four projects. One of these involved collaboration with *Development Education South Yorkshire* by Adams, Povey (now Professor Emerita) and Demissie to gain Erasmus+ funding for Project Citizenship and Mathematics. Burnett and Merchant collaborated with Parry (then University of Nottingham) and Storey, of Chol Theatre, on a project exploring the integration of iPads within a participatory theatre project (leading to O1811).

All researchers can access **institutional funds to support international research collaborations**. Pountney collaborated with researchers at the University of Auckland, including hosting McPhail (leading to O1872 and O1873). Merchant and Burnett hosted Neumann from Griffiths University in 2018 leading to three publications of which O3680 is submitted.

4.2 Engagement with key research users, beneficiaries or audiences

Our researchers have influenced the DfE, in part through the contribution to DfE of Professor Twiselton, the SIoE's Director. As a member of a variety of DfE advisory groups, **Twiselton has brokered input of research on teacher supply and initial teacher education (ITE),** both research undertaken at SHU (see ICS2), but also wider contributions of the discipline**.** For example, Leach (now Leeds Trinity) developed an evidence paper on STEM and ITE that influenced the Carter Review of ITE when Twiselton was a review panel member. Researchers from Brighton, University of East London and St Mary's University also had research brokered by Twiselton to the DfE.

We also engage with policy by presentations to civil servants, examples being: Formby (see ICS1); Maxwell who made two presentations to the Cabinet Office; Boylan invited to speak to the DfE research and evaluation division conference on collaboration between civil servants and academics; and Coldwell's invited contributions to GSR North, the civil service northern network of social scientists. During DfE-funded projects, regular presentations to DfE civil servants, advisory groups and others, and report policy briefs, ensure that emerging findings influence the on-going development of policy and directly influenced government investment. At the invitation of the DfE, **Coldwell acted as expert external advisor to the multi-million-pound *Opportunity Areas Impact evaluation*.**

Other partnerships include a collaboration with the Chartered College of Teachers (CCT) and Teacher Development Trust in **developing and evaluating a model for quality assurance of teacher professional development** (funded by the *Wellcome Trust* and *EEF*). Pountney applied mentoring and coaching research (e.g. O1849) to develop on-line CPD through MOOCs for ITE mentors, initially for SHU ITE partners, and later **hosted and promoted by the CCT; the MOOC was further developed as a regional offer collaboratively with Doncaster Local Authority.**

We have supported a variety of school and other organisations to develop their capacity to self-evaluate, for example through the *Strategic School Improvement Fund* and working with *Leaners First*, a school-led improvement partnership. Applying their research, R. Taylor and Daniels have **supported school-based research projects on the development of oracy,** with staff from 13 schools, covering EYFS to Secondary, benefitting. Maxwell and others have applied their research on evidence-informed teaching to our programme of support for *Researchers in Schools,* with **100+ serving teachers supported to develop school-based research and development projects.**

Seven submitted researchers contribute as trustees and governors of local and regional schools. For example, Pountney and Harris Evans are trustees of the XP school trust in Doncaster, which is pioneering an innovative approach to curriculum making. Pountney has supported this by gaining **collaborative funding from the Edge Foundation** for research on curriculum making practices at XP**, joint publication with XP trust leaders and, with Edge Foundation sponsorship for doctoral fees,** supervising a serving XP teacher undertaking a PhD.

4.3 Wider impact

Well-established impact pathways (see section 1.5) support impacts beyond those described in the impact case studies.

4.3.1 International

Key relationship has been developed with the ***British Council* with total of £1.9 million across 12 projects, applying research to address curriculum and professional development needs in Thailand, Malaysia, Philippines, India, Pakistan, Turkey and Colombia.** The largest of these (£1.38 million) impacted the mathematics and science curriculum in Malaysia since 2014, with Bevins and Perry's contribution informed by their research on professional development.

4.3.2 Public organisations, third-sector, and business

In 2017, Coldwell, Boylan, Perry and Booth applied evaluation and teacher education expertise to develop a **framework for evaluating the Welsh Government's approach to evidence-informed ITE**, and a self-evaluation and planning tool to support implementation of new national ITE standards (Welsh Government, £21K). The tool was used by consortia as part of the application for ITE numbers and so **influenced ITE provision across Wales.**

Studies of the *Further Mathematics Support Programme* **influenced the DfE's renewal of support for post-16 mathematics** through the *Advanced Mathematics Support Programme,* and Demack's analysis of A-level subject choices informed MEI policy input on the need to address post-16 funding to preserve Further Mathematics. Maxwell's research on mentoring in FE (see section 3.1.2) was **applied by the *Education and Training Foundation* in its national mentoring programme** for the sector, part of the DfE's strategy for improving teaching quality.

Our report, *Time for change: black and minority ethnic representation in the children's literature sector* (November 2019) - commissioned and published by the Arts Council England, (Stiell co-I) - explored diversity in children's literature, contributing a significant piece of research to this emerging area for action. Pearson Publishing convened a roundtable of stakeholders where research was disseminated. The research has received a positive response in the trade press and is already having an **impact in the publishing sector, evidenced in articles** in The Bookseller.

