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Pàrlamaid na h-Alba

Scotland's
Futures Forum
Fòram Alba air Thoiseach

Goodison Group
in Scotland
INFLUENCING LEARNING

Scotland's Futures Forum / Goodison Group in Scotland **Forum Debate**

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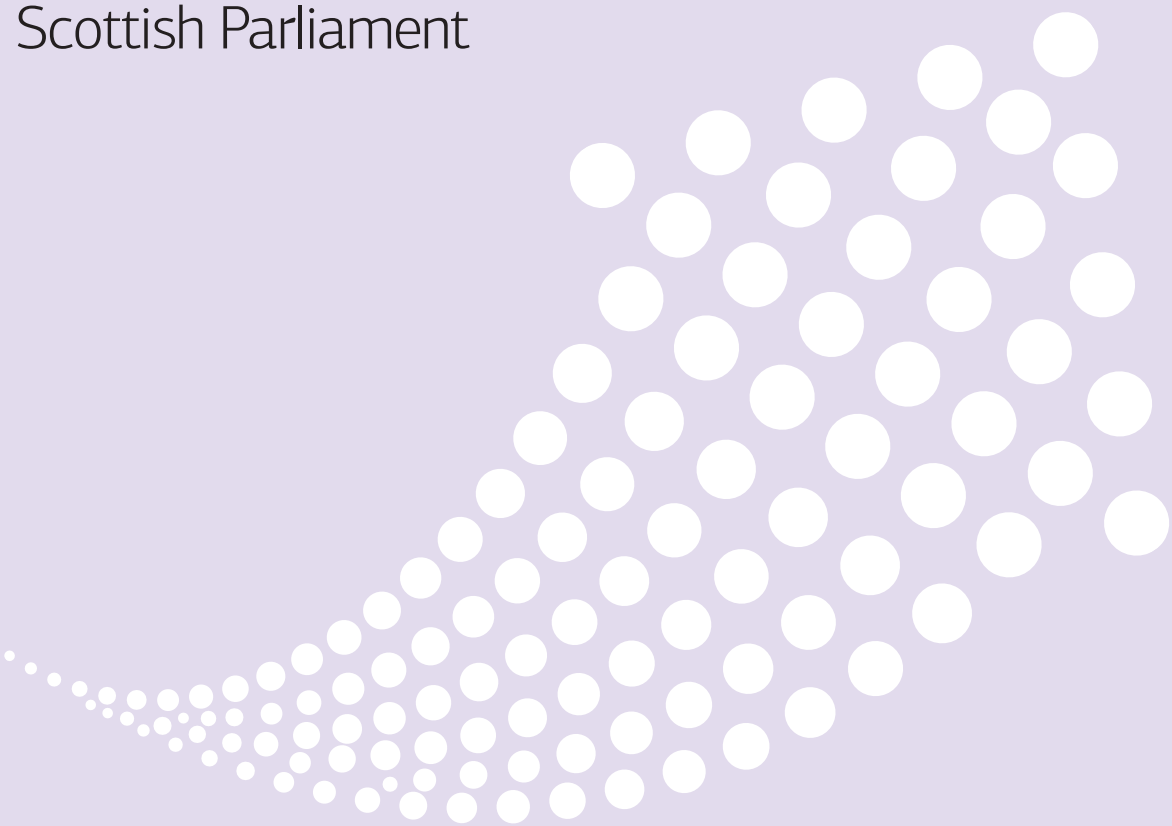
The Scottish Parliament



Background

The Goodison Group in Scotland 2017 programme focuses on exploring future schooling, education and learning approaches in 2030 and beyond. An outline of the project can be found at **http://www.scotlandfutureforum.org/scotland2030-future-schooling.html**. The output from this work will contribute to Scotland's Futures Forum's broader programme, which is considering Scotland's aspirations for society and culture in 2030 and beyond.

Future Schooling, Education & Learning Approaches: 2030 and Beyond

As part of the Goodison Group in Scotland's Future Schooling project, this forum was a follow on from the September debate at which Professor David Bell led a discussion on the economy in 2030 and beyond.

