

International Council of Education Advisers Third Formal Report 2021-2023

November 2023

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Introduction

The International Council of Education Advisers (ICEA) was established in 2016 to provide advice regarding education policies and practices on a pro-bono basis to the First Minister and Scottish Government to advance equity and excellence in the Scottish education system. Members of the ICEA reside and work within and outside Scotland and have experience and knowledge of operating internationally as researchers and policy advisors with and for other governments. They also have experience working with and for international organisations such as the Organization for Economic Cooperation and Development (OECD), the International Congress for School Effectiveness and Improvement (ICSEI) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO). The ICEA brings together diverse international expertise and perspectives in relation to the opportunities and challenges for Scotland's education system. This is the third formal report of the ICEA.

Post COVID-19 pandemic, both the global landscape and local situations have changed quite drastically. In particular, the ICEA notes that several educational reviews have been undertaken from 2021 to 2023 and that the current global fiscal challenges are also affecting Scotland. In this ICEA report, we are mindful of this context and we intend to add value to Scottish education by recommending actions that can be taken to move forward in these challenging times, with an eye for the future.

This remainder of this report is structured as follows. First, we review the major recommendations in the previous ICEA report, published in 2020, and second we review the main recommendations of the major reviews of components of the system, to highlight their synergies. We argue that given the insights from all these reports, it is timely now and indeed critical to implement change that will bring significant benefits to Scottish education. Acknowledging the financial position, third we recommend actions in Scotland that could be prioritised and implemented taking account of current budgetary constraints before offering a concluding commentary.

Review of the major recommendations in the previous ICEA report (2020)

The previous ICEA report, [International Council of Education Advisers Report 2018-2020](#), was published on 17 December 2020. That report was written in the context of the continuing global pandemic and ensuing uncertainty, to “*support Scottish education not merely to get back to normal, or even to define a new normal, but to use this crisis as an opportunity to become a truly extraordinary educational system in the future.*”

The ICEA 2020 report contained two sets of recommendations. The first was about “*Navigating the pandemic and beyond: redesigning schooling, teaching, and learning*” (some recommendations highlighted here).

- Digital technologies: The ICEA recommended “*superior digital pedagogies and universally accessible, high quality, and interactive national learning platforms.*” This included attention to equity of access to digital devices, technologies and connectivity, and the development of digital competences for educators and children and young people. With digital technologies, we also recommended the deliberate development of student capacity for self-directed learning.
- Expansion of learning outdoors: The ICEA encouraged the expansion of outdoor learning across all phases of schooling (including early childhood education) and recommended teachers to be supported in designing outdoor learning opportunities within their teaching approaches.
- Reform of qualifications and assessment: The ICEA recommended: “*a shift towards continuous professional assessment supported by investment in appropriate professional learning*” and linked this to reform of examinations and qualifications, especially in the senior phase of secondary schooling.
- Review of curriculum: The ICEA recognised the holistic nature of Curriculum for Excellence (CfE) and recommended cyclical reviews of CfE

so that it could continue to stay relevant and facilitate “*the realisation of its core capacities.*”

- Engagement of students, families, and communities: The ICEA highlighted the importance of improving communication between schools and parents/carers, families and communities, and recommended strengthening interagency working, and the development of community connections, including research practice partnerships. This included a recommendation for “*integrated learning, health and wellbeing within a place-based holistic educational approach.*”

The second set of recommendations concerned “*Governing and leading education system change and improvement.*” These included the following.

- System leadership, partnerships, and collaboration for a networked learning system: The ICEA recommended a “*theory of change and leadership approaches that emphasise distributed responsibility and engagement, professional judgment and agency, robust collaborative professionalism, local energy and ownership leading school improvement and continued learning by school leadership and the teaching profession*”. The ICEA also recommended “*a Networked Learning System to enhance connections among schools and professionals, designed-based research and practice-based professional learning.*” We emphasised the need to balance structural change, cultural change, and capacity building, but recommended increasing the attention to cultural change and capacity building, especially amid significant structural change.
- School leadership and the Teaching Profession: In the light of increasing concerns about burnout, working conditions, working in isolation, and mental and emotional health for school leaders and teachers, the ICEA recommended “*support for leaders in their work and wellbeing through mentoring as a professional entitlement*” and to support “*a teaching profession with certification, terms, conditions, support, and professional*

learning that enhance digital competence, develop capabilities concerning teaching outside, and strengthen collaborative professionalism”.

