

Unit-level environment template (REF5b)

Institution: Bath Spa University
Unit of assessment: UoA 23 - Education
<p>Section 1. Unit context and structure, research and impact strategy</p> <p>Context and structure</p> <p>Bath Spa University's UoA in Education is based in the institution's School of Education (SoE). Since 2014, we have consolidated our previous excellent regional reputation and used this to develop a distinctive national and international reputation in the three cross-cutting areas of research, which define education research at Bath Spa: 1. social justice and equity in education, 2. practitioner research, and 3. creativity in education. With interdisciplinary engagement from art and design, creative writing, psychology, and environmental humanities, we produce creative, participatory and critical research that makes an impact on education practice and practitioners, with particular impact beyond the academy in developing and embedding innovative creative pedagogical approaches in creative arts education (ICS UoA23-1 CPP), embedding best practice of Teacher Assessment in Primary Science (ICS UoA23-2 TAPS) and creating whole school models to transform the practice of lead practitioners working with disadvantaged learners (ICS UoA23-3 PDL).</p> <p>The Unit is led by Head of Research and Unit lead, Chadderton, supported by the leads of our four research centres. Our research centres are this Unit's structural mechanism for enabling our research and impact strategy and they are:</p> <ul style="list-style-type: none"> • Centre for Research in Early Scientific and Technological Learning and Education (McMahon and Etchells) • Centre for Equity, Inclusion and Community (Bhatti and Simmons) • Centre for Research into Policy, Pedagogy and Practice (la Velle and Parfitt) • Centre for Research in Early Childhood (Georgis and Hattingh) <p>Research strategy: Maximising our research quality and reputation</p> <p>Since 2014, our main aim has been to maximise our research quality and reputation, via the following strategy:</p> <p>We have restructured our research centres strategically in order to consolidate our distinctive research strengths, develop our areas of excellence, and better inform our teaching and curriculum developments. This has enabled us to establish ourselves as a hub for distinctive research into:</p> <ul style="list-style-type: none"> • Early Scientific and Technological Learning and Education (with a focus on primary science teaching, the learning sciences and teacher assessment in science); • Equity, Inclusion and Community (with particular focus on widening access and participation and improving outcomes for marginalised groups, structurally disadvantaged groups including BAME groups, disabled people, looked-after children, traumatised children, refugees and army families, and solutions such as inclusive education, intercultural learning and emotion coaching); • Policy, Pedagogy and Practice (with a focus on creative and arts pedagogies; research in teacher education and practice; leadership in education; national and international policy analysis) • Research in Early Childhood (with a focus on practitioner experience, professional development support and outdoor and forest education). <p>Our research is characterised by the cross-cutting strands of (i) social justice and equity in education, (ii) practitioner research, and (iii) creativity in education, which are integral to the work of each of the centres.</p>

We have **significantly increased our external research funding** (GBP590,298 to GBP2,157,000 - an increase of 265.41%), increasing not only the quantity, but also the quality, of our funding through winning grants from larger, national and international funders such as the AHRC, the EU and the Wellcome Trust. We have also gained funding from charities such as the Forces in Mind Trust and National Association for Virtual Headteachers, and public bodies such as Somerset County Council. We have done this by operating a targeted strategy which includes consolidating our strong partnerships and networks, leadership and mentoring from strategically appointed professors such as Levinson, and diversifying our bids to a variety of different funders (see section 3 for detail).

We have both **enhanced our regional presence and increased our international research considerably**, by strategically supporting national and international collaboration with seed funding and targeted bidding. There are two international projects currently led by the Unit [Hattingh and McMahon] and unit members are engaged in a further five [Bhatti, Bianchi, Georgis, Hay and Morris]) (see sections 3 and 4).

We have **increased the number of research outputs of high quality** submitted to REF (from 48 in 2014 to 66 in 2021) by following a programme of writing retreats, mentoring and co-authorship by professors and senior researchers. CREIC, for example, held 6 writing retreats for members in 2018-9.

Our postgraduate research has been greatly expanded. We have increased the number of doctoral completions by nearly 60%. This has been achieved by applying for externally funded studentships (one through Levinson's AHRC project and one through McMahon's Primary Science Teaching Trust project); from 2016/17 to 2018/19 we provided eleven internal SoE studentships for applicants whose areas of research map onto our research priorities; and we have expanded our supervision capacity significantly (see section 2).

Impact and Public Engagement strategy

Since 2014 we have developed our impact and public engagement work considerably. We are submitting three impact case studies to this REF, one more than last time, which map onto our specialist areas of research:

- UoA23-1 CPP - Developing and embedding innovative creative pedagogical approaches in creative arts education
- ICS UoA23-2 TAPS - Embedding best practice of Teacher Assessment in Primary Science
- ICS UoA23-3 PDL - Creating whole school models to transform the practice of lead practitioners working with disadvantaged learners.

Beyond the work in the case studies, we have supported members of the Unit and built the capacity to conduct many more impactful studies and to engage the public with our research (see section 4).

Since 2014 we have developed a significantly more supportive and structurally embedded impact strategy. We see impact as an integral and iterative part of our research. Our main strategy is to invest in, and support research of direct relevance to education practice, where public impact and community engagement is built in from the start. A particular focus is co-constructed and participatory methodologies, to ensure impact is responsive, ethical, ongoing and sustainable. It is informed by our commitment to socially-engaged, creative and inclusive research. Awareness of the importance of impactful research is raised through our policy of requiring impact statements in all applications for ethical clearance for research data collection.

We have built capacity in this field and are better able to support impact and public engagement work. These appointments include BSU's Knowledge Exchange Manager and Impact Research Fellow (see Institutional Environment Statement IES 4.2.1), and SoE's Project Development Officer. The university's Impact Research Fellow supports staff with planning impact, conducting evaluations, collecting evidence of impact and better embedding

and aligning research and impact in new funding proposals and from the inception of the research. In the Unit, we have provided training to RF Parfitt, to enable individual project support. The Unit's leader supports impact by identifying wider beneficiaries when developing external bids. The research centres hold informal ideas-sharing meetings for maximising impact. Seed funding is also made available for this purpose and all three impact case studies have benefitted from seed funding.