Russell Gunson, Director of IPPR Scotland, provided a focus on the world of work and skills in 2030, considering the implications for education and learning. He was joined by Martyn Ware, Head of Assessment Futures at the Scottish Qualifications Authority, and representatives from a project team of young people working with Young Scot and the SQA on future assessments: Madeleine Brown, Catherine Mackie and Liam Slaven. Dr Paul Gault from Young Scot also spoke.

Russell Gunson, IPPR Scotland

By way of background, Russell Gunson introduced IPPR Scotland as a progressive think-tank dedicated to researching public policy solutions across the full range of social policy. It is committed to supporting economic growth and social justice, and it works on a cross-party basis and retains a neutral stance on Scottish independence.

Russell's presentation focused on the economy over the last 10 years, the economy now, what we are facing in the future, and what that means for education and skills. He took the skills system to mean post-16 education, training and learning.

Scotland's economy since 2007

The context to the current situation from the past 10 years includes the great recession of 2007/08 following the financial crash and credit crunch. In Scotland, the recession was shallower but longer compared to the UK as a whole. The oil price crash has hit the oil industry, while the crash affected financial services – both key sectors for Scotland.

Compared to the UK, Scotland's GDP growth has been lower. Productivity and pay rates have caught up the UK average, and the employment rate is at record levels with only 3.8% unemployment. Youth employment is a huge success story, with 8.4% youth unemployment compared with some European countries where the rate nears 50%. However, there are issues with job insecurity, with 15% of workers in self-employment, 5% in short-term work and 3% on zero hours contracts.

In many ways, the economic performance is a success story of devolution. Since 1999, Scotland has moved from the back to being the best of the rest (outside of London and South East). Internationally, however, UK-wide performance remains very poor.

Where has that left our economy?

Overall, this record leaves us in trouble, both in Scotland and across the UK. We've seen unprecedented public spending cuts, with eight years and counting of real-terms cuts, cuts of 9.2% to the fiscal revenue departmental expenditure limit by 2020 compared to 2010, £1 billion of cuts to non-protected departments in Scotland by 2019–20, and £500 million of cuts to benefits in Scotland by 2020–21. This has all meant the longest fall in living standards across the UK for 150 years.

Where are we now?

Scotland has long-standing inequalities around gender, race and disability, and socio-economically: Some 20% of people in Scotland are in poverty, including 26% of children. There is entrenched low income: 12% of children are in households with low income and material deprivation. Scotland also suffers from inequality, with the top 10% having over a third more income than bottom 40% combined. There is also a gender pay gap: a 6% gap in full-time employment and a 16% gap across full and part-time employment.

Where are we going?

As well as the huge pace of change, there are four big challenges: demographic change, technological change, climate change, and Brexit. How do we meet these challenges while tackling long-standing issues such as poverty and inequality, the productivity challenge and public spending and the deficit, all the while promoting economic advancement and a growth in life chances?

IPPR Scotland research has found that by 2030 the population can expect to have longer working lives, with multiple careers and multiple employers. In Scotland, the number of people aged 65 and over will increase by 53%, between 2014 and 2039.

There will be technological interaction within many more roles and sectors, including mid-skill levels, and in part because of these technological developments we will see economic disruption across the economy.

Scotland is aiming for a just transition from carbon-heavy or focused industries to decarbonisation. Funding will be constrained, while Brexit will likely mean restrained immigration across the UK. Scotland's future place in the world is also currently uncertain.

Change will be constant, and building a responsive and flexible system will therefore be crucial.

Skills system of now

In the current skills system, there is a focus on full-time courses and youth. The outcomes-based approach is patchy, with work conducted on the basis of lots of different regions: for regional colleges and regional strategic bodies for other colleges, local authorities, potential regional bodies for schools, and Skills Development Scotland regional skills assessments, for example. Although there may be good reason for the variety, this can be confusing. There have also been steep funding cuts up until 2015–16 and real-term cuts since.

The key gaps are: a lack of clarity of roles of routes or skills system as a whole; inflexible learning options and routes; a skills mismatch between supply and demand; employer skills investment dropping, particularly in low skilled workers; low skills utilisation despite high skills levels; and challenges in career progression. In particular, there is a mid-career gap in the skills system provision.