Scottish Government’s response to this report was included in the report [Education - Achieving Excellence and Equity: national improvement framework and improvement plan 2022](#) published on 14 December 2021. ICEA recommendations incorporated into the Improvement Plan included: enhancing a range of professional learning and leadership development opportunities; supporting an online professional learning community; commitments to strengthen teacher engagement and school empowerment; guidance on family engagement; updating a parent engagement plan; implementing cyclical review of CfE; support for interdisciplinary Learning for Sustainability; attention to health and wellbeing for children and young people; access to devices for every school age child; collaboration with children and young people’s organisations to improve engagement in decision making; and the formation of the Scottish Coalition for Educational Research (SCER).

Review of the main recommendations of the major education reviews (2021-2023)

After the publication of ICEA 2020 report, Scottish Government commissioned several major independent reviews of education that focused on various specific aspects of education in Scotland. This section summarises the main findings and indicates synergies and commonalities with the ICEA 2020 report.

In 2021 (June) the OECD produced a report that focused specifically on Curriculum for Excellence (CfE) ‘[Into the Future: Scotland’s Curriculum for Excellence](#)’ and concluded that there was a need to make “*adjustments within CfE’s flexible framework to achieve its potential for learners present and future*”. The report suggested that continued efforts were needed to enhance the coherence of the policy environment with CfE, and that the approach to the ongoing implementation of CfE had lacked structure and long-term perspective. This was aligned with the ICEA 2020’s recommendation regarding “*review of the curriculum*”. The recommendations from this OECD report included “*adapting the pedagogical and assessment practices and the structure of learning pathways in the Senior Phase to enhance learners’*

experience of upper-secondary education and help them develop CfE's four capacities continuously".

The recommendation regarding the senior phase by the OECD prompted a further report [Upper Secondary Education Student Assessment in Scotland](#) by Professor Gordon Stobart in August 2021. This report concluded that the alignment between CfE and upper-secondary assessments could be improved by:

- introducing more innovative external assessments in order to capture a wider range of student capabilities;
- rethinking the role of teacher assessment, with more emphasis placed on continuous school-based assessment; and
- establishing better integration of the academic and vocational strands with the assessment system which, given Scottish Qualifications Authority's (SQA) responsibilities for both, would offer a broader range of curriculum options.

The Stobart 2021 report was also well aligned with the ICEA 2020 report regarding the reform of assessments and examinations in Scotland.

In June 2021, Scottish Government commissioned Professor Kenneth Muir to undertake a review of education in Scotland with a view to recommending improvements to the national educational infrastructure. The resulting report [Putting Learners at The Centre - Towards a Future Vision for Scottish Education](#) (Muir Report) was published in March 2022. This report also had considerable synergies with the ICEA 2020 report. Among the many recommendations, the report specifically recommended the replacement of the SQA, the creation of an independent inspectorate and a reformed national agency. It also recommended a National Discussion to establish a compelling and consensual vision for the future of Scottish education.

In July 2022, two National Facilitators, Professor Alma Harris and Professor Carol Campbell, were appointed by Scottish Government to lead the National Discussion. A report [All Learners in Scotland Matter - national discussion on education: final report](#) was published in 2023. The report from the National Discussion included a

renewed vision for Scottish education and aligned values to guide the system to be ambitious, inclusive and supportive, plus Calls to Action for learners, a learning system, digital transformation, and human-centred educational improvement. The Calls to Action (C2A) signalled the need for changes. The report highlighted an enthusiasm for ongoing engagement in discussions and actions that would make those changes a reality. It commented that it would be a huge lost opportunity for Scottish education if this groundswell of current support was lost or side-lined. This report echoed many recommendations in the ICEA 2020 report, especially regarding “*Engagement of students, families, and communities*”, “*System leadership, partnerships, and collaboration for a networked learning system*”, investment in “*school leadership and the teaching profession*” and an “*expansion of learning outdoors*”.

In June 2023, [It's Our Future: A Report of the Independent Review of Qualifications and Assessment](#) led by Professor Louise Hayward (Hayward Report) was published. This report recommended major changes to assessment in Scotland including the introduction of a Scottish Diploma of Achievement (SDA) as a graduation certificate for all senior phase educational settings, the end of exams in S4 and a wider range of methods used for Higher and Advanced Higher assessment. It also recommended a digital profile for all children and young people, which allowed them to record personal achievements and plan future learning. These recommendations could be seen as a follow-through of the ICEA 2020 call for “*reform of assessments and examinations*”.