We support staff to disseminate their research to large audiences of professionals, policy-makers and community stakeholders. For example, ICS UoA23-2 TAPS has been facilitated with venues and administrative support for the project training days and the annual Association of Science Education conference, which has increased both engagement in, and direct beneficiaries of this work. We have also arranged for buy-out from teaching for those with large projects so they can focus on extending the impact of their research (e.g. Earle ICS UoA23-2 TAPS) and even a transformation of their role from mainly teaching to research (e.g. Parker ICS UoA23-3 PDL).

The social justice and practice-relevant nature of our impact strategy has been key to allowing us to develop research in partnership with community partners and research beneficiaries, with many of whom we have long-standing partnerships, and who benefit from our research and put it into practice. This research ranges from work which is a response to an issue identified by partners, to fully participatory, bottom-up approaches that make use of existing local and national networks and enable us to build new ones. E.g. ICS UoA23-3 PDL presents projects which were collaboratively developed with participant institutions/groups and were responsive to problems identified by practitioners - Parker et al's work on Attachment Aware Schools is a collaborative intervention between academics and practitioners which has reconfigured behaviour and relationships in schools. Curran's work, which has led to the first national workload model for SENCOs, was a direct response to issues identified by a SENCO who approached Curran. This work was supported by a grant (GBP5,000) from project partners, the National Education Union, and the Unit supported Curran with marking buy-out to conduct extensive research, widening the inquiry to make it national. Equally Hay collaborates with longstanding local partners, charity House of Imagination and Bath's Holburne Museum, to transform the practices of teachers in the creative arts by co-creating innovative creative pedagogies which emphasise inclusion, collaboration and exploration (ICS UoA23-1 CPP).

Strategy to support interdisciplinary research

Central to our mission as a small, enterprising institution is our strategic promotion of interdisciplinary and collaborative research. Since 2014 we have created a strategy to forge stronger internal interdisciplinary links with colleagues across the university. This is two-pronged in this Unit:

We use the mechanism of collaboration with the three strategic, interdisciplinary institution-wide research centres: the Centre of Cultural and Creative Industries (CCCI), the Research Centre for Transcultural Creativity and Education (TRACE) and the Research Centre for Environmental Humanities (RCEH) (IES 4.1.2). Strategies to collaborate with these research centres within the Unit include the involvement of key colleagues from the SoE on the research centre steering groups (e.g. Chadderton and Hay on CCCI and McCree and Hattingh on RCEH), inviting members of the research centres to SoE research meetings, and holding regular joint seminars. This has led to one of the Unit's most successful interdisciplinary collaborations, that between TRACE and Unit member Hay, on the Arts Council England funded 'Creative Writing in Schools' project (2016-18; GBP600,000). This aimed to inspire young people to write creatively and for pleasure in response to concerns about a lack of creative writing opportunities in schools. For this project, BSU also partnered with Bath Festivals, The National Association of Writers in Education and approximately 100 schools in the south-west. The project increased teacher confidence around supporting children to write, and resulted in those young people who were writing less often than their peers at the beginning of the project, writing more often by the end. It has led to the launch of a new

interdisciplinary project 2019-21, 'Writing for All' which ensures that writers from all backgrounds are supported and new forms of writing are given the chance to succeed.

Within the SoE, we have strategically created an interdisciplinary research centre, CRiSTLE, which is a collaboration between education and psychology. This has resulted in the Wellcome Trust funded interdisciplinary project McMahon and Etchells (joint PIs): 'Enhancing the Learning Sciences in Initial Teacher Education' GBP36,467 (2017-18).

Open research environment and management of research data

The Unit's strategy for open research is guided by the institutional strategy, policies and processes described in the Institutional Environment statement (IES 2.8.1).

In Education we support the principle that research developed with public funds be made publicly available, and have concentrated on making our occasional papers, commissioned reports, book chapters and research data openly accessible. Our own research papers are made freely available in full, with no embargo, via the institutional repository, e.g. [Occasional Paper No.1](#), [Occasional Paper No.2](#). Where publishers' policies allow, the Unit's authors make their book chapters openly accessible, e.g. [Georgis et al \(2018\)](#) and [Simmons \(2018\)](#). The Library repository team have provided training for the Unit in data management principles (e.g. the FAIR data standards) and practical use of the University's Figshare data repository. The Unit monitors progress towards open research targets through the University's annual Quality Review. The AHRC D4D project, (Levinson), has employed a data manager to ensure data sharing between multiple external stakeholders is handled legally and securely. Examples of the Unit's published research data include data collected for [Earle's Teacher Assessment in Primary Science research](#).

Supporting a culture of research integrity

The SoE ensures that all our research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards. Since 2014 we have strengthened the research ethics approval system in place at SoE so that it is more streamlined and better integrated into our systems. Ethical practice in research is a priority for us in the Unit, particularly as a large amount of our research is conducted with participants and potential beneficiaries as co-researchers or close collaborators, and we encourage inclusive and non-hierarchical research which challenges traditional power relations between the researcher and the researched (see work by e.g. [Layen and Hattingh](#), [Levinson](#), as well as all three Impact Case Studies).

All academic staff undertake the Epigeum online module on training in research ethics as a minimum requirement (see institutional level statement). At school level, all research applications are subject to ethics review and are initially reviewed by Read, who has a high level of expertise due to his work on ethical research in the field of disability studies. Applications are then allocated for further review by the relevant research centre representative. Each research centre has an identified ethics lead. The School Ethics Lead (la Velle) represents the SoE at the University's ethics committee and ensures that our procedures are not only compliant with university policy but are as inclusive as possible.

Future research strategy

Our research strategy 2020-25, written by the professors and research centre leads, will reflect our current priorities and involve building on these.

