

Review of a Research Strategy for Scottish Education

1. Executive Summary

A Research Strategy for Scottish Education was published in April 2017. It set out the broad framework for research activity, to be led by the Scottish Government, in the field of school education.

The purpose of this review is to help us consider options for next steps now that the Research Strategy has ended. The review is based on the findings of a desk study and consultation with university researchers, external education stakeholders, and Scottish Government analysts and policy officials.

1.1 Key findings

1.1.1 Supporting research infrastructure and independent research

In 2022, we launched the ‘Education Research Seminar Series’ - a monthly online seminar series which offers policy officials the opportunity to hear about the education research that is being carried out by universities. The series has been received positively, with participants noting the improved communication between university researchers and policy officials.

There have been a number of changes to how researchers can access education data and more datasets are now available on ADR Scotland and our Open Data Platform. The process for submitting bespoke requests for data has been simplified and we have provided information on our education datasets, data access and data linkage to university researchers. We agree with the wider research community that we can further improve access to our data and it will remain an aim going forward.

In 2019, a proposal was submitted, on behalf of the Scottish Council of Deans of Education, to establish a multi-year grant funded programme of educational research to be known as the Scottish Coalition for Educational Research. The launch of the project encountered delays owing to the COVID-19 pandemic and uncertainties around budget. Due to the current volatile economic and fiscal context it was decided that work to progress SCER would cease.

1.1.2 System performance and “what works”

Our research has had a strong focus on the attainment gap, the health and wellbeing of young people, and drivers of educational improvement. This has included: ongoing evaluation of the Attainment Scotland Fund and the development of a new Evaluation Strategy; research with headteachers to explore the implementation of the senior phase; the introduction of a Health and Wellbeing Census and the Parental Involvement and Engagement Census; and the continuation of Behaviour in

Scottish Schools Research. We have also continued to measure pupil progress via teacher professional judgement data and our participation in OECD's Programme for International Student Assessment.

1.1.3 Empowering practitioners to produce and use evidence and data

We partnered with the Education Endowment Foundation to introduce a Scottish-specific version of the Teaching and Learning Toolkit. It aimed to provide teachers and schools with an accessible summary of international research on 34 different educational approaches so as to support them to access and use evidence when making decisions about how to improve learning outcomes. The toolkit was launched in 2017 and was used to help schools to better spend their Pupil Equity Funding to support disadvantaged pupils.

We launched the BGE Benchmarking Tool in 2018. All teachers have had access to the benchmarking tool via Glow since June 2018. The tool has helped schools improve the quality of teacher judgement data and has encouraged schools to have collaborative improvement discussions with similar schools. We also conducted research with teachers and schools to explore how they engage with research and the factors that support and hinder ability to make best use of evidence.

Stakeholders have noted that one of the strengths of the strategy was its recognition of the contribution research can make to supporting evidence informed practice. More can be done, however, to continue building effective networks between policy, practitioners and researchers.

1.1.4 Governance

The strategy has been governed by two external facing advisory groups who oversee the strategy – the National Advisory Group (NAG) and the Academic Reference Group (ARG). Members are positive about the increasingly collegial relationships between the Scottish Government, university researchers and other educational bodies and stakeholders. However, the role and remit of these groups could be clearer and this will be addressed in whatever supersedes the Research Strategy.

Awareness of the strategy could have been improved across the education landscape. Any future strategies would, thus, need a clear dissemination plan. Stakeholders suggested that clearer actions and more regular reviews of progress and impact could also help to improve awareness of the strategy and its outcomes.

The current title of the strategy suggests that its focus encompasses the entire educational journey rather than just school age education. Members suggested that the scope could be extended beyond school age education to include early years and post-18.

1.1.5 Recommendations

Based on the findings of the review, we have identified several actions which should be taken into consideration when considering options for what may supersede the Research Strategy. These are:

- supporting opportunities, for both research providers and universities, to bid for education research contracts
- embedding independent research in the policy development process by considering the most effective ways of disseminating academic research in a policy ready format
- continuing to improve access to SG education datasets
- supporting the use of evidence in educational practice by: developing clear dissemination plans for our research to ensure that evidence is reaching practitioners; participating in collaborative networks between researchers, teachers and other educational practitioners; and identifying opportunities for practitioner research
- reviewing the roles and remit of the Academic Reference Group and National Advisory Group and relooking at membership to ensure the effective representation of the entire education research community
- better defining the scope of any future strategy to ensure it is clear what stage of education the strategy covers
- developing a dissemination plan which sets out how we will keep stakeholders engaged with any future strategy and how we will disseminate the outputs of our research and research activities to different audiences

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2. Introduction

A Research Strategy for Scottish Education was published in April 2017. It set out the broad framework for research activity, to be led by the Scottish Government, in the field of school education.

The purpose of the review is to help us consider options for next steps now that the Research Strategy has ended. The review is based on the findings of a desk study and consultation with university researchers, external education stakeholders¹, and Scottish Government analysts and policy officials.

3. Background

The research strategy was developed by the Scottish Government's (hereinafter referred to as "SG") Learning Analysis Unit in the Education Analytical Services division (both hereinafter referred to as "we"), in response to the recommendations from the Organisation for Economic Co-operation and Development (OECD, 2015); 2016 National Improvement Framework (NIF) priorities (Scottish Government, 2016); and consultation with academics and education stakeholders.

3.1 Improving Schools in Scotland: An OECD Perspective

In 2015, SG commissioned the OECD to undertake an education policy review (OECD, 2015). The purpose was to inform the ongoing development of education policy, practice and leadership in Scotland, by providing an independent review of the direction of the Curriculum for Excellence (CfE) and emerging impacts seen in quality and equity in Scottish schooling. The review concluded with a number of recommendations, with the following being most pertinent to education research:

- collect data to measure progress in closing the attainment gap and ensure that, by striving for greater quality in Scottish education, that the attainment gap is not exacerbated as standards and expectations for all are raised
- ensure that frameworks, guidance, policies and interventions to tackle poverty and its impact on child outcomes are synergised and are evaluated to evidence their effectiveness
- develop a range of metrics that reflect the full ambition of CfE rather than reducing quality and equity to more readily measurable attainment indicators, such as qualifications
- evaluate how successfully CfE is implemented in schools
- develop innovating learning environments in secondary schools which are targeted in areas with the highest deprivation levels and designed and evaluated with engagement from the Scottish research community
- develop an integrating framework for assessment and evaluation that encompasses processes and systems for learner assessment, teacher and

¹ Members of the National Advisory Group (NAG) and Academic Reference Group (ARG) were given the opportunity to submit written feedback. We received four responses from the NAG and six responses from the ARG. In addition, group discussions about the Research Strategy were held during meetings of the NAG and ARG in Autumn 2022,

leader appraisal and school evaluation together with local authority and national activities and policies

- strike a more even balance between the focus of assessment and developing a robust evidence base on learning outcomes and progression
- strengthen evaluation and research on CfE with greater collaboration between researchers, policy-makers and practitioners - this should include independent knowledge creation by independent and non-government agencies

3.2 National Improvement Framework (NIF)

The NIF sets out the vision and priorities for Scottish education that have been agreed across the education system, and the national improvement activity that needs to be undertaken to help deliver those key priorities. Scottish Ministers have a statutory duty, introduced by the Education (Scotland) Act 2016, to review the NIF and publish a plan on an annual basis. The research strategy for Scottish education was developed in response to the 2016 NIF. The vision of the 2016 NIF was to develop an education system which delivers both excellence and equity in equal measure for all children in Scotland.

The main priorities for the 2016 NIF were:

- improvement in attainment, particularly in literacy and numeracy
- closing the attainment gap between the most and least disadvantaged children
- improvement in children and young people's health and wellbeing
- improvement in employability skills and sustained, positive school leaver destinations for all young people

3.3 Stakeholder consultation

In June 2016, a programme of stakeholder engagement was undertaken with a range of organisations of educational professionals, academics and unions. This included academic roundtables, telephone interviews and written submissions. The purpose of the engagement was to identify shared research priorities and identify knowledge gaps. Respondents identified a number of issues for the research strategy to address. These included:

- improving the translation of research into practice by ensuring that both educational practitioners and policy makers have the skills to generate, interpret and use data and research effectively
- providing evidence of "what works" in the Scottish education context
- better co-ordination of educational research to ensure: that research is not duplicated; there is greater awareness of ongoing research; and more opportunities for collaboration
- building capacity for the dissemination of research
- improving access to research funding

Respondents also identified several priorities for education research, including:

- encouraging the use of more innovative research methodologies, including mixed methods and longitudinal research
- undertaking more multidisciplinary research on educational inequalities
- promoting data sharing and linkage

Respondents also pointed to gaps in the evidence on educational inequalities and the implementation and outcomes of CfE.