Together, these reviews and reports, which were based on sound evidence taken from international evidence and advice and comprehensive soundings in different parts of the Scottish system, reveal commonalities regarding a need for significant change within Scottish education. Collectively these reports point towards the need for:

- greater levels of local empowerment, more transparency and greater synergy from collaboration across the system;
- meaningful engagement with and respect for the education profession, children and young people, their families and the different communities in educational improvement;

- structural and cultural change through significant and immediate changes to the SQA and Education Scotland;
- changes to assessment, specifically but not exclusively in the senior phase, that ensure that CfE continues to be aligned to all phases of education and that there is parity between vocational and academic pathways;
- ensuring all children and young people in Scotland have equitable experiences and improved educational outcomes;
- a direct focus on teaching, learning, equity and wellbeing; and
- high quality implementation of reforms.

Given this collective work, the ICEA's assessment is that the time for commissioning reviews is now over. There is a strong consensus about the need for action but the specifics remain to be determined. We recognise that some changes take time, and that fiscal austerity is a limiting factor. But we are concerned that the momentum of change might not match the appetite for change within the system. We offer our recommendations in this report in 7 strategic areas for action, establishing the basis for an extended period of strategic reform.

Strategic Area 1: Improve the teaching profession and professional learning.

In the Autumn 2022, at the United Nations (UN) General Assembly in New York, the Secretary General, in partnership with Education International, announced the [creation of a High-Level Panel of 17 education Ministers and other leaders on the future of teaching](#), as a response to a widely agreed global crisis of recruitment, retention, and motivation of the teaching profession. The reasons for the crisis, among others, were identified as declining pay and status, increasing workload, deteriorating well-being, lack of professional autonomy and collaboration, weak support in special education and other areas, declining levels of satisfaction and the politicisation of teaching. The settlement in Scotland concerning teachers' pay and working conditions, points to other aspects of the UN's global agenda that are now also worth exploring in the years ahead. These include increasing the intrinsic satisfactions of teaching through greater opportunities to be involved in school-level innovation; more experience of being autonomous professionals working

collaboratively together on improvement and innovation; moving away from top-down leadership to greater teacher leadership within and across schools; and providing appropriate pathways for career progression. In other words, as well as addressing factors that negatively impact on teachers' satisfaction, the positive motivating factors of school leaders and teachers must also be improved. Ultimately, the quality of the schooling experience of Scotland's young people will depend on the quality of their school leaders' and teachers' working conditions.

Other than working conditions, we also need to invest in the professional learning of educational professionals to address the changing needs of the young people. This kind of investment underpins any reform programme arising from the recent set of reports. The [Teaching Scotland's Future](#) (Donaldson Report) report in 2010 has already argued that the quality and morale of the teaching profession in Scotland had to be central to addressing the challenges of raising standards for all, addressing inequity, providing a stimulating school experience and promoting the wellbeing of all young people. While much has changed since 2010 and significant progress has been made in taking forward some recommendations, the realisation of the aspirations of the report remains unfinished business.

CfE was predicated on much greater engagement of school leaders and teachers with key decisions about the curriculum and its realisation. Professional agency goes hand-in-hand with teacher quality and that in turn requires an ongoing commitment to continuing professional learning. In the past, the emphasis was on training teachers in specific skills and techniques associated with effective classroom practice. However, the teaching and learning process is becoming increasingly complex with new areas of knowledge, better understanding of child development, the advent of digital technologies and the impact of family situations (especially for the disadvantaged). Therefore, we need to support school leaders and teachers, individually and collectively, to grow professionally throughout their careers to meet these challenges.

One of the most important ways of building the necessary professional learning is through locally created collaborative networked learning systems ([Madrid Miranda and Chapman, 2021](#)). The General Teaching Council for Scotland (GTCS) has

developed a reference framework for professional standards and review processes in the teaching profession and there is a continuing need to create the conditions to encourage and support career-long professional growth. Moves towards greater local resourcing and decision making should provide for more customised approaches to professional learning. But greater clarity is required regarding the control over decision-making and about sources of support. In particular, the role of central and local bodies as facilitators of professional learning needs to be more clearly articulated. In addition, there is a need to provide external stimuli and challenge in order to inject fresh thinking into local collaborations. The emerging professional learning strategy should therefore include mechanisms to secure the engagement of universities and other sources of expertise and new ideas.

Specific Recommendations

1. The Scottish Government should continue to improve the working conditions of school leaders and teachers.
2. The Scottish Government, national agencies and local authorities should continue to strengthen approaches to professional learning as an integral part of the move towards greater collective agency and local decision-making.
3. The Scottish Government should articulate more clearly the role of national, regional and local bodies in facilitating professional learning.
4. The Scottish Government, national agencies and Regional Improvement Collaboratives should explore and expand professional learning opportunities beyond immediate localities to enable educators to learn from each other and collaborate wherever they are.