We will continue to develop our research in the three cross-cutting areas which define our work: social justice and equity in education; practitioner research; and creativity. We aim further to develop the work of our newer research centres, PPP and REACH, and invest strategically in research-active members for these centres, both as external appointments and in capacity-building with our own ECRs and doctoral students. Recent ECR appointments in PPP, such as Morris, conducting work on self-guided learning in HE, and Kuhn, formally a

doctoral student with us, now Co-I on EPSRC funded 'Understanding data: practices and politics', provide a strong foundation. While we have focused recently on creating an inclusive environment for research and appointing and supporting ECRs (see below), our intention is also to focus on appointing more senior and experienced researchers in our areas of strength in order to enable us to benefit from their leadership and existing wider networks, including international ones, in order to grow and develop our international work. We also aim to increase the number of, and extend the work of our Visiting Professors and Research Fellows, to increase the mentoring and support given within the research centres.

Secondly, we aim to build on our recent success in gaining external research funding. We aim to continue to build on existing relationships with funders and external stakeholders, a strategy which has worked well, with grants from the Primary Science Teaching Trust, the Wellcome Trust, and London Borough of Tower Hamlets (see below). We will also continue to build on and support strategic national and international collaborations with other institutions and non-academic partnerships via e.g. the Global Academy of Liberal Arts, a global network of creativity, in order to extend the reach of our research nationally and internationally. We will continue to respond directly to the needs of practitioners, communities and beneficiaries, and in doing so develop and support research which is participatory, non-hierarchical and inclusive.

Thirdly, we expect to continue to support our vibrant and growing postgraduate research community and environment. We aim to recruit a total of 15 doctoral students attached to our research centres in our areas of specialism. Supervisory capacity will be increased by strategic mentoring of colleagues new to supervision, a current strategy which is already working well, with five ECRs already acting as junior members of supervision teams. A new element of our strategy will involve improving support for doctoral students within the Unit, to enhance their sense of belonging in the SoE, which will include the introduction of an annual colloquium and the development of a programme of workshops for research students, specific to the study of education.

Section 2. People

Staffing and recruitment policy

Our staffing strategy has focused on consolidating our areas of strength and capacity-building. This has enabled us to recruit high quality research staff at all stages of their careers. We have recruited five new research professors since 2014: Whitty (now late), Levinson, Chadderton, la Velle and Preston (Preston has moved on) in order to provide leadership and mentoring in our specialist areas of practitioner research (teacher education) and social justice and equity; and recently qualified doctors or early-mid career researchers such as McCree, Yuan, Lewis, Georgis, Bremner, Durden-Myers, Mitchell, Morris, Yeh, in order to build capacity in these areas. We have promoted outstanding researchers McMahon, Earle and Hay from senior lecturer to reader in order to provide leadership in practitioner research (science education) and creativity in education. All Category A eligible staff in the unit are employed on permanent contracts, providing a positive support structure.

Staff development strategy

In line with the University's commitment to staff development in research, we have strategically focused our attention on consolidating and enhancing our existing strengths and capacity-building, including mentoring of emerging researchers with a teaching/educational practitioner background, to help them build on their professional practice to become active researchers. Within our areas of strength, our strategy is to encourage staff to follow their curiosity to produce excellent research and provide inclusive research development. Our strategy is informed throughout by the UK's Concordat to Support the Career Development of Researchers and we are committed to supporting staff at all stages in their careers.

A structured, formal system of 1-1 mentoring in the Unit involving our research professors provides support to colleagues on an ongoing basis. It is monitored by the research lead and research centre leads and reported at our termly SoE research forum (see below). This has

worked well: by building a picture of issues that arise for colleagues on an individual level we have put together a series of small group writing workshops, each of which targets specific aspects of writing (style, self-grading, finding one's voice). This has resulted in some significant successes, including ECR Kuhn being awarded an HDI EPSRC Network Plus grant in 2020, and some successful research partnerships, including [Chadderton and Macer](#) on widening access, and [Levinson and Parker](#) on Attachment Aware Schools. Research centre leads provide targeted support with issues related to the theme/s of the research centre. Additionally, we have developed strategic international and national alliances with visiting research professors to support our staff and increase the vitality and interconnectedness of our research: Gore (Newcastle, Australia), Menter (Oxford, UK), Tatto (Arizona State, US), Eloff (Pretoria, South Africa), la Velle (visiting until 2018; now employed at BSU). These professors visit regularly e.g., in 2017-18 la Velle visited 30 times. They give seminars, mentor ECRs, support bid writing, conduct writing retreats, attend professorial appointment boards, contribute to PhD supervision and co-author publications with BSU colleagues, e.g. [La Velle and Duggan's work](#) on university-based teacher educators.

Staff are encouraged to participate in our internal research seminar series, and at our annual SoE research day, both of which provide an inclusive and supportive forum for experienced and less experienced researchers to share and develop their work. We support CPD and attendance at research conferences such as BERA and ECER, as well as public engagement events. All staff are encouraged to apply for the annual internal research funding scheme and the public engagement seed fund to support their research, impact and engagement activities. This targeted funding enables not only larger projects to get off the ground, but also smaller, experimental projects. The seed funding resulted in the support of six successful projects 2017-8. For example, 'Fantastic plastic?', a collaboration between SoE (McMahon), Geography (Wilkins), and Beacon Rise Primary School, Bristol (22 staff and 400 children), as co-researchers, addressed the concern of plastics accumulating in the oceans. The collaborators devised teaching sequences for primary schools that enabled children to develop a scientific understanding of plastics and discuss the moral issues of plastic use and disposal. The children were supported to take actions of different kinds (letter writing, changing own behaviour, beach cleaning).

Our staff development activity is informed by improved strategic communication around research, which ensures both effectiveness and inclusivity of research development activity. The SoE holds a termly Research Forum, which is attended by the Head of School, research centre leads, programme leads, representatives from BSU's central Research Support Office, student representatives. The Head of Research attends the team meetings of the different teaching programmes to update colleagues on issues of policy and research opportunities and regulations.

Unit staff have benefitted from an SoE scheme of marking buy-out to conduct research (e.g. Mitchell, McMahon), as well as an institutional scheme of teaching relief (e.g. Bianchi), which have led to a range of excellent research outputs. Teaching remission is arranged for staff involved in large research projects (e.g. Bianchi, Earle).