3.4 Priorities of the strategy

Based on the OECD and NIF recommendations and the findings from the stakeholder consultation, we developed a Research Strategy for Scottish Education which would focus on three key areas:

1. supporting research infrastructure and independent research
2. system performance and “what works”
3. empowering practitioners to produce and use evidence and data

4. Key developments in Scottish education

4.1 Coronavirus (COVID-19) pandemic

When we developed the Research Strategy, it could not have predicted that we would experience a global pandemic. The Coronavirus (COVID-19) pandemic brought about severe disruption to education and, as a result, our research and budgetary priorities greatly shifted. This has meant that we have not been able to deliver every commitment that was made in the strategy (see table 1) and have, instead, prioritised education recovery and research into the impact of the pandemic. Table 1 lists several commitments that were deprioritised and which will, thus, no longer go ahead.

Table 1. Deprioritised commitments

Evaluate non-standard approaches to education and engagement (in part-fulfilment of the recommendation to evaluate innovative engagement) to see if these are approaches or models that should be available to local authorities in a more systematic way, and whether these are effective approaches in closing the attainment gap.
Undertake research which will provide insight into how the twin aims of raising attainment for all, and closing the attainment gap will be achieved.
Monitor the behaviour of secondary indicators which have not been identified as the official measures of the attainment gap, but provide other valuable information about the performance of the system.
Undertake analysis which seeks to quantify the differences that school interventions make relative to social change, and within both these categories, identify the most effective interventions.

On 20 March 2020, a decision was made to advise that Scotland’s school buildings should close, and SG worked with stakeholders across all sectors of Scottish

education to find new and innovative ways to continue learning and teaching and supporting the health and wellbeing of children and young people. This period of school building closures and wider national lockdown had an impact on all children and young people. However, it is widely acknowledged that it was likely to have been a particularly difficult experience for children and young people disadvantaged by their socio-economic background.

In the 2020/21 Programme for Government (Scottish Government 2020, p. 97) SG committed to undertake an equity audit to ‘deepen our understanding of the impact of the pandemic on children from disadvantaged backgrounds, and set clear areas of focus for accelerating recovery’. The resulting Equity Audit (Scottish Government, 2021a) identified a number of key findings, including:

- the mental and physical health and wellbeing of children and young people has been impacted negatively during school building closures
- lack of access to technology (devices and connectivity) has a negative impact on the remote learning experience and the engagement of children and young people
effective remote learning necessitates collaboration across partners, including the public and third sector, particularly in identifying vulnerable families requiring tailored support
- evidence suggested that teaching provision differed between children and young people from higher and lower income backgrounds, with children experiencing socio-economic disadvantage and children in early years or starting secondary school more likely to be affected negatively.

4.2 Education reform

Since the publication of Research Strategy there have been a number of key policy developments, with Scottish education now undergoing a programme of reform. This includes: a national discussion on education; an independent review of qualifications and assessments; reformation of education bodies (that is, the Scottish Qualifications Authority (SQA) and Education Scotland); and reviewing post-school education and training. Underpinning this period of education reform has been a number of key education reports which are summarised below.

4.2.1 Improving outcomes for young people through school education

In 2019, Audit Scotland undertook a review of how effectively the Scottish Government, councils and their partners were improving outcomes for young people through school education. This work was paused in March 2020 due to the COVID-19 pandemic. It was restarted in October 2020 with the scope expanded to look at the impact of COVID-19 on school education and the response taken by the Scottish Government, councils and their partners.

The report (Audit Scotland, 2021) identified a number of key findings. This included:

- organisations involved in planning, delivering and supporting school education were working well together which led to a strong, rapid and collaborative response to the pandemic

- the pandemic demonstrated the importance of school education and other sectors working together to tackle issues which affect young people's life chances and outcomes, such as child poverty and health and wellbeing
- national education policy and the curriculum reflect the importance of different educational pathways and opportunities for young people and of recognising outcomes beyond exam results
- educational performance varies across council areas – at the national level, exam performance and other attainment measures have improved but the rate of improvement has been inconsistent across different measures
- the measurement of progress was hampered by the cancellation of exams and disruption to data collections during the pandemic
- progress towards closing the poverty related attainment gap has been limited and inequalities were exacerbated by the pandemic
- council spending on primary and secondary school education across Scotland increased between 2013/14 and 2018/19, largely due to the Attainment Scotland Fund

It was recommended that SG continue to focus on priorities for education recovery and improvement, building on the actions set out in the NIF. This would need to be underpinned by consistently published robust national data to monitor the aims of the national curriculum, national policy priorities, COVID-19 recovery, and improvement. The report stated that the NIF should be updated to ensure greater prominence of these broader outcome measures in public reporting and messaging. The report recommended that we work with stakeholders to agree an approach to addressing the disruption to data collections during the pandemic, given that this would affect our ability to monitor progress towards these priorities. The final recommendation was to ensure targeted support to address inequalities takes into account data on broader demographic issues, including the impact on COVID-19, which are not well evidenced in the Scottish Index of Multiple Deprivation.

The Scottish Government response to this report was the subject of the Public Audit Committee in September 2021 (see, Scottish Parliament, 2021).

4.2.2 Scotland's Curriculum for Excellence: Into the Future

In 2020, SG invited the OECD to assess the implementation of CfE, to understand how curricula are designed and implemented in schools, and to identify what can be improved for CfE to continue delivering quality learning for all students. The review assessed the implementation of CfE in primary and secondary schools and looked at progress since the OECD's initial review in 2015.

The report (OECD, 2021a), published in 2021, made a number of key recommendations which have shaped the direction of education reform in Scotland.

Firstly, it was recommended that CFE should be reviewed to ensure that it is responsive to educational and societal change. The report noted that this should include ensuring that young people are equipped with a core foundation of skills at the Broad General Education (BGE) stage, with specialisation coming later in upper-secondary education. At the Senior Phase, the report argued for better alignment with CfE to ensure young people continue to develop the four capacities of

CfE (successful learners, confident individuals, responsible citizens, effective contributors). It was suggested that CfE may be strengthened by increased capacity for curriculum design by teachers and school leaders at local school levels, drawing on research, experimentation and collaboration with other practitioners and schools.

Secondly, the need for effective collaboration with clear roles and responsibilities for the design and delivery of CfE was underlined. The report stressed that there should be genuine stakeholder engagement when making changes to CfE that has a clear purpose and impact on decision making. It was stated that this would necessitate transparency about the governance of CfE and a clear communication strategy for CfE implementation and development.

Thirdly, the report called for the consolidation of institutional policy processes for effective change by: providing ring-fenced time for all teachers, for curriculum planning, for monitoring of student achievement and in support of moderation of assessment outcomes; simplifying policies and institutions by establishing a specialist stand-alone agency responsible for curriculum (and perhaps assessment) and reviewing current the process of inspections of the school system; introducing a broader approach to external student assessment, including a wider range of assessment options that better align with four capacities of CfE; and establishing a systematic curriculum review cycle with a planned timeframe and specific review agenda, led by the specialist stand-alone agency proposed above.

Finally it was recommended that SG develop a long-term approach to the review of CfE, implementing the recommendations in the report as a coherent package rather than individual policy actions

In June 2021, SG published a response to the review (Scottish Government, 2021c). In the response, all the recommendations were accepted and the actions that would be taken as a result were briefly set out. Of note were commitments to moving the role of inspection out of Education Scotland and to consider replacing the SQA with a new, specialist agency responsible for both curriculum and assessment. In October 2021, SG published a more detailed framework for how the recommendations would be addressed (see, Scottish Government, 2021d).

4.2.3 Upper-secondary education student assessment in Scotland

Following the cancellation of the 2020 and 2021 exam diets and the use of alternative certification models during the pandemic, SG asked the OECD to expand its ongoing review to include a deeper focus on the future of student assessment and qualifications approaches in the Senior Phase curriculum in Scotland. The OECD appointed Professor Gordon Stobart to undertake the review and he considered approaches taken around the world as part of his work. The report (OECD, 2021b), published in August 2021, set out a number of options for consideration as part of a wider dialogue on the future of qualifications and assessment. These included:

- exploring the replacement of examinations at age sixteen by a school graduation certificate - the current approach staggers examination from S4 to S6 and Stobart recommended simplifying the exam diet by adopting a school

graduation certificate which is based on teacher assessment whilst also drawing on activities inside and outside school

- ensuring the resilience of upper-secondary assessment system by basing qualifications on a mix of ongoing teacher assessment and external examination
- broadening forms of assessment (including the use of wider and creative approaches, incorporating digital technology, continuous teacher assessment, and oral and practical presentation) to better align assessment with the approaches to teaching and learning encouraged by CfE
- consulting with young people about their perceptions and views of assessment arrangements
- further developing the role of vocational qualifications in broadening the curriculum

In response to the report (Scottish Government, 2021e), SG stated that Professor Stobart's suggestions would be considered as part of a wider conversation with learners, teachers, parents and others on how Scotland's qualifications and assessment system can best evolve in line with the curriculum and society of today.