Strategic Area 2: Curriculum, Pedagogy and Assessment.

The ICEA recognises that CfE can allow schools to offer a highly flexible and adaptable curriculum, that is highly relevant in post-pandemic times to meet the needs of every child and young person. But the potential of CfE is yet to be fully realised, a point made by the previous [ICEA report \(2020\)](#), the [OECD report \(2021\)](#) and the [Hayward Report](#). We need to examine and remove barriers which restrict curriculum breadth, flexibility and innovation, creativity and deeper and equitable

learning for every young person. The aim is to sharpen the focus on the holistic development of every child, especially with skills and capacities that are much needed in a post-pandemic and rapidly changing world.

The pandemic also challenged many existing assumptions about assessments and examinations. Scotland has been among the global leaders in developing alternate forms of assessment for young people, and the Stobart and Hayward reviews exemplify the kind of evidence-based forward thinking in this regard. Hayward's recommendations are directed towards encouraging and recognising a wider range of achievements than are possible in existing examination arrangements. However, there are also signs of an emerging global pushback towards retaining traditional exams, despite their potential negative consequences for student equity and well-being. For example, in Ireland, a Ministerial announcement in May 2022 that the Irish Leaving Certificate which had hitherto determined 100% of high school students' ongoing certification with a one-time, sit-down, in person examination, would, in future, determine no more than 60% of a student's final grade, [was suspended just over a year later](#) to allow for pilot projects on alternate assessments and for an evaluation of AI and its assessment implications to occur. Tensions between sound arguments to tilt assessment away from traditional forms and pressures to maintain traditional examinations largely as they stand will need to be addressed in an open-minded manner if the recommendations of the Hayward Review are to be progressed positively.

Specific Recommendations

1. Re-examine issues that hinder the potential of CfE to be fully realised, such as performance in examinations as a principal driver in secondary education and narrow metrics as school accountability measures.
2. Harness the progress made in digital literacy in both staff and students, which may require some curricular and pedagogical guidance and support for the profession from local, national or international sources.
3. Improve the alignment of assessment to better support progression of knowledge and skills through each level of education (notably in the senior

phase). Promote access to the wider suite of qualifications and accreditation for young people.

4. Support the profession (e.g. in professional learning networks) in developing their capacity in continuous assessment and in designing, implementing and moderating assessment tools that are fit for purpose, both for internal and external examinations. Reduce the amount of external assessment so that teachers will have more space and time within the curriculum for innovative pedagogies, deeper learning, knowledge application, and skills development.
5. Address the tension between traditional examinations and alternative assessments in an open-minded manner.
6. Urgently examine the benefits and risks of AI for streamlining and improving examinations and assessments.

Strategic Area 3: Support collaboration among teachers and schools

ICEA has highlighted the importance of collaboration among teachers and schools and the need to develop coherent networks to support innovation and improvement across the system. This is necessary to tap into the latent potential that exists within Scottish education. Put simply, more teacher and leadership expertise, knowledge and ideas exist within the system than are currently being utilised.

In practice, this involves building relationships across curricula, organisational, geographical and professional boundaries that moves knowledge, expertise and ideas around the system. It is crucial that such collaborative working is not a blind act of faith. Rather, activity must be underpinned by systematic enquiry to ensure that evidence informs developments rather than replicating uninformed or out-of-date practice. Building a Scottish Networked Learning System that promotes working across boundaries and is driven by evidence will ensure that all teachers have access to the very best professional learning and resources to impact on pupil achievement.

There has been some progress in different parts of the system in this respect. For example, one Regional Improvement Collaborative (RIC) website states: *“We will build on existing practice to build a learning system that will bring about equity,*

excellence and empowerment. The system will promote a culture of learning... We will facilitate collaboration which will promote, allow and scaffold learning and challenge partners". However, there is still work to be done to build a wide-spread culture of systemic networked learning. International evidence suggests that it is very difficult to mandate or drive this change from the centre through hierarchies ([Payne, 2008](#)). Rather, for this approach to be successful it requires nurture, facilitation and brokerage through networks across the system and to be led by credible practitioners who can demonstrate impact in their own classrooms and schools.

Specific Recommendations

1. Build on and expand the most promising collaborative professional learning programmes that are led by teachers for teachers. This will ensure the most recent and relevant expertise and experience is diffused around the system. Other parts of the system should be designed to serve this agenda.
2. Invest in the technological architecture to support teacher collaboration across curricula, organisational, geographical and professional boundaries so that all have access to highest quality professional learning irrespective of their context.
3. Strengthen relationships between school and regional personnel, including within and across RICs to build capacity for leadership from the middle, with a view to increasing support and challenge through collaborative improvement.
4. Incentivise collaboration within and across regions by adhering to the principles of subsidiarity which places limited resources to where they can incentivise collaboration and make the most difference in schools and classrooms.