Supporting Early Career Researchers

In addition to the ESR programme at institutional level (IES 3.3), in the SoE we have prioritised investment in ECRs and considerably improved our support for ECRs since 2014. Our programme includes the following:

- All our ECRs belong to one of our research centres and are allocated a research mentor. Where appropriate, this might be a colleague from another school to enhance interdisciplinarity. We create opportunities for ECRs to develop their research skills by working alongside more experienced researchers e.g. Barber working alongside McMahon funded by the Unit.
- The Accessible Reading Group (ARG) works across programmes in initial teacher education and education studies to support colleagues less familiar with research literature. It focuses on examining articles on higher education and professional

development which are accessible to staff at various levels of research capability and expertise, and both active and non-active researchers.

- Allocation of seed funding prioritises applications from ECRs to support them in developing their area of research towards applying for external funding.
- Writing retreats run by Chadderton and la Velle, as well as the individual research centres, provide inclusive and supportive spaces where all researchers, including ECRs, can develop their academic writing.
- The PPP research centre runs an internal blog for ECRs to share their research.
- Staff without doctorates are supported to study towards gaining one. This has resulted in nine members of staff gaining their doctorates since starting at BSU in the current REF period, and a further nine currently being supported to complete. Four of those completions are now SRR and their work is being submitted to this REF.
- The effectiveness of our ECR strategy is evidenced by the number of ECRs classified as SRR: Durden-Myers, Kuhn, Morris and Yuan (13% of the total).

PGR students

Since 2014, we have developed a programme of initiatives to expand our PG research environment and have had considerable success in building a vibrant doctoral research community. There are currently 28 PGRs registered on doctoral programmes. We have 12 PhD completions in this REF period, up from 7 in the last REF, an increase of more than 58%. This success is due to a range of strategic initiatives:

Strategic recruitment and development of promising academic staff has expanded our research and supervision capacity in our areas of strength, such as Georgis and Lewis in early childhood studies, and Simmons and Read in disability studies and inclusion, Professors Levinson and Chadderton in the field of social justice and equity in education, and Professors La Velle and Whitty in teacher education. McMahon and Earle (science education) and Hay (creativity in education) have been promoted to Reader, enabling them to take on more PG supervision.

PGR students have been strategically selected to research in the Unit's fields of particular excellence: 1. Social justice and equity in education, where we have students focussing on SEND, widening participation and student experience, and racialised student experiences; 2. Practitioner research with current students focusing on teacher education and practice and teacher assessment in primary science; and 3. Creativity in education with students focusing on creative practice in teaching including creative writing, music education and theatre education.

We offered eleven internal SoE studentships from 2016/17 to 2018/19 for applicants whose areas of research map onto our research priorities and strengths. Successful applicants included graduates of our education programmes. The awards were offered on a full-time basis and included an expectation that recipients would make a strong and innovative contribution to the development of the research environment both within SoE and across the university. Examples of their contribution include success in securing funding to present workshops in the University's Journeys in Research series, setting up a peer support community across campus, and further developing interdisciplinary links in the writing process. We also gained two of the BSU funded studentships; have provided two studentships to academics from the Council for at Risk Academics; and have two externally funded studentships: Levinson's AHRC project D4D and McMahon and Earle's Primary Science Teaching Trust funded project.

We provide a range of opportunities for students to contribute to the life of the University and build their research skills. They contribute to SoE's lunchtime seminar series and present at the SoE annual research day. They take part in events organised by the researcher development office, which include the Three Minute Thesis (TMT) competition, the doctoral students' research roundtables and the annual early stage research conference. PGRs from the unit have been prominent in all of these, as prizewinners in the TMT, and in their role as leaders (for example in workshops on creative writing). The South West Postgraduate

Symposium: Practical Issues in Conducting Educational Research (BERA Postgraduate Symposium Series) was held at BSU (2017) organised by Yuan.

Students are supported to put on their own events to develop related skills. For example, we have funded the student organisation of a Small Press Publishing workshop (2017) and a Small Press and Book-making workshop (2018), which included presentations from prominent members of the small press comics/zine/artists' book communities. To develop research and teaching skills, opportunities are provided for doctoral students to undertake paid research assistance to experienced academics, and to take up some undergraduate teaching (supported by appropriate training).

Students are matched with supervisors who have relevant local/national connections to external organisations, to ensure that research remains directly relevant to the community and to practitioners, to give them the opportunity of dissemination to, and engagement with, the wider public beyond academia and to fulfil the requirements of the Researcher Development Concordat with regards to career development and management. E.g. Macer sits on the board of the Theatre Royal in Bath, and supervises doctoral research in theatre education and practice. Students are encouraged to make interdisciplinary links across the institution to enable them to develop a wider range of skills and contacts, for example by joining research centres and reading groups in other subject areas and schools. Education students are members of the Making Books Research Centre, the Book Arts research cluster and the Undisciplined Reading Group in Digital Creativity.

Equality and Diversity

The Unit's strategy for equality and diversity is guided by the institutional strategy, policies and processes (IES 3.5).

Equality and diversity in research is a particular concern of this Unit, forming one of the main strands running through our work, in the shape of our cross-cutting focus on equity and social justice, and the work of the research centre CREIC, where ongoing work focuses on SEN and inclusion (Curran, Levinson, Simmons, Read), race equality (Bhatti, Chadderton) and widening participation (Macer). 24 out of 32 staff returned to the REF in this unit are female, and all our BAME staff are being returned. A particular recent focus in the SoE has been on staff with disabilities, with the formation by this Unit of the 'Disabled Staff Network', led by Read. The Unit has provided internal funding for the following ongoing research projects which will inform inclusive research practice:

- 'Building the inclusive researcher: What does inclusion look like in research and how might it change us, our outlook and methods as researchers?' This research explores the benefits and challenges of enacting inclusive research methods from a disability studies and community resilience perspective (focusing on environmental and humanitarian crises, such as COVID-19).
- 'Understanding the lived experience of disabled staff in academia'. This focuses on the experiences of disability disclosure and accessing reasonable adjustments; a sense of belonging and opportunities for leadership as a disabled person; and recommendations for changes to ensure that disabled staff can be recruited and retained within academia.