4.2.4 Putting Learners at the Centre: Towards a Future Vision for Scottish Education

Following the publication of the OECD reports, the Cabinet Secretary for Education and Skills commissioned Professor Ken Muir to provide independent advice on the OECD's recommendations for structural and functional change to SQA and Education Scotland, including the delivery of the national curriculum, assessment, qualification and inspection functions. Professor Muir took up his role as Independent Advisor on Education Reform in August 2021, undertaking a public consultation resulting in 764 consultation responses, and 87 meetings, events and webinars. Professor Muir's report (Scottish Government, 2022a), published in March 2022, made several recommendations for creating a more cohesive, simplified and consistent education system to continue delivering excellence and equity for Scotland's learners. This included:

- conducting a national consultation on a new vision for the future of Scottish education which incorporates the views of all partners and stakeholders, including all learners, teachers, practitioners, and parents and carers
- establishing an new executive Non Departmental Public Body to take onboard SQA's current awarding functions
- establishing a new national agency for Scottish education - this should be an executive agency of the Scottish Government comprising the current support and improvement functions of Education Scotland, SQA's Accreditation/ Regulation Directorate, the Scottish Credit and Qualifications Framework (SCQF) Partnership and elements of Scottish Government's Curriculum, Qualifications and Gaelic Division
- establishing a new inspectorate body with its independence enshrined in legislation
- further developing our online tool "Insight" - an online benchmarking tool for secondary schools and local authorities to identify areas of success and where improvements can be made – so as to help drive change in Scottish

education, support the learner journey, and enhance parity of esteem across academic and non-academic qualifications and awards

- more effective collaboration between the Scottish Government and other national bodies should collaborate more effectively to ensure that policies align well with each other and with any revised vision for Scottish education
- establishing a transitions programme team to oversee the changes and reforms envisaged in this report.

SG published a response to Professor Muir's recommendations in March 2022 (Scottish Government, 2022c). In the response, the actions SG would take to respond to Professor Muir's recommendations were set out. Some of the larger commitments made included:

- facilitating a national discussion on the vision for the future of Scottish education, and appointing an independent facilitator to assist with the delivery of this work
- establishing a new qualifications and assessment body
- drawing together curriculum and assessment into a new national education body
- reviewing SQA's accreditation and regulation functions, particularly in relation to the scope of these functions, where these functions should sit in future, and how to ensure the independence of these regulatory functions
- continuing with the commitment to remove His Majesty's Inspectorate of Education from Education Scotland and establishing a new inspection body which is separate from a national education agency

4.2.5 Independent Review of Qualifications and Assessment

In October 2021, SG announced it would commission an independent review of qualifications and assessments. Emerita Professor Louise Hayward was appointed to lead the Review. The aim is to ensure that all senior phase learners have an enhanced and equal opportunity to demonstrate the width, depth and relevance of their learning.

The review adopted an inclusive approach that drew on the thinking of individuals and communities. It was supported by an Independent Review Group (IRG) with membership drawn from:

- those for whom qualifications matter most, individual learners and, as appropriate, their parents or carers
- those who are engaged in the design, development and delivery of qualifications, teachers, head teachers, examination boards, regulators, local policy makers and communities
- those who use qualifications – schools, colleges, employers and universities

The IRG was supported by research-based groups aligned to key aspects of the Review. The purpose of these groups was to ensure that the work of IRG was informed by the best available evidence. It was also supported by 13 Collaborative Community Groups (CCGs). These CCGs act as a link to a wide range of

communities and will ensure an inclusive and participatory approach, with a particular focus on people whose voices are seldom heard in policy discussions.

In March 2023, an interim report (Scottish Government, 2023c) set out a potential new approach to qualifications and assessment. This included:

- a significant reduction in external assessment, including examinations, across the senior phase
- better and more clearly defined integration of academic and vocational qualifications
- a broadening of the evidence collected during the Senior Phase to include a wider range of skills and other competencies
- developing an enhanced digital infrastructure that will enable the use of digital assessments and the creation of a digital profile that will help learners gather and present their achievements consistently no matter the educational setting
- introducing a Senior Phase Leaving Certificate which will draw together more aspects of learning into a single form

The proposal underwent further consultation and a final report outlining the recommendations of the IRG was published in June 2023 (Scottish Government, 2023f). The recommendations included:

- adopt the Scottish Diploma of Achievement (SDA) as the new approach to qualifications and assessment which will contain three elements
 - Programmes of Learning - in-depth study of individual areas of the curriculum, subjects and vocational, technical and professional qualifications
 - Project Learning - opportunities for learners to demonstrate how they can use knowledge from across subjects/technical and professional areas to tackle challenges
 - Personal Pathway – opportunities for learners to reflect on their broader achievement beyond acquisition of subject or technical, vocational and professional qualifications
- create national plans to make the SDA a reality for all learners in all educational setting and sustain local and national standards for qualifications and assessment
- make time available for staff in Education to access professional learning, to collaborate and to engage with the changes being proposed
- work in partnership with the IRG, CCGs, learners, teachers, policy and research communities during the design, development, delivery and review of the new qualifications and assessment
- encourage colleges, employers and universities to use the wider evidence base provided by the SDA as the basis of decisions they take when selecting students or employees
- require national monitoring and accountability systems to gather information on the breadth of achievements recognised within the SDA

4.2.6 National Discussion on education

In September 2022, SG launched a “national discussion” aimed at developing a collective vision for the future of Scottish education informed by the views of people across Scotland. The Discussion was co-convened by the Scottish Government and the Convention of Scottish Local Authorities (CoSLA). It was facilitated by two independent facilitators, Professor Carol Campbell and Professor Alma Harris, who are members of the International Council of Education Advisors.

Several channels through which children, young people, parents and other educational stakeholders could give their views were offered, including a public consultation, social media, school led discussions and public events. The final report was published in May 2023 (Scottish Government, 2023d) and set out a vision, values and a call to action.

The vision statement for the future of Scottish Education is that all learners in Scotland matter. The vision statement outlines the following:

- the Scottish education system values collaborative partnerships that engage all learners, the people who work within and with the education system, and parents and carers
- all learners are supported in inclusive learning environments which are safe, welcoming, caring, and proactively address any barriers to learning and inequities that exist or arise
- each child and young person in Scotland has high-quality learning experiences which respect their rights and represents the diversity of who they are and the communities they live in
- each child and young person receives great teaching, resources, and support for joyful learning that builds their confidence and equips them to be successful and to contribute in their life, work, and world

The vision is underpinned by a call for action. The key message is “educating our future” which reinstates the need for an education system that will: support the rights of all children and young people; offer quality teaching and learning that suits the different needs of each learner; and help learners their goals and meet the needs of a changing world.

5. Supporting research infrastructure and independent research

5.1 Research Funding

In the OECD (2015, p. 23) report, CfE was described as an “ambitious undertaking” which required robust research and evaluation to monitor its implementation and impact. Consequently, the report called for objective and credible research and evaluation, noting it would be beneficial for Scotland’s education system for this to be conducted by independent and non-government researchers “working at some arm’s length from political decision-making...”.

However, it was argued in the 2016 stakeholder consultation, that existing research funding processes were restricting innovative and topical research in education.

More specifically, university researchers stressed the need for longer term funding to develop research expertise.

Typically, government funded education research is procured via competitive tendering on Public Contracts Scotland and is designed to respond to immediate policy needs. Government research contracts can, thus, be won by both university researchers and independent research agencies. At a meeting of the Research Strategy's Academic Reference Group (ARG) in November 2021, we delivered a session on the procurement of research and the role of government social researchers. The aim was to increase awareness among university researchers of SG procurement processes so as to better enable them to tender for government funding.

In the Research Strategy, we committed to supporting self-directed research by universities and non-governmental institutions. This was primarily to be achieved by increased opportunities for research funding. The strategy suggested this may be achieved via existing mechanisms, for example the Scottish Funding Council, or by challenge funds whereby organisations are encouraged to bid for grants within broad parameters.