4.3.3 Influencing societal debates and shaping discourse

Articles disseminating research findings regularly appear in national, international and specialised media to influence societal debates, with the following having research featured in this way: Adams, Boylan, Coldwell, Formby, Hodge, Maxwell, Slater, Willis and Wolstenholme. Boylan authored a series of articles for *Schools Week* and *The Conversation* on mathematics education policy, with articles in ***The Conversation* gaining in excess of 150,000 reads** in total. **Formby had 54,000 readers** of an article on LGBTQ population (see ICS1). Hodge featured extensively in the *Times Educational Supplement* writing about autism, supplemented by a social media presence focused on the **#debateautism hashtag - approximately 997 tweets with up to 67,000 impressions** per tweet and an average of 15k. Hodge produced two videos hosted on YouTube, one which has over 1000 views.

We support researchers to disseminate research and gain wider influence by supporting events. For example, the aforementioned study of regional teacher retention (section 4.1) culminated in a summit focused on retention of mid-career teachers in spring 2020, with 60 school and academy

trust leaders and policymakers. Our programme of external seminar events and contribution to ESRC-supported Festival of Social Science, as well as book launches, attract both academic and practitioner attendees. The **annual Primary Conference for practitioners and the Hallam Festival of Education** attract hundreds of attendees.

4.3.4 Covid response

Research funded by *Save the Children* (see 1.4) was adapted to examine how Children's Community partnerships had supported families during the first lockdown. Pluquailec was funded to study the impact of Covid on the autism community. Pountney and Perry, with others, have supported the ***GROW Programme (Covid recovery)***, funded by £175k (Barnsley Metropolitan Borough Council), which is providing mentoring by graduate mentors for disadvantaged young people adversely affected by Covid, with, so far, **340 young people benefiting**. With IPSOS-Mori, the DfE commissioned a team led by Stiell to research schools' response to Covid, with **early findings influencing DfE policy teams and cited in officials' report to the Parliamentary Education Select Committee.**

4.4 Indicators of wider influence, contributions to and recognition by the research base

4.4.1 Influence on methodology and research practice

Methodological contributions on the effective use of logic models have influenced the EEF via Maxwell's invited presentation to the EEF evaluator conference in 2018. In July 2019, **Coldwell and Maxwell reviewed the new EEF** *Implementation and Process Evaluation Guidance,* leading to a stronger focus on contextual factors, building in evidence-informed logic models (using the language and key recommendations of O3575). **This guidance is now being used by all EEF evaluation teams, benefitting 20 international research teams, working on over £2m of projects per annum**. These strengths led to Maxwell and Demack (with Lortie-Forges, now Loughborough) being commissioned to undertake a current review of all published EEF trials that included a meta-analysis of effect sizes (see section 3.2).

Coldwell, Culliney, Demack and others have **advised YEF on evaluation strategy, data archiving, the National Pupil Database and ethical issues**. In 2019, McCaig was appointed to the *Effectiveness of Outreach Working Group* of the *Centre for Transforming Access and Student Outcomes (TASO),* a 'what works' centre. The working group assesses current evaluation evidence and commissions research and evaluation work on TASO's behalf.

Coldwell acted as expert advisor to the SHINE trust on their impact and evaluation strategy, helping shape their focus on theory-informed evaluation, and was an **expert advisor on effective implementation and process evaluation for the 2018/19 £4.5m EEF/SHINE early years parental engagement funding**. Coldwell and Burnett were members (2014-2016) of the *National Literacy Trust impact strategy advisory group*. Macaskill contributes her expertise as University ethics lead regionally, as a member of South Yorkshire Police Independent Ethics Panel and lead on ethical issues related to digital policing.

4.4.2 Influencing education as a discipline

We supported design and evaluation research focused on addressing the BAME attainment gap, working with partners across SHU disciplines (£97k funding), building on Madriaga and Demack's research. Madriaga has presented his research at the *AdvanceHE Closing Attainment Gaps Project Network* meeting of 15 HEIs and **his work subsequently informed the University of Derby's institutional policy** in addressing achievement gaps between student groups.