Section 3: Income, Infrastructure, and Facilities

Income

Since 2014 the unit's research income from external sources has increased from GBP590,298 to GBP2,157,000 - an increase of 265.41%. This list of our successes exemplifies the increasing quality of our research bidding expertise and our capacity to build the researchers of the future.

Centre for Research in Early Scientific and Technological Learning and Education

- McMahon (PI): Primary Science Teaching Trust, 'Teacher Assessment in Primary Science (TAPS)', GBP136,075 (2014-16)
- Earle and McMahon (PIs): Primary Science Teaching Trust, 'TAPS 1&2', GBP164,760 (2016-19)
- Earle (PI): Primary Science Teaching Trust, 'TAPS 3' GBP150,000
- Earle (PI): Education Endowment Foundation, 'Focus for teacher assessment for primary science', GBP388,500 (2018-19)
- McMahon and Etchells (PIs): Wellcome Trust, 'Enhancing the learning sciences in Primary Initial Teacher Education' GBP36,283 (2017-18)
- McMahon (PI): Wellcome Trust, 'Supporting teachers with sciences of learning' GBP43,567 (2019-2020)
- Earle (PI): Education Endowment Foundation, 'Thinking, Doing and Talking Science' GBP47,300 (2016-18)

Centre for Equity, Inclusion and Community

- Macer (PI): Forces in Mind Trust 'Access to HE' GBP97,209 (2014-16)
- Mortimore (PI): Scanning Pens, 'Scanning Pens and Dyslexia' GBP8,200 (2017-18)
- Curran (PI): National Education Union, 'National SENCO Workload Survey' GBP5,000 (2018)
- Levinson (PI): AHRC, 'D4D: Disability and community: dis/engagement, dis/enfranchisement, dis/parity and dissent' GBP1,187,771 (2016-20)
- Chadderton (PI): Aldgate and All Hallows Foundation 'A longitudinal study of young women's transitions in Tower Hamlets in an age of austerity' GBP7,705 (2018-19)
- Bhatti (Co-I): ERASMUS, 'Education for Democratic Intercultural Citizenship' GBP40,000 (2015)
- Parker and Rose (co-PIs): Somerset County Council, 'Somerset Emotional Coaching Project', GBP50,000 (2015)
- Macer (PI): National Association of Virtual School Heads (NAVSH), 'Effective use of PP+ to improve educational outcomes for Looked After Children', GBP9,962 (2019)
- Horner (Co-I): GCRF Development grant, 'Edu-Peace: Supporting Educators in Conflict-affected settings', GBP6,162

Centre for Research into Policy, Pedagogy and Practice

- Hordern (PI): The Society for Education Studies, 'Characterisation of the 'region' of early years professional knowledge', GBP8,693 (2013-15)
- Bianchi (Co-I): EU, 'Arts Together', euros 75,195 (2018-20)
- Hordern and Bishop (Co-PIs): Gatsby Charitable Foundation, 'Degree apprenticeships: higher technical or technical higher education', GBP3,452 (2016-17)
- Garside (PI): Philosophy of Education Society, 'Towards a transitionalist critique of education' GBP9,625 (2015-16)
- Kuhn (Co-I): HDI EPSRC Network Plus - Learning, Skills and Social Justice Project funding 'Understanding data: practices and politics' GBP59,558 (2020-21)
- Parry (PI-Art & Design UoA) and Hay (Co-I): AHRC, 'Rethinking waste and the logics of disposability: Compound 13 Lab' GBP85,252 (2019-20)
- Soyinka and Sorensen: Arts Council England, 'Paper Nations: Creative writing in schools', GBP600,000 (2015-18)

Centre for Research in Early Childhood

- Lewis (PI): Kinderly, 'Digital resources for professional development in collaboration with Kinderly' GBP14,064 (2017-19)

We have achieved this growth through a significant investment in improving the organisation and infrastructure to support research as detailed in the research strategy:

We have greatly improved our communications process since 2014. Funding calls are circulated via e-mail by the Research Support Office (RSO) to the SoE's Head of Research who forwards them to colleagues, raising awareness of the opportunities available and following up with research centre leads to encourage application. We have also improved our data recording processes, e.g. the RSO reports on the progress of bids to the Head of Research, who reports to the University's Research and Ethics Committee.

A successful strategy for us has been providing strategic support for colleagues to build on previous funded projects (e.g. TAPS) and build relationships with specific funders with whom we have had previous success (e.g. PSTT, EEF, Wellcome Trust). Further, while we target certain strong applications to highly competitive schemes (EEF, EU), we have also successfully diversified our sources of funding where appropriate (to charities such as Voctech and Forces in Mind). We have also targeted our efforts to responding to an actual need among education practitioners, such as Curran's work on SENCO workloads, or addressing a social justice issue, such as Macer's work on access to HE for former service personnel, and either collaborating on, or co-constructing the research with beneficiaries. The new SoE Research Helpdesk provides support for colleagues applying for research funding and advice and guidance in research methods and bid writing, and has improved the quality of the bids we submit. An internal peer review system was newly established by research lead Chadderton in 2018 in addition to the existing institutional level peer review team.

We have formed strategic interdisciplinary research collaborations across the university, which have also been key to our bidding success. These include the partnership between McMahon and Etchells from Psychology which has resulted in funding from the Wellcome Trust. Equally, we support our researchers to become members of larger research consortia involving external institutions such as the Western Widening Participation Research Cluster which involves researchers in WP from BSU and the Universities of Bath, Bristol, the West of England and University Centre Weston, which contributed to the success of Macer's bid to NAVSH.