Schools system of now

On schools, the PISA statistics show a plateau in school performance, which is a drop in relative terms. The Curriculum for Excellence has a focus on skills and competencies, and assessment or testing is being introduced across primary and secondary schools. Governance changes have been proposed, with school autonomy and regional collaboration, while funding has been flat in cash terms, although there has been new attainment gap funding.

The attainment gap throughout school age is a key gap. Other problems include subject choices being more restrictive in senior phase in some areas, a lack of flexibility and autonomy for schools – or at least the perception of that lack of flexibility – along with a lack of data and testing of 'what works' in attainment. Schools could work better together within and across local authority boundaries and that continuing professional development could improve, although this is a challenge while the teacher workload is high and increasing and there are subject and geographical teacher recruitment gaps.

Looking ahead

We need to design an education and skills system that improves pay, productivity and progression, with a focus on low wage sectors that will help bring inclusive growth. The system should also bring coherence over purpose at national and regional level, be responsive to constant disruption and change, and cater to learners/employees with multiple careers. Part of this means the system must deliver tech and digital literacy across the curricula and enable flexible learning from intense bursts of learning to very part-time courses. It should be co-designed by employers and employees/learners and encourage increased employer investment in skills/higher-skill business model. After all, social justice and economic performance will require us to get more out of all of our population by tackling the attainment gap, the fair access gap and the progression gap.

Some thoughts on how we do it...

In schools, we require the successful implementation of the Curriculum for Excellence and governance changes. Further, the attainment gap and fair access gap at higher education must be tackled, including by pushing forward the Commission on Widening Access. We should consider the assessments we use, particularly at S5 and S6, which requires college, employer and university interaction. Finally, funding should concentrate investment where it is needed most, supported by more attention on evaluation and measuring what works.

For skills, courses should be modularised, enabling full flexibility from full-time to very part-time. Career pathways should be developed, with an education passport supporting a career of learning. Finally, there should be a focus on progression, pay and productivity, by encouraging greater employer investment in and engagement with the skills system.

Further information

Russell concluded his presentation by noting that further information is available in the IPPR Scotland reports based on the work it has undertaken in relation to future skills:

- ***Jobs and Skills in Scotland*** – June 2016
- ***Equipping Scotland for the Future*** – January 2017
- ***Autonomy in the Right Place*** – April 2017
- ***Scotland Skills 2030*** – June 2017

Martyn Ware, Scottish Qualifications Authority

Martyn Ware thanked the Goodison Group in Scotland on behalf of the Scottish Qualifications Authority for the opportunity to participate. He noted that the subject of the debate is critical to the future of the economy and society in Scotland, and these events can only help us to pick our way collectively through some highly complex and challenging issues.

Martyn was attending the forum debate principally in support of the young people who were participating as part of their work with Young Scot and SQA, and he set their work in context.

As Russell Gunson and IPPR Scotland in the 'Scotland Skills 2030' report have shown, and as has been articulated by the World Economic Forum under the banner of the Fourth Industrial Revolution, there are great challenges facing the world economy and society, which have implications for Scotland.

The SQA has sought to understand the implications of these changes for how the skills needed to thrive in the workplace and society of the future are assessed and recognised. The SQA has been asking fundamental questions about what skills will be needed, how they are best assessed and how to represent them in a way that gives them currency. It is considering the needs of young people still in full time education and of those 'mid-career' learners referred to in the IPPR report.

The SQA has engaged with a wide range of organisations and bodies in Scotland, the wider UK and internationally. As part of this engagement, it was critical to actively seek the views of young people. Young people have a greater stake than any of us in ensuring we are effectively prepared for the challenges and opportunities to come. By virtue of their life experience, both what they have and have not experienced, they also have a perspective that is different from those of us who are no longer as youthful as we were – or may wish to be. Both points mean that we need to listen to young people and take account of their views.

The SQA is delighted to be working with Young Scot and its panel of young people. It is listening carefully to its voice among many others as the SQA works to define the future landscape of its approaches to assessment as part of Scotland's national response to the changes going on all around us.

Dr Paul Gault, Young Scot

Dr Gault introduced the #SQAFutures project, which involved young people in discussions about future assessment.