5.1.1 SCDE position paper

In October 2017, on behalf of the Scottish Council of Deans of Education (SCDE) Professors Chris Chapman (University of Glasgow), Mark Priestley (University of Stirling) and Rowena Arshad (University of Edinburgh) submitted a position paper, "*Strengthening the role of research in informing policy and practice*" (SCDE, 2017), in response to the Research Strategy. This paper proposed government support to strengthen the research and networking capacity of educational researchers in Scottish universities.

The paper presented two themes. Firstly, that the availability of funding has inhibited collaborative working due to the pressure on university researchers to compete with one another for funding. The paper suggested that this has led to significant evidence gaps relating to key educational policy issues, such as the attainment gap and the impact of the curriculum on the educational outcomes of young people. Secondly, the paper notes that a large proportion of government funding is allocated, following competitive tendering, to independent research agencies and is targeted at smaller studies designed to evaluate specific initiatives rather than at larger scale research projects that gain a deeper understanding of educational issues.

Nonetheless, university researchers have told us they can sometimes be hesitant to bid for research contracts. Feedback from university stakeholders suggests that the reason for this is threefold. Firstly, due to the fast paced nature of policy delivery and development (often connected to annual Programme for Government commitments and/or delivery within the financial year), it is not always possible for university researchers to reconcile project and procurement timescales with their own availability and capacity. Secondly, university researchers believe they are less commercially competitive, with research agencies able to "undercut" universities (see, SCDE, 2017, p. 3). Thirdly, university researchers have commented that the

procurement process is lengthy and they are reluctant to earmark time to develop a bid which may not be successful.

Our approach to commissioning research is governed by SG's procurement strategy (Scottish Government 2022d) which aims to use our collective spending power to deliver sustainable and inclusive economic growth. Among the strategic aims is to use public procurement as a means to drive wellbeing by creating quality employment and skills and providing opportunities for Scottish small and medium-sized enterprises (SME), third sector and supported businesses to bid for public contracts and to participate in public sector supply chains. The majority of Scotland's independent research agencies are SMEs and we are committed to supporting opportunities for them to bid for research contracts.

In accordance with [regulation 76\(10\) of The Public Contracts \(Scotland\) Regulations](#), contracts must be awarded on the basis of both quality and price. When bidding for research contracts, suppliers are typically expected to demonstrate: their understanding of the policy context; a sound methodological and ethical approach; their ability to meet delivery timescales; a robust procedures for risk management and data protection; and, importantly, that they hold the skills, experience and qualifications to carry out the work. We are confident, therefore, that commissioned research, whether delivered by universities or research agencies, is always carried out by skilled, experienced researchers with robust social research and policy knowledge. What is more, the quality of bids carries far greater weight than the proposed cost of delivering the contract.

The SCDE paper underlined the benefits of university led research – primarily, subject and methodological expertise as well as a greater understanding of the underlying causal mechanisms that shape educational outcomes. The paper, thus, proposed the establishment of several educational research networks which would bring together expertise from across Scottish universities and facilitate more effective and systematic working. The paper recommended that we consider establishing a funding stream to support this activity.

5.1.2 Scottish Coalition for Educational Research

The approach set out in SCDE paper received ministerial support and Professor Mark Priestley (University of Stirling), Professor Rowena Arshad (University of Edinburgh), Professor Cristina Iannelli (University of Edinburgh) and Professor Chris Chapman (University of Glasgow) developed a proposal for the aforementioned research networks. The networks would be supported by Scottish Government grant funding.

In June 2019, a proposal was submitted, on behalf of SCDE, to establish a multi-year grant funded programme of educational research to be known as the Scottish Coalition for Educational Research (SCER). Funding for SCER was provisionally approved in 2020, however, the project was subsequently paused due to immediate changes to analytical and budget priorities necessitated by the COVID-19 pandemic. The development of the project resumed in July 2021, when the proposal was revised to account for pandemic related changes in the educational research landscape.

In Spring 2022, we revisited the proposal, however grant could not be issued at this point due to the [Resource Spending Review](#) and a Government wide pause on issuing new grant letters.

By Spring 2023, it was evident that the volatile economic and fiscal context would require a significant realignment of Ministerial priorities, particularly following the resolution of the teachers' pay dispute and to support the delivery of key commitments around free school meals, attainment and digital devices. A number of difficult decisions, thus, had to be made about the education portfolio budget, over the remainder of the parliamentary term, to take account of the challenges that the Scottish economy faces. As part of this, a decision was made that funding for SCER would not proceed.

5.1.3 EU Research and Development funds

The Research Strategy was published after the 2016 United Kingdom European Union (EU) membership referendum. The result of the referendum instigated great uncertainty about the future of research funding owing to the potential withdrawal of EU Research and Development funds, namely Horizon Europe. Scotland won around €755 million in Horizon 2020, the predecessor to Horizon Europe, over 2014-2020. This made Scotland one of the most successful nations per head in the programme during this period. In the Research Strategy, we suggested that an options appraisal may be progressed to consider the way forward for educational research funding, post EU exit. While we did not progress with this suggestion, a number of developments have since happened.

In December 2020, the EU-UK Trade and Cooperation Agreement included provisions for the UK to become an 'associate' member of Horizon Europe. However, due to ongoing discussions between the UK and EU on how to implement a border between the Republic of Ireland and Northern Ireland, the UK's association is yet to be finalised.

In June 2021, SG launched the 'Saltire Research Awards' – a £3 million scheme aimed at repairing research links with the EU following the UK's exit from the EU. The fund, delivered via the Scottish Funding Council and Royal Society of Edinburgh, is open to all research disciplines including arts, humanities and social sciences and multidisciplinary projects. Further support was announced by the UK government in November 2021 in the form of the 'Horizon Europe guarantee' which provides funding to researchers and innovators unable to receive their Horizon Europe funding while the UK is in the process of associating to the programme.

In July 2022, the UK Government set out their longer term plan for a Horizon Europe alternative in their paper '*Supporting UK R&D and collaborative research beyond European programmes*' (Department for Business, Energy & Industrial Strategy, 2022). The paper covers details of the transitional measures proposed to provide stability and continuity of funding for UK researchers and businesses, including:

- the Horizon Europe Guarantee
- funding for successful, in-flight applications
- uplifts to existing talent programmes
- uplifts to innovation support
- funding for research institutions most affected by the loss of Horizon Europe's talent funding
- continued third country participation in Horizon Europe

In April 2023, a further UK Government publication, '*Pioneer - Global Science for Global Good - A UK Prospectus for Opportunities Beyond Horizon Europe*' (Department for Science, Innovation and Technology, 2023), set out a long-term, prospectus programme to support research and innovation in the UK should association to the Horizon Europe scheme not prove possible.

5.2 Engagement with the academic research community

The OECD (2015) report proposed greater involvement of university researchers in the development and evaluation of education policy and practice. The report noted that a 'strong research and evaluation system requires researchers, those with specialist analytical capacity, policy-makers and practitioners to work together' (p. 167) and that 'the research community could make an invaluable contribution, including on helping to design schooling so as to engage those most at risk of disengagement. (p. 11). In the 2016 stakeholder consultation, respondents suggested policy should be developed with greater consideration of research findings.

In the Research Strategy, we committed to hosting engagement events with the academic community to ensure that policy priorities more effectively inform research and to help ensure that policy development is more effectively informed by research. In 2022, we launched the 'Education Research Seminar Series'- a monthly online seminar series which offers academic education researchers the opportunity to present their research to policymakers. These have facilitated engagement with research across government by bringing up to date education research on key policy areas to colleagues and fostering direct engagement between researchers and policy teams. The series covered a range of policy relevant themes, including additional support needs, educational equity, digital literacy, curriculum and social inequalities. It has prompted discussion and further contact between academics and policymakers. The series will run again in 2023.

Members of the ARG have spoken positively about the introduction of the seminar series. They feel it has been helpful in developing a more collegial relationship between SG and university researchers and value it as a channel through which they can present directly to policy makers. Policy officials reported that the seminar series has been interesting and valuable and has added to their understanding of their policy areas.

5.3 Building capacity for quantitative research

The 2016 stakeholder consultation results indicated that building the capacity of researchers to undertake quantitative research should be a priority for universities.

Respondents identified a skills gap in the use of advanced quantitative analysis which could be addressed via greater cross disciplinary collaboration. In the Research Strategy, we recognised that building analytical capacity across the education research community was needed. The Research Strategy stated that we would consider the ways in which university researchers could be supported to build their familiarity with our education datasets and we committed to better use of existing datasets and easing access to SG data.