Infrastructure and facilities

The scholarly infrastructure for the Unit includes Library subscriptions to high impact and internationally excellent journals (SCImago international journal rankings), for example *Journal of Teacher Education*, *Educational Research Review*, *Child Development*, *Journal of Educational Psychology*, *Sociology of Education*. Library collections directly relevant to the UoA include more than 1,800 journal subscriptions, 15,000 books and over 2,500 e-books. The Library's extensive digital collections include *Education Research Complete*, the world's largest full-text research database designed for education, and *Academic Search Premier*.

A key investment to enhance our research infrastructure and facilities within the Unit since 2014 has been in technology. For example, we have developed The British Educational Research Tool integrating Engagement ([BERTiE](#)), a platform allowing easy access to evidence-based education research to support researchers, practitioners and students. BERTiE is a web-crawler built to only search predefined websites that have been curated through academic moderation. Levinson's AHRC-funded [D4D](#) project has invested in telepresence robots and is researching the range of possibilities for increasing the inclusivity of informal learning in spaces such as galleries and museums for those who cannot attend in person, such as individuals with physical disabilities, illness or anxiety. This project in fact found that these telepresence robots enabled people to go on guided tours of the Hastings Contemporary Gallery and the Saatchi Gallery in London during the Covid lockdowns. We have also invested in four humanoid and programmable robots, one Pepper and three NAO, which are currently enabling us to conduct research in inclusive pedagogies in school settings. We invest in C-Live, a live roleplay simulation platform which aims to build teacher skills and confidence using avatar pupils. The platform enables us to conduct research on different aspects of teacher development and support.

Section 4: Collaboration and Contribution to the Research Base, Economy, and Society

Collaboration

Since 2014, we have developed a programme of support to increase our collaboration and public engagement with our research, and develop ourselves as a hub for research in social justice and equity in education; practitioner and practice-relevant research; and creativity in education.

Engagement has included our engagement with the Global Academy for Liberal Arts (GALA) network, founded at Bath Spa University in 2014, now with 19 institutional partners globally who collaborate on research and teaching. This has resulted in successful research collaboration, including 'Exploring 'Forest' and Outdoor Experiences in Different Cultural Contexts: towards a shared understanding', a research collaboration between REACH and GALA partner SUNY Geneseo.

Competitive internal funding within the Unit is strategically ring-fenced to support research collaboration nationally and internationally and has resulted in projects such as:

- 'Views about Science Enquiry- Elementary': a collaboration between McMahon and Illinois Institute of Technology USA (2019) developed and tested a children's questionnaire to make systematic comparisons of children's views of scientific inquiry over time and between countries to inform teaching practitioners.
- 'Creative writing collaboratively': a joint research project with the Universities of Bristol, Exeter and UWE following a group of PGCE students over their training year to explore their experiences of teaching creative writing in the English classroom, which will inform teaching on the PGCE.
- [The Doctoral Training Centre Effect: ESRC Doctoral Training Centres and the UK Social Science Doctoral Training Landscape](#) (2016-18), a collaboration between Yuan, Lancaster University and Liverpool Hope, the results of which are being used to inform the continuation of the ESRC's DTC policy.

The aim of the formation of the SoE's Research Active Schools Committee (RASC) in 2015 was to coordinate a strategic approach to the development of research partnerships between SoE, partner schools, and other educational organisations. The group explores practical strategies to improve our capacity to collaborate with our partner educational organisations by both working with them on research projects and disseminating research. Events have included workshops on data analysis, research conferences for NQTs and current ITE students on being research active.

We formed the [Teacher Education in Lifelong Learning Network](#) at the SoE in 2011 to provide a specialist research network for practitioners in the lifelong learning and post-compulsory sector and to connect research and practitioners. As of 2019/20 it has 350 members: practitioners, academics and policy-makers. Approximately four network meetings are held per year nationally and include keynote presentations from academics, college lecturers, local government representatives and education journalists. The network has compiled a 'Big Bibliography' of a range of research publications related to FE, ITE, and teacher education in lifelong learning to support members to conduct their own research.

The Unit has facilitated interdisciplinary collaboration by hosting high-profile conferences (international and national), which have supported our strategic aim to establish ourselves as both a regional and national hub of practitioner research and increase public engagement by bringing together academics, practitioners, policy makers and members of the community. These have included the 'International Conference on Research in Music Education' (2017, 2019); the annual conference of the 'Association for Teacher Education in Europe' (2019); the 'National Attachment Aware Schools Conference' (2015 and 2016); 'Voices in Early Childhood Research: exploring and transforming practice through a participatory approach to research' (2018) attended by 60 early childhood practitioners, academics and students; 'Joining the Dots: Challenging Conceptualisations of Child Development' (2019) attended by 150 practitioners

and academics; a series of eight events on Attachment Aware Schools and Emotion Coaching each attended by 100+ delegates from the local community; the 'Future of Teacher Education' conference (2018) attended by over 60 delegates from Regional Teach First, Million Plus, the Universities Council for the Education of Teachers, Teach First, the Chartered College of Teaching, teacher unions, local Multi-Academy Trust leaders, school ITE coordinators and SCITT/SD programme managers; the 'Annual Association for Science Education West of England' conference, held annually since 2014 (80 teachers and trainees); 'Community Impact - Armed Forces and Education' (2016) funded by the Forces in Mind Trust, attended by managers of military and civilian employment and career advice services (Career Transition Partnership, Help for Heroes, Army Education Centre, Swindon & Wiltshire LEP, Ascentis), and military and civilian organisations supporting service pupils (Directorate of Children & Young People, Skillforce, Army Families Federation, Wiltshire County Council).