Beard has influenced higher education pedagogy policy internationally, with strong

relationships developed in Singapore and Hong Kong. In Singapore, at the invitation of the Ministry of Education, through keynotes at conferences for school leaders and headteachers, appointments to advisory panels and delivery of professional development on experiential learning, he shared research on 21st century curriculum needs (e.g. O1798), leading to change in curriculum practice. He is currently **Visiting Professor at Education University of Hong Kong and has held three other visiting Professor roles in China.**

4.4.3 Contributions to the sustainability of the discipline in post-graduate research

Building on collaborations in PGR in STEM over a number of years in the White Rose university network, SHU contributed to constructing the WRDTP bid. Jay (SHU 2014-2020) was founding pathway director of the *Education, Childhood and Youth Pathway* of the **ESRC *White Rose Doctoral Training Partnership*.** Externally, **Adams co-coordinates the *Doctorate in Education Directors' Network*,** supporting course directors to develop and share professional doctorate expertise. She instigated the link between the network and the UK Council for Graduate Education. Macaskill was an invited member of the Office for Students and Research England convened *Postgraduate Research Student Mental Health and Wellbeing Catalyst Programme Evaluation Advisory Group*. More widely, researchers have **supported doctoral provision nationally and internationally through external examinations;** 23 category A eligible staff conducted **a total of 93 doctoral examinations, with 16 of these at universities outside the UK.** In the UK, universities included a full range of institutional missions including Cambridge, Oxford, research-intensive universities and newer institutions.

4.4.4 Other contributions and recognition by the discipline

UoA researchers have made **eight invited contributions to International Handbooks,** with four of these by Burnett and Merchant in the field of digital literacies - underlining the international importance of their contribution. Burnett was commissioned by the *Cambridge Primary Review Trust* to contribute a paper on digital literacy and, with Merchant, invited to contribute to on-line guides and summaries for researchers and practitioners, published by the US *Literacy Research Association* and the *International Reading Association.*

Leach was **deputy chair of the REF education sub-panel in 2014.** Burnett is a member of the **REF 2021 UoA23 sub-panel** and Mooney a member of **the REF 2021 Interdisciplinary Research Advisory Panel.** Jay (SHU 2014-2020) was appointed as an **external member of the Hong Kong RAE panel**. Burnett, Merchant, Beard and Macaskill have contributed to professorial promotion panels or reviewing applications at 11 universities, of which seven are overseas.

Slater's project *Around the Toilet* (ICS4) was awarded the ***National Coordinating Centre for Public Engagement*'s award** for public engagement (Humanities and Social Sciences Category) in 2016.

We regularly host conferences and events for academic networks with organising contributions, with **approximately two events per year during 2013-2020, with 1000 delegates in total** supporting networks and societies focusing on: critical disability, Language and Literacy, BERA events, and Science and Mathematics education.

Submitted researchers have undertaken approximately **200 external invited keynotes** at academic conferences and seminars, including: ESRC seminar series; invited workshop contributions; and presentations to a wide variety of academic and other groups including: European-funded action network groups, LBGTQ+, autism and disability campaigning and community organisations, film festivals, and practitioner conferences such as those for Advanced Skills Teachers, STEMnet, the Research Schools Network, the Association of Science Educators, Networks, UCET and Maths Hubs. These include approximately 60 international invitations, with notable contributions by Burnett and Merchant in Literacy, and by Beard in Higher Education

pedagogy.

UoA researchers participate and support a variety of key discipline and professional networks, including the *University Council for the Education of Teachers* (Boylan and Perry), and *United Kingdom Literacy Association* (UKLA). **Burnett**, **a UKLA council member since 2014**, has held nine UKLA roles, most recently as **President**. Rowlett has undertaken various roles for the *Institute of Mathematics and its Applications,* and currently is vice-president. Povey (retired 2019) was **Chair of the British Society for Research into the Learning of Mathematics** (2014-2016). Bower is **President of the *Association for Language Learning.*** The following roles as BERA SIG convenors were held: Jay (SHU till 2020), Methodology (2016-2019); McCaig, Higher Education (2015-2018); and Pountney, Curriculum (2019-). Pountney is member of the *British Curriculum Forum* steering group. Perry is a member of the *International Professional Development Association England* committee.

4.5 Journal editorships

Staff held **editorships or associate editor roles at 11 journals during the relevant period, and 27 editorial board memberships.** Merchant was founder editor of the *Journal of Early Childhood Literacy*; McCaig is editor of *Higher Education Review.*

4.6. Participation in grant reviews and contributions to research councils and funders

Thirteen staff undertook review of grant proposals for external organisations with the main beneficiaries, by number of reviewers, being the ESRC (Burnett, Formby, Macaskill, Merchant, Morrison), Nuffield Foundation (Burnett, Coldwell, Maxwell, McCaig), and Leverhulme (Boylan, Burnett, Macaskill). Other UK contributions were: AHRC (Moore), Wellcome Trust (Coldwell), UKLA (Burnett), Medical Research Council, SRHE and British Academy (Formby). International contributions were made to: the Irish Research Council (Boylan, Merchant), Netherlands Research Council (NWO) (Merchant), Israel Science Foundation (Coldwell), New Zealand Ministry of Business, Innovation & Employment Science Investment Round (Burnett), SSHRC Canada (Macaskill, Merchant), CNRS-France (Merchant), Dunhill Trust, Luxembourg National Research Fund in the Domain of 'Societal Challenges, and Hong Kong Young Researcher Scheme (Macaskill), Spencer Lyle Foundation (Pountney), Singapore National Institute of Education (Beard), Council for At Risk Academics - Syria Programme (Donaghue).