Strategic Area 4: Engagement of students, families, and communities

In the previous report, the ICEA recommended that the role and involvement of students, families, and communities should be extended in all aspects of Scottish education. The ICEA commends Scottish education for its bold progress toward this goal, for example through the National Discussion about the future of Scottish education and the innovative forms of participation undertaken by the Hayward

Review. The next step is to ensure the experiences and perspectives that students, families, and communities shared are seriously considered in developing educational policy and practice. In particular, those of the marginalised whose needs could remain unserved. Rather than seeking uniformity, the system should consider how equity and excellence could be advanced for all, albeit differently in different communities.

One critical area of need is mental health and well-being. The problems that COVID-19 created for children's mental health and well-being such as grief, anxiety, depression, and loneliness did not end when the pandemic was over. [A 2022 UNESCO report on health and well-being](#) explained how "*the COVID-19 pandemic highlighted the unmet need for mental health services*". A [report by the European Parliament and the OECD](#), presented data revealing that rates of anxiety and depression were higher for young people under age 25 than for any other age group during the later and not just the earlier stages of COVID-19. These worrying trends had even more severe consequences for low income and minority groups. A [2022 UNICEF report](#) pointed to long-term issues that many children and their teachers were having to deal with in post-pandemic times such as being "*overly cautious and fearful*", "*struggling to interact with others*", and worrying about "*having fallen behind in school*". These international reports pointed to the immediate importance of making child mental health and well-being a policy priority and the longer-term implications for academic achievement and equity.

But schools cannot deal with such issues alone. In line with the Scottish Government's Getting It Right for Every Child (GIRFEC) policy, the ICEA recommends bringing together multiple agencies and institutions such as social service agencies and universities to collaborate on these efforts. There are some existing collaborative initiatives which can serve as models of expanding this effort. For example, [The West Partnership](#) brings together educators from eight local authorities who together serve 35% of Scotland's children and young people. Its workstream of wellbeing seeks to amplify the voices of children and young people, engage families in the learning process, collaborate with local agencies, and share good practice among practitioners. The [Network for Social and Educational Equity](#) is another example of collaboration among schools, universities, local authorities, the

social services sector and Education Scotland with a justice-focused mission of mitigating the poverty-related attainment gap in young people's education. The voices of children and young people and attention to context are central to the work of this evidence-driven network. The young people even have opportunities to learn from a global perspective, thus understanding the broad reach they can have as global citizens (e.g. through collaboration with children and young people in other education systems). We therefore reaffirm our earlier advice as an ICEA to continue to deeply engage children and young people, families, and communities in the educational process.

Specific Recommendations

1. Develop additional mechanisms to ensure that the voices of children and young people, families and communities across the system (those in the system experiencing the greatest challenges) are heard and will inform educational change in the system.
2. Ensure that parents, carers and family members have a strong understanding of the learning pathways and opportunities available for their children and young people so that they can participate confidently and productively in supporting learning trajectories.
3. Find innovative ways to partner with the social service sectors to support families, deal with mental health and well-being issues, and inform curriculum, teaching, and learning.
4. Continue to work on establishing partnerships across education (school and university) and other sectors to create spaces for learning outside of the school walls and school day, within and across local communities.

Strategic Area 5: Governance and Leadership

Our previous ICEA report called for a move towards a more locally led system. Scottish Government has indeed pursued a policy of greater devolution of resourcing to schools as seen, for example, in the Pupil Equity Fund (PEF). More recently, the Muir Report recommended that the principle of subsidiarity should guide its proposals about structural and cultural reform. Subsidiarity and cultural change were

central arguments made by Chapman and Donaldson (2023) in their paper [Learning is Scotland's Future](#). We are strongly supportive of this approach but believe that there remains some way to go to achieve the full benefits of local decision making and realise the potential that exists within schools and their communities.

Major structural reform will inevitably be costly in financial terms. It can also result in dissipation of effort as individuals, organisations and the system must adjust to new relationships. We therefore reaffirm our earlier advice as an ICEA that structural changes should only be made as an integral and necessary part of a coherent approach to governance across all levels of the education system. Clear beneficial impact on the learning and experience of the young people and their teachers should be the acid test of any proposals. In the past we have argued for “*shifting the ownership of change*”. Given the need for cultural change in a climate of austerity, this focus is more important than ever.