In 2018, we undertook a small scoping study to identify issues relating to data access and capacity to undertake quantitative analysis. Responses were received from academics from the universities of Stirling (Faculty of Social Sciences), Glasgow (School of Education) and Edinburgh (Moray House). Respondents pointed to a number of challenges with data access, particularly in relation to the complexity and length of time taken to access data and link datasets.

In recent years there have been a number of changes to how researchers can access education data. We have made a range of education datasets available on Administrative Data Research (ADR) Scotland. This includes the Pupil Census, leaver destinations and attainment, and qualifications. We publish a range of statistical datasets on our [Open Data Platform](#) and bespoke requests for data can be submitted via an application to the [Statistics Public Benefit and Privacy Panel](#) without also needing to go through the Education Analytical Services Data Access Panel. We are also now part of the [SafePod Network](#) which provides researchers with standardised safe settings (SafePods) across the UK for data that requires secure access for research.

In 2021, we delivered a session on education datasets, data access and data linkage to university researchers who sit on the ARG. The session covered how to access data on Research Data Scotland and ADR Scotland and the process for accessing the data we hold. It also provided an overview of existing datasets. This session was received positively by the ARG, however, in our recent consultation, it was noted that further work is needed to continue improvements to data access. Similar feedback was received from researchers using SG data. In their research – which uses PISA data to investigate the role of family and schools factors in inequalities in science education - Shapira et al. (2023, p. 47) noted they experienced several delays due to issues accessing data. They, therefore, made several recommendations for improving data access, including reducing the time taken to access data and ensuring university researchers are aware of the datasets available to them. Improving data access will, thus, remain a priority going forward.

6. System performance and “what works”

There was broad consensus, in the 2016 stakeholder consultation, that greater focus on exploring “what works” in education was needed. This was considered to be one of the ways in which the goals for the NIF could be attained and was deemed a priority for the Research Strategy. Though some respondents advocated for better use of international evidence, the need for further evidence on the specific Scottish context was emphasised. In the Research Strategy, it was noted that, given ongoing educational reform, there is a need to maintain and keep an up to date and comprehensive evidence base on “what works”.

The focus on “what works”, however, has been identified as an area for further work in the Research Strategy. In our recent stakeholder consultation, members of the ARG noted the volume of statistical data that is used in the development and evaluation of policies and interventions. They underlined the value qualitative research can add to the education evidence base and would welcome further information on how qualitative data and experiential data are used within the policy making process.

6.1 Assessment of pupil progress

Two of the main drivers of educational improvement identified in the 2016 NIF were the assessment of pupil progress and the use of performance information. It was thought that this evidence could be used to assess the effectiveness of educational practice and interventions and identify areas in which further improvement was needed.

As is noted in the Research Strategy, one way we measure pupil progress is via the collection of teacher professional judgement data. This is known as the Achievement of Curriculum for Excellence Levels (ACEL) – an annual data collection on all Primary 1, Primary 4, Primary 7 and S3 pupils in publicly funded mainstream schools, and all pupils based in publicly funded special schools/units. It measures national performance in the literacy organisers (that is, reading, writing, listening and talking) and numeracy, and reports on the percentage of pupils who have achieved the expected CfE level relevant to their stage, based on teacher professional judgements. This data was not collected in 2019/20 due to the closure of schools resulting from the COVID-19 pandemic. Data for S3 and special school pupils was not collected in 2020/21 due to other pressures on these schools, including implementation of the SQA Alternative Certification Model, which was used to award National 5s, Highers and Advanced Highers in 2021.

The Research Strategy also identified that our existing participation in PISA was providing valuable data on Scotland’s educational performance. PISA measures the performance of Scotland’s 15 year olds in reading, mathematics and science, against that of other countries. The programme runs every three years across all OECD members and a variety of partner countries. Scotland has participated in all seven surveys since the first wave of testing in 2000. That said, PISA provides us with baseline data that precedes CfE and has been a constant throughout CfE’s development and implementation.

In the Research Strategy, it was also stated that we would consider whether to participate in other international comparative studies, for example those led by the International Association for the Evaluation of Educational Achievement. In April 2023, in the First Minister’s vision for Scotland - *Equality, opportunity, community: New leadership - A fresh start* (2023a) – a commitment was made to increase the provision of internationally comparable data on Scotland’s education performance by re-joining the Trends in International Mathematics and Science (TIMSS) and Progress in International Reading Literacy (PIRLS) studies.

6.2 Attainment Gap

One of the key aims of the 2016 NIF was to ensure every child has the same opportunity to succeed, with a particular focus on closing the poverty-related attainment gap. In the 2016 stakeholder consultation, an agreed research priority was to focus on exploring equality and equity. Respondents stressed the need to develop a greater understanding of how the attainment gap between the poorest and richest can be narrowed in the Scottish context. The Research Strategy made several commitments to undertaking research that would provide the evidence needed to support progress towards closing the attainment gap. Namely, there was a commitment to carrying out research which would identify effective practice and interventions for raising attainment of the most disadvantaged pupils.

6.2.1 Evaluation of the Attainment Scotland Fund

In the Research Strategy, we committed to ongoing evaluation of the Scottish Attainment Challenge (SAC). The First Minister launched SAC in February 2015. Its aim is to help achieve equity in educational outcomes with a particular focus on closing the poverty-related attainment gap and focuses on improvement activity in literacy, numeracy and health and wellbeing. The Attainment Scotland Fund (ASF) is a targeted initiative focused on supporting pupils in the local authorities with the highest concentrations of deprivation.

A programme of evaluation of the ASF has been ongoing since the inception of the SAC and has reported on an annual, retrospective basis. An initial report on Year 1 and 2 (from 2015-2017) of the fund was published in 2017, with annual evaluation reports published from 2018 to 2022.

The ASF Year 6 Evaluation Report (Scottish Government, 2022e) covered the school year 2020/21. As in previous years, multiple evidence sources were used in preparing the ASF Year 6 report. This included:

- ASF Headteacher Survey (Scottish Government, 2022f)
- ASF Local Authority Survey 2021
- Administrative data (financial information)
- Challenge Authority and Schools Programme Progress Reports
- Quantitative data on attainment and wellbeing

The evaluation has been supported by an evaluation strategy. Published in 2018 to cover Year 3 and 4 of the Fund, the evaluation strategy has been reviewed annually for Year 5 (2020-21) and Year 6 (2022-22) to ensure that the evaluation remains responsive to emerging developments both within the ASF and wider contextual factors. For example, the evaluation was adapted to take account of the impact of COVID-19 in Year 5.

The refreshed SAC was launched in March 2022, introducing a new mission to “use education to improve outcomes for children and young people impacted by poverty, with a focus on tackling the poverty-related attainment gap” and a number of changes to the programme at national, regional and local level. This includes the introduction of Strategic Equity Funding (SEF), replacing Challenge Authority and

Schools Programme Funding, and Local Stretch Aims through the [Framework for Recovery and Accelerating Progress](#).

As part of the launch of the refreshed SAC, a refreshed programme logic model, with revised inputs, activities and outcomes linked to the new mission was developed in collaboration with a range of stakeholders – '[Tackling the Poverty-Related Attainment Gap – Our Theory of Change The Scottish Attainment Challenge Logic Model](#)'. A comprehensive review of the ASF Evaluation Strategy was also conducted to ensure the evaluation continues to assess progress within the context of the new mission and offers insights into the operation of the refreshed programme. We published a new Evaluation Strategy for the Attainment Scotland Fund 2022-2026 in November 2022 (Scottish Government, 2022g) which is underpinned by the revised logic model and builds on learning from the previous evaluation. This was supplemented by a detailed analytical plan, published in February 2023 (Scottish Government, 2023e).

6.2.2 Scottish Council of Deans of Education Attainment Challenge Project

In 2018, the SCDE were given SAC funding to establish a three year research programme involving representatives of the eight Schools of Education providing initial teacher education (ITE) across Scotland at that time. The broad aim of the projects was to research how the sector might better prepare early career teachers to work more effectively to improve literacy and numeracy attainment and health and wellbeing outcomes in schools for socio-economically disadvantaged children and young people.

The programme included a four phase collaborative project which looked at:

- how teacher education institutions collectively support early career practitioners to work effectively with pupils from disadvantaged backgrounds
- the effectiveness of current practice
- how teacher education can be improved so early career teachers are more effective in improving the engagement and attainment of pupils
- what other practice or research might assist be needed

Additionally, each of the eight participating schools of education conducted a research project reflecting their particular context and priorities. These reports have now been published on the [SCDE website](#).