International collaborations

We have systematically developed our international collaborations with targeted use of internal seed funding. The focus of these collaborations has been co-constructed, collaborative research with beneficiaries, which, guided by our impact strategy, takes participatory approaches to research that challenge traditional hierarchical relationships between researcher and participant. This has resulted in five international collaborations since 2018, including:

- Bianchi's [Arts Together](#) project (EU). This brings together researchers and practitioners from institutions across Europe, including universities, nurseries, youth organisations and SMEs: the University of Peloponnese, Greece, University of Bologna, Italy, Astiki Mi Kerdoskopiki, Greece, Higher Incubator Growth, Greece, ARSIS (the Association for the Social Support of Youth) Greece, Centro Per Lo Sviluppato, Sicily, Four Elements, Greece, Kinder Villa, Austria, Mediter, Belgium;
- Hattingh's '[Exploring the 'Forest' and Outdoor Experience in Different Cultural Contexts: towards a shared understanding](#)', a collaboration between BSU and 4 nursery settings in Denmark, England and the US;
- the AHRC funded '[Rethinking waste and the logics of disposability Compound 13 Lab Mumbai](#)' (2018-20), a partnership between BSU's School of Art and the Unit and ACORN Foundation, a recycling charity in Mumbai, Makers Asylum, a community makerspace in Mumbai and young people in Dharavi, Mumbai's largest informal settlement.

Collaboration with government, third sector, civil society and business

Commensurate with our research, impact and engagement strategy, we have expanded the reach of our collaboration beyond academia. Many of these projects are a direct response to a request from practitioners and involve close collaboration with practitioners, ensuring that impact is built-in. These include:

Chadderton acted as a research consultant to Tower Hamlets Council in their design of a programme for improved careers education for pupils in years 7-9 (2019) as a result of her previous research on careers education funded by the Aldgate and Allhallows Foundation (2014-2019). Chadderton provided research-informed advice for the council on their action research project to trial different activities to improve school-based careers work, which is continuing to inform their agenda.

'Developing models of CPD to support the delivery of high quality PE teaching in primary schools' (2017- 2018) was a collaboration between Duggan and the Football Association, which aimed to improve the FA-delivered [FA Primary Teachers Award](#) (PE workshops). These are offered to Primary and Early Year PGCE students as part of their course and to serving primary school teachers across the country as CPD (approximately 6,000 participants per year) to provide teachers with the skills and confidence to make PE more inclusive and manage

difference. As a result of the research, these workshops have now been adapted to include extra leadership training, which has resulted in improved confidence among workshop participants to teach more inclusively.

Bremner is undertaking research to improve the professional development of English Language teachers in collaboration with language schools in Bath. Addressing the relative lack of flexible CPD, particularly in the area of self-efficacy for English Language teachers, Bremner has developed a timeline approach in order to support them to develop their own practice.

Georgis is collaborating as a consultant on 'Psychosocial Adaptation and Integration of Syrian Refugee Communities Using Community Learning for Empowerment Groups' (University of Alberta and the Multicultural Health Brokers Cooperative). This community-based participatory project engages Syrian community leaders as co-researchers to facilitate community dialogue and reflection related to social integration. Georgis is providing expertise in the form of her [RAISED Between Cultures model](#), a conceptual framework for promoting intercultural practice in interactions with children and families.

Contributions to the research base and society

The strategy outlined above, as well as the diversity of the Unit's research, has led to a wide range of contributions to the research base and society with benefit to a diverse set of beneficiaries both within and beyond academia. Commensurate with our research, impact and engagement strategy, in particular our contribution is to education practice and practitioners regionally, nationally and internationally, includes influential reports, models, tools, methods and materials and has resulted in rendering education practice and research more inclusive and socially just, and practitioners more confident and effective. Examples include:

CRiSTLE: [Embedding best practice of Teacher Assessment in Primary Science](#) (ICS UoA23-2 TAPS)- The team developed the TAPS Pyramid, an accessible school self-evaluation tool, which science subject leaders can use to audit, action plan and develop assessment processes, in response to a lack of guidance following the removal of the statutory levelling system in England. The tool has been designed through iterative cycles of co-constructed research with primary schools. TAPS has become the best practice model for teacher assessment and TAPS tools are used by thousands of schools nationally.

McMahon, Yeh and Etchells' 'Learning Sciences in Initial Teacher Education' (Wellcome Trust) addresses the place of scientific views of learning in initial teacher training courses and has developed [open access materials](#) designed to be integrated into ITE programmes to support trainee primary teachers to engage critically with ideas from neuroscience. The materials are being used on our own and other ITE courses (including Aberystwyth and Liverpool John Moores Universities) and have led to a significant reduction in trainee teachers with misunderstandings about the brain and education ('neuromyths').

CREIC: Curran's NEU-funded research on SENCOs (ICS UoA23-3 PDL) developed [the first national workload model for SENCOs](#): guidance for school leaders regarding how the SENCO role can be facilitated, after Curran's previous research showed 70% of SENCOs did not have enough time to effectively ensure learners with additional needs were able to access the provision they required. The workload model is now recommended for use in schools by the DfE.

Macer's 'Forces in Mind' research [Access to Higher Education Diplomas](#) produced an influential report showing that ex-military personnel, particularly from lower ranks, are disadvantaged on entering Higher Education by transition blind spots created by lack of access to fully-informed career information, advice and guidance. This research has had an impact on the work of the Navy, Army and RAF Families Federations.

Simmons's work on inclusion for children with PMLD innovatively uses participatory approaches as an alternative to more traditional, deficit-based experimental design to conduct research on the lived experiences of these children which recognises their personhood and supports the development of their communication skills. This has led to the creation of ongoing weekly mainstream school placements for primary school children with PMLD among a group of schools in the south-west of England.

Levinson's AHRC-funded [D4D](#) project, with co-investigators from both academic and non-academic settings, has made a significant contribution to the evolution of research language that is accessible to the wider public. The research uses arts-based approaches as a genuinely inclusive and participatory alternative to the traditional interview, to produce data which is more authentic to the participant experience.

PPP: Bianchi's 'Arts Together' project (EU) has produced a [curriculum](#) for the integration of refugees into education in host countries. Drawing on research with recently arrived refugees in south-east Europe on their social and educational needs, the Arts Together curriculum equips teachers for dealing with diversity, fostering mutual understanding and respect among their students and improving the educational performance of refugee students by employing artistic activities and collaborative approaches. The curriculum is being used by Greek and Italian partners to train teachers and facilitators, and by migrant camps, centres, and schools in Thessaloniki and Sicily.