In considering the current framework of national and local bodies, we believe that much may be achieved through establishing greater clarity of role and purpose, changes to governance and redirection of effort. The teaching profession and other key stakeholders should be given a more central place in the internal governance arrangements of national organisations and local structures such as the RICs. A greater sense of ownership of educational policy and greater sensitivity to the realities of the implementation of policy will help to combat ambiguity and further embed responsibility for the quality of the educational experience in schools and classrooms. It is not for ICEA to prescribe specific changes but, in line with the thrust of the Muir Report, there are several characteristics that we believe should underpin future developments.

- Governance arrangements for SQA (or its successor body) should maintain necessary independence while establishing much closer involvement of education professionals in its decision-making processes.
- Education Scotland (or its successor body) should operate at more arms-length from Scottish Government but with a clear remit to advise government on key policy areas such as revisions to the curriculum. Its authority should be enhanced through an independent chair of a Board

that also engages education professionals drawn from all levels in the system in its work.

- The role of 'Education Scotland' should be reimagined. It should be repurposed to focus on brokering and facilitating local developments rather than the delivery of professional learning at its own hand.
- The role of the RICs should be clarified with an emphasis on promoting collaboration across boundaries. Funding arrangements should promote strategic planning over a three-year period rather than the existing one-year cycles.
- An independent HM Inspectorate of Education should be established as a matter of urgency. In addition to its role in accountability, the approach to inspection going forward should promote improvement within a collaborative culture of self-evaluation. It should have direct access to the Cabinet Secretary without going through established civil service channels. The Chief Inspector should be created at a sufficiently senior level to attract a high quality and competitive field of applicants.
- Governance reform should be directed at stimulating and supporting educational innovation and improvement, not by adding implementation demands but by removing bureaucratic obstacles. Particularly in an environment of austerity, teachers should experience more freedom to innovate and collaborate.

High quality and clear leadership at all levels in the system will be central to success. A continued focus on professional learning for leadership will therefore be an essential part of any longer-term strategy.

Specific Recommendations

In reviewing the infrastructure for the leadership and governance of Scottish education, Scottish Government should:

1. Redesign governance arrangements to give greater prominence to education professionals and other stakeholders in the decision-making process.

2. Establish relationships across levels that allocate clear roles and responsibilities, minimise duplication and create potential for impact.
3. Pursue the principle of subsidiarity through reporting and financial arrangements that allow effective decision making at the local level.
4. Create a leadership narrative that highlights the importance of innovation in learning and teaching and of teachers engaging in innovation together within and across their schools to support pupils' achievement.

Strategic Area 6: Artificial Intelligence (AI) and the Digital World

The emergence of Chat GPT in late 2022 has seen a huge interest in the promise, benefits, cautions and inevitable challenges of this disruptive technology. It is already evident that Artificial Intelligence (AI) provides amazing opportunities and new challenges for education. Governments and educators must now act quickly to maximise the positive effects and manage the risks for the benefit of young people and adults alike. As [Suleyman \(2023\)](#) puts it, AI is part of a “*coming wave*” of technological advancements, touted as one which will “*force us to confront the most fundamental questions our species has ever faced*”.

AI is big business and therefore driven by commercial imperatives. Generative AI is able to generate high quality work, which is difficult to distinguish from human work, and indeed is able to surpass the average human ability in many areas (c.f. [Hargreaves, 2023](#)). Major corporations are already developing educational applications using AI. Therefore, the question is not whether AI will impact on education but how we can ensure that AI supports the purposes and values of Scottish education and within a clear and coherent educational strategy and framework. The young people in our schools today will learn and live through this wave. Whether they could ride the wave or be drowned in it will be shaped significantly by what they learn and experience in their school today.

AI has huge potential to free schools from some of the constraints associated with mass education. For teachers, it can cut through many of the administrative, routine assessment, and basic curriculum planning tasks that have diverted time and expertise from teaching and learning. In these ways it can support the wellbeing of

pupils and teachers. It may also provide adaptive feedback about the learning of individual pupils that will allow direct support to individuals in real time. For the young people themselves, it can provide access to sources of personalised support for their learning in ways that are less constrained by the pace of the class and the rhythm of the school day. AI can also contribute directly to our understanding of the impact of education policy and practice. Its ability to interrogate massive data sets can provide fresh insights into desirable future policy directions.

On the side of caution, concerns with AI range across isolation, plagiarism, cheating, privacy and intellectual property infringement, and the end of intrinsic learning motivation (since one can simply use AI to generate a piece of work). There are also concerns whether many of the traditional functions of human teachers will be taken over by machines. Moreover, as the world becomes more and more digital, there are those who will yearn for a more human world of real experiences, relationships, and spaces - a point made in, for example, [Sax's \(2022\) "The Future is Analog"](#).