6.2.3 Bespoke individual level background index

In the Research Strategy, a commitment was made to conduct a study on the long-term development of a bespoke index of social background which will create individual-level (as opposed to area-based) data involving consideration of the data collected at school registration. It was thought that a bespoke index would enable more targeted and effective intervention for disadvantaged pupils, and also better take into account disadvantage of those who do not live in deprived areas.

Work was done to examine the feasibility of developing a bespoke index. Department for Work and Pensions (DWP) social security data and, in particular,

their Children in Low Income Families dataset, were identified as being key to developing this index. Work is being undertaken to explore the practicality of accessing the individual-level data from DWP that is needed to develop the index.

6.3 Pupil health, wellbeing and behaviour

CfE goes beyond prioritising the development of numeracy and literacy skills, with health and wellbeing being identified as equally important to children and young people's educational outcomes. One of the key priorities of the 2016 NIF was the improvement in children and young people's health and wellbeing. In the 2016 stakeholder engagement, respondents identified a need to more fully evaluate the health and wellbeing of pupils by defining more clear measurements and establishing a robust source of regular data collection. They suggested that there was currently a too great a focus on evaluating CfE in terms of academic attainment (particularly reference to literacy and numeracy). In the Research Strategy, we made a commitment to developing improved data on health and wellbeing and ensuring that new data is gathered on social background and the non-attainment aspects of CfE.

6.3.1 Health and wellbeing census

The first Health and Wellbeing (HWB) census was implemented in 2021-22. The approach to the census was informed by the Edinburgh Voluntary Organisations' Council's (EVOC) 2015 options appraisal, *'The future of children and young people's surveys in Scotland: An options appraisal'*. The appraisal (EVOC, 2015) recommended a single survey to gather the range of data on children and young people's health and wellbeing, to provide local level data primarily in order to drive improvement and to help with local service planning.

The HWB Census took a new approach, with central government working collaboratively with local authorities to support them to collect the data they required to meet their duties set out in legislation. In collaboration with research experts, Public Health Scotland, local authorities and other experts, we developed a robust set of questionnaires local authorities can use, and are providing a technical/ digital platform for local authorities to use to collect their own data.

The findings were published in 2023 (Scottish Government, 2023b) and the datasets are available for a wide range of users to undertake analysis. Following this first collection, a review of the HWB census will highlight good practice and areas for improvement. This will include a review of the approach, frequency, questionnaire content, and the data collection processes. Engagement with children and young people, parents/carers and data users will feed into identifying improvements.

6.3.2 Behaviour in Scottish Schools Research

In the Research Strategy, we committed to continuing research into behaviour in Scottish schools. Behaviour in Scottish Schools Research (BISSR) has been ongoing since 2006, with surveys also taking place in 2009 and 2012. The aim of the research is to provide a clear and robust picture of behaviour in publicly-funded

mainstream schools and of current policy and practice in relation to managing behaviour.

A new BISSR survey was commissioned in early 2020. However, due to the impact of the COVID-19 pandemic, particularly school building closures, the contract was not awarded until September 2022. Fieldwork began in early 2023, with findings due later in 2023. 2022/23 research will provide trend information where possible compared to previous surveys.

6.4 Parental engagement

The 2016 NIF identifies parental engagement as one of the key drivers of improvement as it is considered an important factor in ensuring successful outcomes for children. The NIF committed to improving and increasing ways in which parents and families can engage with teachers and partners to support their children and increase the voice of parents in leading improvements with schools. This was reiterated in the Research Strategy.

In 2019, the first Parental Involvement and Engagement (PIE) Census was launched, asking parents and carers about the involvement and engagement they have with their children's school. The model of the PIE census is the same as that for the HWB census, whereby it is local authority data collection, primarily to meet local authority data needs. We have worked collaboratively to develop a questionnaire and provide an online platform for data collection. Local authorities may use alternative questions and platforms, to meet their needs. The data is shared with us for national analysis.

Local authorities undertook the 2022 PIE census in January-June 2022. The questionnaire was adapted based on feedback from local authorities on the 2019 Census. Working with local authorities, changes were minimised to ensure consistency over time for monitoring purposes. Two new questions were added at the request of local authorities.

The analysis was published in December 2022 (Scottish Government, 2022h). This provides data from 2019 and 2022, spanning the period of the pandemic and the resulting impact on schools.

6.5 Senior Phase

The 2016 OECD report focused on the BGE phase of CfE (up to S4). CfE is divided into two phases: the Broad General Education and the Senior Phase. The Senior Phase lasts from S4 to S6 (approximately ages 15 to 18) and follows on from a young person's broad general education. Senior Phase enables young people to deepen their learning through both academic and vocational qualifications and a range of opportunities, such as work placements or volunteering. It supports them in moving on to their next stage, including college, employment, training or university. The option was, thus, left over to review the Senior Phase of CfE once the new National Qualifications were bedded in.

In 2018, we commissioned a survey of secondary school headteachers (Scottish Government, 2019b). The aim of the survey was to better understand how the Senior Phase was being implemented in secondary schools and to identify the factors that influence, support or constrain its implantation. The survey went out to head teachers in June 2019 and 45% of all headteachers (159 out of 357 Secondary Schools in Scotland) responded to the survey.

The survey found that most headteachers were confident in their ability to lead, design and implement the Senior Phase and felt they had sufficient autonomy to do so. They felt confident that their schools were providing a sufficient variety of learning pathways to meet the needs of all their young people across the Senior Phase. Nevertheless, headteachers were also experiencing a number of challenges, including timetabling pressures and availability of subject teachers.

In 2020, SG commissioned the OECD to carry out another review of how CfE was being designed and implemented in schools and to identify any areas for improvement. The OECD published its findings in June 2021 (OECD, 2021a) and sets out 12 recommendations and a number of actions that should be taken to strengthen CfE and tackle its ongoing implementation challenges. This included a recommendation to adapt the pedagogical and assessment practices and the structure of learning pathways in the Senior Phase to enhance learners' experience of upper-secondary education.

In a response to the OECD report (Scottish Government, 2021c), the Cabinet Secretary for Education and Skills accepted all twelve recommendations in full. As an initial response, the Cabinet Secretary announced the intention to replace SQA, Scotland's awarding and accreditation body, and consider a new specialist agency for both curriculum and assessment. The Cabinet Secretary appointed Professor Ken Muir to provide independent advice on the OECD's recommendations for structural and functional change to SQA and Education Scotland, including the delivery of the national curriculum, assessment, qualification and inspection functions.

Professor Muir's report included a recommendations to establish a new body, Qualifications Scotland, to take on the responsibility for the design and delivering of qualifications, the operation and certification of examinations, and the awarding of certificates (Scottish Government, 2022a). In 2022, a Qualifications and Assessment Independent Review Group (IRG) was established, led by Professor Louise Hayward. Professor Hayward has been appointed by the Cabinet Secretary to provide a report and recommendations, advising on the purpose and principles which should underpin any reform of national qualifications and assessment in the Senior Phase (see, Scottish Government, 2022b).

6.6 Workforce capacity

It was noted in the Research Strategy that evidence pointed to teachers lacking time to develop strategies to improve pupil performance based on research and data. It was suggested, therefore, that research on teaching capacity and workforce planning would be beneficial. There is no regular, nationally representative survey of the education workforce in schools and early learning centres in Scotland. This

represents a gap in our knowledge in relation to the views, experiences, needs, values and professional practice of the workforce. We, therefore, proposed a biannual survey of practitioners (Scottish School and Early Learning Workforce Survey) working in schools and early learning settings.

The purpose of the survey was to:

- present an opportunity to engage proactively to develop a robust, objective understanding of the workforce
- provide regular, robust data at a national and local authority level to feed into the policy making process
- provide insight into the impact of policies 'on the ground'
- provide baseline data on workforce wellbeing as Scotland moves to manage and recover from the ongoing COVID-19 pandemic.
- deliver an evidence base on workforce views akin to the outputs from the OECD's Teaching and Learning International Survey.

This project was paused in spring 2022 in light of the Resource Spending Review.

7. Empowering practitioners to produce and use evidence and data

In the 2016 NIF, it was noted that teachers, schools and partners need a clear, coherent, consistent set of evidence and data, locally and nationally, to help them to self-evaluate and plan further improvements to achieve excellence and equity for children and young people. However, it was argued, in the 2016 stakeholder consultation, that there are barriers to engaging educational practitioners with existing evidence, meaning that research does not always translate into practice.