Hay, Bianchi and Soyinka (ICS UoA23-1 CPP) have created pedagogical models which support educators in the creative arts in both formal and informal learning settings to create successful and inclusive creative learning environments, challenging the notion, common in formal education, that creativity and the creative arts are an individual endeavour, associated with innate talent or ability. These models include '[The Writer's Cycle](#)' and '5x5x5=Creativity', tools which are used by educators and practitioners in over 100 local schools and community learning settings to increase participation and inclusivity in creative arts learning.

REACH: In partnership with Kinderly Learn, the Professional Association for Childcare and Early Years and Achievement for All, REACH developed and trialled [a digital platform for developing Continuing Professional Development](#) for the early childhood workforce. The platform focuses on bite-sized, interactive and reflective learning for practitioners.

Editorships and advisory boards and research reviewing

Staff are either editors or on the editorial boards of 11 peer-reviewed research journals: la Velle is editor of 'Journal of Education for Teaching'; Chadderton is on the editorial boards of 'Race, Ethnicity and Education', 'Whiteness in Education', 'Journal of Vocational Education and Training' and 'Jahrbuch fuer Paedagogik' (Germany); Yuan sits on the editorial advisory board of 'Journal of Global Education and Research'; Earle is editor of the 'Journal of Emergent Science'; McMahon is a member of the editorial board of 'Journal of Science Learning'; Emira sits on the editorial board of the 'Journal of Contemporary Education, Theory & Research'; Simon sits on the editorial boards of 'Management in Education' and 'Educational Management, Administration and Leadership'. Simmons is executive editorial board member at the 'British Journal of Learning Disabilities'. Staff also contribute to the research base by reviewing for national and international research funders: Simmons reviews proposals for the British Academy and Wolfson Foundation and the Independent Scholar Research Foundation and Chadderton for the ESRC and British Academy.

Leadership roles in subject networks, charities, other organisations

Staff also make a substantial contribution by holding leadership roles within subject networks, charities and other research-related organisations. These include:

- la Velle who is on the executive board of the International Council on Education for Teaching, (ICET) is Chair Elect and leads its research arm; in 2016-2019 la Velle was on the Executive Board of the Universities Council for the Education of Teachers and Chair of its Research and International Committee;
- Chadderton is an elected fellow of the National Institute for Careers Education and Counselling;
- Hay is Director of Research at '5x5x5+Creativity', an arts-based action research organisation;
- Earle is an 'academic collaborator' at the Primary Science Teaching Trust and sits on the Association for Science Education Research Committee;
- Bianchi is Trustee of 'My Future My Choice', a creative education charity which is part of the Bristol Initiative Trust;
- Durden-Myers is Chair of the International Physical Literacy Association.

Staff holding these positions have not only contributed to the work of these organisations via their research, but this work has also enabled further, collaborative research, such as Forest of Imagination, a collaboration between 'House of Imagination', the SoE, and BSU's Centre for Cultural and Creative Industries led by Hay, in which collaborative and participatory research is conducted on creative place-making through temporary transformation of familiar city spaces and creative social engagement (ICS UoA23-1 CPP).

Keynotes and invited presentations

Colleagues from the unit have given a range of keynote speeches and invited presentations on their research at both academic and practitioner conferences and events.

Collectively members of the unit have given 15 keynote presentations. These include three international keynotes: Levinson at the Conference on Social Capital and Young People, University of Sligo, Ireland (2016); and McCree, Pedagogia del Bosco Conference, Milan, Italy (2018) and at the symposium for European Outdoor Education audience, at IT Tralee University, Ireland (2020); and twelve national/regional keynotes: Earle has given seven, including at the Association for Science Education national conference (2018) and Surrey science partnership (2016); Lewis at the Sector Endorsed Foundation Degree Early Years National Meeting (2017); Chadderton at the Western Widening Participation Research Cluster Conference (2019); Read and Macer at the National Association of Virtual School Heads' national conference (2020); Curran at the 17th Annual SEND Update (2019) and the Somerset SENCO conference (2019).

Invited talks which engage the public and practitioners with our research include:

- Curran regularly presents her research to practitioners and the wider public, having presented eleven times since 2016 at events such as SEN South West 2016, ResearchSEND 2017, NA SENCo Provider Partnership 2018, FestABLE 2018, Westminster Insight Forum 2018, British Dyslexia Association 2018, A-Fest Conference 2019, Nasen SENCO Advisory group 2019;
- Earle has conducted workshops for the public on primary science learning at York National STEM centre (2016) and Havering science (2017);
- McCree has given four invited presentations on her research on forest schools, including at Timber Festival of Woodland Culture, 2019, Inspirational Outdoors, Cornwall, 2019, and the Bristol Festival, 2018;
- Chadderton has given two presentations on decolonising careers education to practitioners at the National Institute of Career Education and Counselling (2018 and 2019);
- Simmons presented 'Illuminating the fluidity of naturalistic social interactions for children with PMLD' to an audience of speech and language and occupational therapists, special school teachers and designers of alternative communication technologies at the Communication Matters and the Brain Injury Trust (2019) and 'Belonging for people

with profound intellectual and multiple disabilities in education' at the Disability Innovation Institute at the University of New South Wales (Australia, 2020).

- Read and Macer presented a NAVSH-hosted webinar entitled 'Effective use of Pupil Premium Plus to support the educational outcomes of Looked After Children' (2020) for professionals involved in supporting looked after children;
- Durden-Myers presented her research on physical literacy at Swedish Athletics, Stockholm in 2019.

Media engagement

Curran's research has been quoted by the media no fewer than 10 times in 2018, including in the Times Educational Supplement 'Exclusive: 74% of SENCOs lack time to support pupils' (30 Nov 2018); McCree gave an interview for BBC R4 Woman's Hour about [play in the pandemic](#) (April 2020) and has been quoted by The Guardian, 25 June 2019, '[Forest schools: is yours more a marketing gimmick than an outdoors education?](#)'; and Earle gave a [Live Lesson](#) on the Teacher Assessment in Primary Science model on an expert panel for the BBC (November 2018).