Perhaps, the important point now is to be prepared for a shift in the education paradigm and to ask fundamental questions rather than to be beguiled by the excitement that AI is currently generating. In Singapore, [Ng \(2023\)](#) advocates asking educators to reflect on what *real* intelligence is (now that *artificial* intelligence has arrived), and for attention to be directed towards the use of AI to enhance the development of real human intelligence, not just how we can use artificial intelligence to do our current work more efficiently or effectively. Therefore, policy and practice will need to strike a good balance between the need to move quickly as technological innovation accelerates, and maintaining a firm grasp on the fundamental purposes and values that characterise education in Scotland. If young people develop skills that compete with AI, they will inevitably lose out in the competition for future employment. The challenge for policy and practice is to focus on the unique aspects of human intelligence that can work with and through technology. The importance of a school as a community was highlighted during lockdowns and moves towards greater use of AI should not undermine this crucial social and developmental function.

Against this backdrop, we propose that Scottish Government should immediately set in train work to learn more about, discuss, debate, make key actionable recommendations on the potential, promise, applicability and cautions of AI in education, soliciting and incorporating student and teacher input. There will also be an immediate need for systematic professional learning to build educators' ability and confidence to use AI in their teaching, learning, leadership, assessment practices and daily tasks.

A useful starting point will be work already done by international organisations. For example, a [UNESCO Guide for Generative Use of AI in Education and Research](#) locates the emerging pros and cons of AI use in relation to a set of core principles. It quotes the UK Russell Group of leading research universities in arguing that "*students and staff need to be supported in using GenAI tools effectively, ethically and transparently*". It is especially concerned that the use of AI "*does not undermine student human rights nor disempower teachers*" and must "*protect human dignity and the cultural diversity that defines the knowledge commons*". In the end, it advocates for a "human-centred" approach to AI use. Rather than banning AI tools in educational institutions (the initial response of many systems), it sets out eight guidelines for AI use. These might be a helpful template for AI policy and practice in Scotland.

- Promote inclusion, equity, linguistic and cultural diversity.
- Protect human agency.
- Monitor and validate AI systems.
- Develop AI competencies for children and young people.
- Build capacity for teachers and researchers to make proper use of AI.
- Promote plural opinions and plural expressions of ideas.
- Test locally relevant application models and build a cumulative evidence base.
- Review long-term implications.

The implications for the school curriculum will also need to be addressed. Digital literacy, news literacy and citizenship development will be essential components of the school curriculum going forward if the proliferation of fake news, conspiracy theories, and student engagement with social media are to be addressed. The

existing emphasis in CfE on the ability to be creative and to apply learning will assume even greater importance as will the ability to influence decision making and seek solutions in the face of complexity. Also, while AI can improve effectiveness, efficiency, and accessibility of learning, it is important for Scotland to plan for other impacts, especially those affecting the morale of the teaching profession.

Specific Recommendations

1. The Scottish Government should urgently explore the implications of AI for education to identify related curriculum and professional learning policy developments, and work with universities, teachers' organisations, business, parents, students and community, to support measured implementation.
2. The established policy commitment to address inequality in education should also take account of the likelihood of an increasing digital divide associated with access to AI.

Strategic Area 7: Equity and excellence

We should remember that Scottish education is premised on the twin values of equity and excellence. Excellence refers to ensuring children and young people acquire a broad range of knowledge, skills and competencies at the highest possible levels. Scotland's vision for education defines equity in education as "*ensuring every child and young person has the same opportunity to succeed, no matter their background or shared protected characteristics, with a particular focus on closing the poverty related attainment gap.*"

Over recent decades equity in education has become a key national goal around the world for school education. The [OECD](#) frequently advises governments to give equity similar high priority in education policies as they give to excellence. Equally, the United Nations Convention on the Rights of the Child (UNCRC) highlights the importance of education engaging with and serving the expectations and needs of all young people. The rationale for this advice is that a world-class education system is difficult to achieve without more targeted investments in equity of education. It is important that the Scottish Government will continue to emphasise the

interrelationship of equity and excellence in its future education policies en route to a higher performing education system.

Equity in education is a multifaced concept that has no one simple definition that would work well for policy purposes. The fact that it has not been clearly defined in education policy documents and improvement plans, either in Scotland or anywhere else, has resulted in wide range of interpretations, often inadequate targets, weak monitoring, and also lack of accountability for prevalent inequities in the education system. For example, the National Improvement Framework (NIF) and improvement plan 2023 offers a very loose description for equity in conjunction with inclusion and wellbeing. A road to more equitable and sustainable education for all our children, requires a commonly agreed clear definition for what 'equity in education' means.