In the Research Strategy, it was stated that we would support practitioners to be able to act on the findings of educational research and aim to foster greater communication between teachers and researchers. In our recent stakeholder consultation, stakeholders noted that one of the strengths of the Research Strategy was its recognition of the contribution research can make to supporting local authorities, schools, school leaders, and teachers in participating in, and using, research to improve education in Scotland. It was recognised, however, that more can be done across the education research community to build networks between policy, practitioners and researchers. Stakeholders, thus, recommended a focus, in any future iteration of the strategy, on improving mutually beneficial communication between those working in research, policy and practice contexts.

7.1 Using data in educational practice

A significant theme arising from the 2016 stakeholder consultation was the need to improve translation of education research into practice. It was stressed that educational practitioners need to develop the skills to generate, interpret and use data and research effectively. In our recent stakeholder consultation, the strategy was commended for its emphasis on developing mechanisms through which data and research can make their way into the daily practices of teachers and schools. It was argued that there has been growing awareness throughout the education

system – and particularly within local authorities – about the importance of using data to evaluate progress.

‘From my experience of engaging in research in partnership with local authorities, there appears to be a greater awareness of the importance of utilising data in evaluating progress within individual classrooms and schools.’ – ARG member

Stakeholders emphasised, however, that it is unclear whether we can attribute this improvement in data literacy directly to the strategy.

The Research Strategy pointed to our partnership with the Education Endowment Foundation (EEF). The EEF’s [‘Teaching and Learning Toolkit’](#) was identified as an effective means to support education practitioners to access and use evidence when making decisions about how to improve learning outcomes. The Toolkit summarises evidence on the impact of educational interventions that have already been tested in schools. In 2017, we partnered with the EEF to introduce a Scottish-specific version of the Toolkit. It aimed to provide teachers and schools with an accessible summary of international research on 34 different educational approaches. Each approach was summarised in terms of its average impact on learning, the strength of the supporting evidence, and the relative cost. The Toolkit was expected to help schools to better spend their Pupil Equity Funding to support disadvantaged pupils. The toolkit was launched in 2017 with a 3 year contract with the EEF. It was housed on the National Improvement Hub until the contract ended in March 2020.

In 2022, Education Scotland funded [Connect](#) to develop the [Equality and Equity Toolkit](#). Similar to the EEF toolkit, it provides accessible information and evidence about interventions previously used in schools and other settings to address educational inequalities. It has been designed to support practitioners in their practice and decision making by providing access to a range of evidence, research and practice, and by identifying the conditions contributing to success. The toolkit is underpinned by existing research and evidence, which will be reviewed and updated regularly.

The BGE Benchmarking Tool was launched in early 2018. The purpose of the tool is to enable local authorities and schools to compare their actual performance against CfE Levels in literacy and numeracy against a ‘comparator’ result for a group of pupils with similar characteristics. After the tool’s launch, workshops were held with all 32 local authorities and headteachers across Scotland. All teachers have had access to the benchmarking tool via Glow since June 2018. The tool has helped schools improve the quality of ACEL data and has encouraged schools to have collaborative improvement discussions with similar schools.

The BGE tool is usually updated in January each year. However, due to the COVID-19 pandemic, Achievement of Curriculum for Excellence Level (ACEL) data was not collected in 2019/20. As such, there was no update to the BGE tool in January 2021 for the 2019/20 cohort. Only primary ACEL data was collected in 2020/21. Accordingly, the most recent update in January 2022 included data only for Primary schools for the 2020/21 cohort. The next update in January 2023 will include all BGE stages (P1, P4, P7 and S3) again for the first time since January 2022.

7.2 Knowledge utilisation study

To support the delivery of our objectives to empower practitioners to better use data, we committed to conducting research which would explore how educational practitioners engage with research and the factors that support and hinder ability to make best use of evidence. In 2018, a “knowledge utilisation study” (Scottish Government, 2019c) was undertaken. This research comprised three strands: a literature review; a qualitative strand that gathered information from teachers, head teachers, attainment advisors and Regional Improvement Collaboratives leads across six local authorities; and a survey of 1,000 practitioners across Scotland.

The study identified several key issues for consideration, including:

- teachers having insufficient time to use data and evidence, thus, identifying a need to consider how to balance workload with ambitions to encourage greater use of evidence in practice
- the importance of establishing collaborative networks between academics, teachers and other educational practitioners
- using key actors, such as headteachers, attainment advisors and educational psychologists, to transfer knowledge to teachers
- investing in career-long professional training for practitioners
- improving engagement with research and evidence by supporting collaborative practitioner research within and across schools
- ensuring research findings are shared with practitioners in an accessible format

8. Governance

8.1 National Advisory Group and Academic Reference Group

The Research Strategy sets out the governance structure that will be followed. Internally, progress on the strategy is reported to the NIF programme board. There are then two external facing advisory groups who oversee the strategy – the National Advisory Group (NAG) and the Academic Reference Group (ARG).

The NAG was established to feed into the development and evolution of the strategy. This group is made up of organisations who have a direct role in evaluation and research. The membership includes: Scottish Government, Education Scotland, SQA, Association of Directors of Education in Scotland, the General Teaching Council for Scotland, UK Research and Innovation/ Economic and Social Research Council, Scottish Council of Deans of Education, Association of Scottish Principal Educational Psychologists and Scottish Educational Research Association (as a direct link to the academic community).

The group’s role is outlined in the strategy as:

- commenting on the strategy and suggesting further topics for investigation
- overseeing an on-going engagement process with stakeholders
- providing input into progress reports on the strategy for Ministers

- identifying and, where necessary, agreeing who should commission, delivery partners for the strategy, for example, research projects, data collections
- providing input on dissemination
- working closely with groups with similar interests, such as Education Scotland's Knowledge into Action Strategic Stakeholder Group to ensure effective synergy and minimise duplication
- providing an overview of existing activity across member organisations and identifying gaps as they emerge
- help to ensure that the strategy is delivered in a way which makes most use of existing relationships and complementary agenda across stakeholders

The Academic Reference Group was established to offer advice and guidance on the future direction of the strategy. The group includes representation from the Scottish Government, Education Scotland, the Royal Society of Edinburgh's (RSE) Education Committee, and all eleven universities represented by the Scottish Council of Deans of Education. In our recent consultation with members, it was suggested that we review how members are selected. Specifically, it was noted that greater diversity and representation within the membership of the ARG is needed to ensure there are opportunities for a range of academic voices to be heard. Suggestions were also made about opening up the membership to a wider range of organisations, such as the British Psychological Society.

Originally it was envisaged that both the NAG and ARG would meet annually. However, in response to member feedback the NAG now meets three times per year and the ARG meets twice yearly, allowing for a better level of engagement. Meetings are chaired by the Deputy Director of Education Analytical Services, Scottish Government.

The governance of the Research Strategy has been commented on by some academic researchers and institutions (see, for example, RSE, 2017; Humes, 2020; Holligan, forthcoming). This commentary has largely focused on the role of the NAG and ARG, with questions asked regarding the amount of influence the groups have in shaping the direction of government research and the extent to which the groups foster collaboration.

This commentary somewhat reflects the feedback received from NAG and ARG members as part of the review process. Though members were positive about the increasingly collegial relationships between SG, university researchers and other educational bodies and stakeholders, it was noted that that this has largely been confined to meetings of the NAG and ARG – that is, that collaborative action beyond these meetings has been less evident. This appears to be largely due to some uncertainty around the roles of the NAG and ARG members and the extent to which stakeholders should be involved in the delivery of the strategy.

'There is significant value in having a Research Strategy for Scottish Education. That value could be enhanced by a clearer understanding of the purpose of the strategy and the roles of different stakeholders. At present, the document appears to function primarily as a research plan for the Scottish Government. There is merit in producing such a document, both in raising awareness of forthcoming work, and in ensuring that the

Scottish Government takes a coherent approach to education research, but greater involvement from across the sector would be beneficial.’ – NAG member

Members of the NAG representing SQA and Education Scotland, for example, stated that they were unsure whether they are considered stakeholders or partners in delivering the strategy.

‘It is not immediately apparent whether there is a role for non-departmental public bodies such as SQA or Education Scotland beyond participation in the National Advisory Group. These organisations will want to develop their own research strategies and plans, and it is likely that not everything in those plans will fit into the wider research strategy for Scottish education.’ – NAG member

Both SQA and Education Scotland carry out and commission their own research, albeit not on a similar scale as SG. There is a question, therefore, of whether the Research Strategy should embody the relevant research plans and activities across all members of the NAG. Similarly, members of the ARG said that they are keen to draw connections between the Research Strategy and the strategies being developed in their respective university departments. Members suggested, therefore, that any future strategy clearly sets out who is responsible for ensuring its delivery and what the roles of NAG and ARG members will be in supporting its delivery.

Members of both the NAG and ARG saw it as their role to disseminate the strategy within their own organisations and in the education landscape more broadly. It was recognised that, within their respective organisations, awareness of the strategy could be wider. That said, all stakeholders were in agreement about the need for a clearer dissemination plan for any future iteration of the Research Strategy. Members of the NAG and ARG suggested that a dissemination plan needs to be accompanied by funding to support strategy delivery and stronger senior leadership in championing the strategy, both within SG and the organisations represented on the NAG and ARG.

8.2 Monitoring and reporting on progress

In the Research Strategy, we stated that an evaluation of the strategy would take place after five years which would provide recommendations for improvements to any future iteration of the strategy. Our recent consultation with stakeholders, however, has shown there is appetite for more frequent reporting on actions taken to achieve the strategy’s objectives. Members of the NAG and ARG explained that they would like more frequent updates on the various research activities and outputs that are achieved over the duration of the strategy, with a greater focus on their impact.

Members also stated that the awareness of the strategy could be further improved if there were more frequent reviews of progress and if strategy outputs were more effectively disseminated. It was, thus, recommended that any future iteration of the Research Strategy should include clearer targets with reviews on progress and impact conducted annually or biannually.

8.3 Scope of the Research Strategy

In the Research Strategy, we also stated that we would consider the scope of the strategy when conducting the five year review. It was noted that the current research strategy is primarily focused on the work that is being conducted in schools and school age children. However, it was suggested that this could be extended to encompass the full educational journey in Scotland.

Members of the NAG were in agreement that the scope of the research strategy could be extended beyond school age education to include early years and particularly post-18 to help understand transition to further education, higher education and the workplace. The ARG recommended that any future iteration of the strategy should be more broadly focused across all sectors and include early learning and Community Learning and Development (CLD).

9. The future of the Research Strategy

Based on the findings of the review, we have identified several actions which may be considered for inclusion in any future iteration of the Research Strategy.

9.1 Areas of research interest

- Supporting evidence based policy making and evaluation
 - a. Scottish education is undergoing a programme of reform and we are likely to see some significant changes over the duration of the next Research Strategy. Educational reform will necessitate a robust evidence base, not only in the development stage, but in terms of ongoing monitoring and evaluation of the outcomes and impact. In our recent consultation, both internal and external stakeholders were in agreement that education reform will be a key area of research interest for the next strategy. Some respondents, thus, questioned whether we should develop a new strategy when the shape and nature of education reform is still unknown. Rather, it was suggested that the strategy be delayed to ensure it reflects the new landscape of educational organisations. However, the importance of maintaining relationships with stakeholders from across the educational research community was noted.
 - b. Beyond education reform, several other areas of research interest were noted during the consultation with stakeholders. These can roughly be broken down into three areas: evaluation of policies and interventions; educational inequalities (including, the longer term impact of COVID-19, prevention and early intervention, health and wellbeing and additional support needs); and educational practice (including, new technologies, pedagogical approaches and educational transitions). Members of the ARG, specifically, also argued for greater use of qualitative sociological and philosophical studies to ensure that policy development and evaluation is not only based on quantitative data.

9.2 Supporting independent research and research procurement

- Supporting opportunities, for both research providers and universities, to bid for education research contracts.
 - a. Independent research providers are uniquely set up to deliver rapid, large scale, high volume data collection. The strength of university researchers lies in their meaningful, scholarly and contextualised analysis of that data. There is value, therefore, in encouraging consortium bids in which universities and research providers come together to deliver prompt and academically robust research. This may go some way to reducing the twin burden of the lengthy procurement process and capacity to deliver.
 - b. It is important that we have a good overview of Scotland’s educational researchers, including early career researchers, and their research interests and specialisms. This will ensure that we can invite and/or notify researchers of relevant procurement opportunities. It is important therefore, that we encouraged interested researchers to be register with the Public Contracts Scotland platform.
 - c. We should carefully consider the process by which we evaluate bids for research contracts with aim to reduce the time burden procurement can place on interested suppliers. This may include introducing word or page limits, ensuring that quality questions are relevant and proportionate to the ask of each contract, and providing sufficient time for bids to be developed.

- Embedding independent research in the policy development process
 - a. When developing policy we must draw on a range of evidence, including statistics, government research and independent research led by universities. Our engagement with policy officials has indicated that academic research could be made more accessible. While the Education Research Seminar Series goes someway to addressing this, we should consider additional ways of disseminating academic research in a policy ready format.

- Continuing to improve access to SG education datasets
 - a. We should provide clear information on the education datasets that are currently available to researchers and how these datasets can be accessed.
 - b. We should also set out actions for how we intend to improve data access. This may include: issuing clear guidance on timescales for data access requests; increasing the number of datasets available on ADR and our open data platform over the duration of the next strategy; and promoting available datasets to researchers across the education research community.

9.3 Supporting the use of evidence in educational practice

- Making evidence accessible to educational practitioners

- a. We need to ensure that we develop clear plans for the dissemination of our research publications to ensure that they are reaching the practitioners who are delivering education. This will necessitate some consideration of how our research can be shared with practitioners in an accessible and useful format. We should also consider how we can better engage with actors, such as headteachers, attainment advisors and educational psychologists, who have been identified as key routes for knowledge exchange with teachers.
- b. Education research networks, including the NAG and ARG, are key routes for the dissemination of education research. We should consider how practitioners can be represented in these groups. We will also look to participate in any existing or future collaborative networks between researchers, teachers and other educational practitioners.

9.4 Governance

- Reviewing the remit of the Academic Reference Group and National Advisory Group
 - a. The ARG and NAG have been successful in building good relationships with educational stakeholders and opening constructive channels for discussion. However, members are uncertain about their role in governing the Research Strategy and their responsibilities for its delivery. We need to develop a clearer description of the purpose of these groups that sets out the remit, roles and responsibilities of its members.
 - b. We will relook at the membership of the groups to ensure: that all key external stakeholder organisations and bodies are represented; there is representation from across the range of SG analytical and policy units working in education, including senior leaders; and, in the case of the ARG, that opportunities to participate are extended to early career researchers, researchers from across a range of disciplines, and researchers from underrepresented communities.

9.5 Format and content of the Research Strategy

- Clearly defining the scope of the Research Strategy
 - a. The title of the current strategy – A Research Strategy for Scottish Education – suggests that its scope extends across all stages of education. Rather, the strategy is focused on research on school-age education. In any future iterations of the strategy, we will consider the scope and ensure its title better reflects its focus.

9.6 Dissemination

- Developing a dissemination plan

- a. The visibility of the Research Strategy has been limited by the lack of a clear dissemination plan. More can be done to raise the profile of the strategy, both internally and externally. Any future iteration of the strategy should be accompanied by a dissemination plan which sets out how we will keep stakeholders engaged.
- b. A dissemination plan should also consider how we will disseminate the outputs of our research and research activities to different audiences, including policy officials, the education research community, educational practitioners and learners themselves.

10. List of acronyms

- ACEL - Achievement of Curriculum for Excellence Levels
- ADR – Administrative Data Research
- ARG – Academic Reference Group
- ASF - Attainment Scotland Fund
- BGE – Broad General Education
- BISSR - Behaviour in Scottish Schools Research
- CCG - Collaborative Community Group
- CfE – Curriculum for Excellence
- CoSLA - Convention of Scottish Local Authorities
- COVID-19 - Coronavirus
- DWP - Department for Work and Pensions
- EEF - Education Endowment Foundation
- EU – European Union
- EVOC - Edinburgh Voluntary Organisations' Council
- HWB – Health and Wellbeing
- IRG – Independent Review Group
- ITE - Initial Teacher Education
- NAG – National Advisory Group
- NIF – National Improvement Framework
- OECD - Organisation for Economic Co-operation and Development
- PIE – Parental Involvement and Engagement
- PISA - Programme for International Student Assessment
- RSE – Royal Society of Edinburgh
- SAC – Scottish Attainment Challenge
- SCDE - Scottish Council of Deans of Education
- SCER – Scottish Coalition for Educational Research
- SCQF - Scottish Credit and Qualifications Framework
- SDA – Scottish Diploma of Achievement
- SG – Scottish Government
- SME - Small and medium-sized enterprises
- SQA - Scottish Qualifications Agency

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