Equity in education is an elusive concept. It is interpreted in public policies and education plans in a variety of ways. Fairness, inclusion, social justice, non-discrimination, closing achievement gaps, and equal opportunity are examples of terms used variously in the context of educational equity. Despite being laudable principles, they do not provide an operational guide for what equity means in practice, how it should be assessed, and how progress in improving equity should be reported. Closing poverty-related attainment (or achievement) gap is just a part of better equity, significant inequities exist in other social groups other than those determined by students' socio-economic status.

Equity and excellence are two sides of the same coin. Excellence can also be an elusive concept and all too easily reduced to performance metrics. Improvements in literacy and numeracy have been a strong focus in Scotland but the policy and professional agendas need to support all young people to engage with complexity across the curriculum. In pursuing the need for greater equity it remains vital that all young people are challenged and stretched in ways that encourage them to achieve highest possible standards.

Efforts to build more equitable education should start by clarifying what equity in education means. [One way of defining equity](#) is to include two distinct objectives that focus on education outcomes: Individual goal and social goal. It has regard to both

the minimum levels of achievement expected for all students and the education achievements of students from different social groups. Within that dual goal framework, equity in education can be defined as follows:

- Individual goal: All children achieve a minimum standard of education that enables them to fully participate in adult society in a way of their choosing. This means that all students should achieve at least a minimum level of education (completed secondary education) that gives them the capacity to function as independent adults and to participate effectively in society. It also means that all children have the right to high quality education that equips them with the knowledge, understanding, and skills to create their own meaning in the world, to choose their own path in society as adults and to take an active part in shaping the development of society.
- Social goal: Children from different social groups achieve a similar level and range of outcomes. It means equality of outcomes by gender, class, race, ethnicity, and domicile. These groups of students should achieve similar average outcomes and a similar range of outcomes above the minimum standard.

Specific recommendations

1. The Scottish Government should define, in collaboration with key stakeholders, equity and excellence in education in coherent ways so that it would better serve improving policies and practices, sharpen the monitoring frameworks, and establish clear lines of accountability.
2. Collection of data needs to be upgraded to adequately assess the effectiveness of policy initiatives and progress in improving both equity and excellence in education.
3. Enhance reporting on progress in equity of education by including better measures of educational needs in and resourcing of different equity groups.

Moving forward: Future proofing Scottish education

Scottish education is well recognised globally as valuing both equity and excellence. The system invests significant resources to tackle poverty, close attainment gaps and strengthen the teaching profession. The costs of managing the pandemic and financially supporting businesses and their employees have created conditions of inflation and austerity across much of the world. In many jurisdictions, any future educational improvements must be undertaken within stringent budgetary constraints. How will it be possible to motivate teachers and improve students' learning and well-being in a seemingly unavoidable era of declining resources?

Beyond the cliché of doing more with less, there are possible solutions that might enable cost-savings without sacrificing equity or excellence. These include ring fencing certain high priority parts of education from public sector cuts; exploring digital supports for, or supplements to in-person teaching, learning and professional learning; using AI to support and streamline some areas of work like curriculum planning and assessment; and empowering teachers to engage in inspiring local innovation by removing external obstacles (such as overly complicated lists of outcomes and performance measures).

More support for human-centred, teacher-led change, and pulling back from big structural system changes, will create a dynamic movement of educational transformation rather than imposing an expensive and unwanted structural change on teachers and school leaders.

Difficult times present both a challenge and an opportunity. People are hoping to see changes, for the better and for the future. This is actually a good time to bring reform forward. The recommended actions in this report could be prioritised and implemented through a redistribution of resources that enhances efficiencies, eliminates duplication and therefore minimises the need for new investment. The ICEA recommends that the overarching theory of change in the short to medium term is not to change structures too much (this is expensive), but to redirect energy to focus on improving teaching professionals, professional development,

collaboration, and innovation. The idea is to build capacity and remove barriers to grass-roots innovation by identifying points of high leverage.

The need for change is clear and expectations are high. We need to have the wisdom and the will to exercise creativity and high quality thinking when it comes to resource allocation, and to implement direct on the ground interventions that will mean the most to education professionals in providing the best education for their students. New and agile ways of working should be pursued so that equity and excellence can still flourish during austere times. Even as Scotland works through the immediate challenges, it should keep an eye on the future. With creative thinking, thoughtful planning and skillful management, simple and effective measures now can bring about positive developments within Scottish education in the longer term.

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