Young Scot's mission is to empower Scotland's young people to improve services, policy and strategic decisions, and as part of that it aims to activate, by creating pathways for young people to navigate positively through times of transition; to connect, by supporting young people to grow, develop and achieve by connecting them to services and opportunities, and to empower, by enabling young people to participate and influence change locally, nationally and globally.

Young Scot works with young people aged 11 to 26 on learning and growing, living and thriving, and working and achieving, in order to support them in making meaning of their lives as they grow up and face transitions.

In projects like #SQAFutures, Young Scot works with a partner organisation and young people themselves through a co-production and co-design process to produce bright ideas. The process involves **exploring**, by uncovering the issues through gathering insights and genuine experiences from and by young people; **creating**, by generating ideas and co-producing solutions with and by young people; **reflecting**, by considering the future impact and sustainability of the ideas produced; **recommending**, by producing influential ideas and solutions with young people; and finally by **implementing** the ideas and solutions with young people.

#SQAFutures

The aim of the project was agreed as *to develop and help make use of new and innovative approaches to assessment.* A Vision Panel was assembled, and the project kicked off in July 2017 with a core youth panel of 10 young people leading the activity. Three workshops have been delivered, including one at Edinburgh Napier University, with one at a further education college due to come.

The core question has been: "What are the most appropriate ways and contexts for learners to demonstrate their competence in a way that provides SQA with the information it needs to certificate their ability?"

So far, the following points have come out. There are opportunities with digital developments as new technologies are emerging all the time, and they can be used to reduce inequality in the classroom. They provide the potential to change what teaching and learning looks like. However, communities need to be involved and access for all needs to be a key concern. Technology should adapt to suit human needs, not the other way around, and the infrastructure and funding need to be in place.

It was also noted that analogue has value as some experiences have no digital equivalent. Learning through doing can also be more memorable as it enables people to put their skills into action.

Looking to the skills required in the 21st century, it was noted that transferable skills are more valuable than knowledge, but that transferable soft skills are not taught in schools. These skills are difficult to assess: they are demonstrated in action and they improve and develop over time. However, they are valued by employers and young people alike.

Extra-curricular activities are also becoming more important as they develop transferable skills. Indeed, volunteering is equally as important as qualifications as the activities allow people to try new skills and new roles.

As a result, dynamic qualifications need to be designed, moving away from time-bound assessments like exams. It should be possible to measure progress over time, involving non-traditional assessors, more qualitative data and perhaps points systems in which multiple activities count toward a quantitative grade. Skills should be measured across lessons, giving young people a chance to do well in a class even if their subject knowledge or ability is not the best.

Finally, meaningful assessment is required to give employers and further and higher education institutions a better idea of what individuals can do. Such assessment would measure potential and growth, with digital technology enabling people to build a personal profile instead of a CV.

Madeleine Brown, #SQAFutures Youth Panel

Madeleine provided a point of view from the Youth Panel on the current situation and what it means for skills and assessment.

Digital futures

Modern day technology is constantly expanding and changing at a breathtaking pace in order to meet our needs as a society. This era of innovation is an amazing opportunity to completely revolutionise what it means to be a student or teacher in Scotland's future.

The concept of an online lesson database could be used to combat inequality by reaching out to the most vulnerable groups in society, such as young carers or those struggling with mental ill health. In addition, it would create a more active and accessible learning environment for both students and teachers alike, allowing us to store information faster than ever before.

As amazing as those machines are, however, the interests and needs of the people involved must lie at the heart of any innovation, ensuring that an equal standard is upheld throughout the country. Communities should play a vital role in developing the infrastructure and funding strategy to achieve fair access for all.

21st Century Skills

Technology has brought us many remarkable things but there are certain skills that we humans possess that far outweigh machinery. Creativity, innovation, leadership and teamwork are all qualities that are becoming increasingly desirable in the workplace, and it is essential that the curriculum reflects this, providing students access to more vocational sectors such as the performing arts and sports.

A major concern is that modern day employers are not receiving workers equipped with the skills they need to exceed in the workplace. So-called soft skills such as teamwork, communication and creativity are often undervalued in favour of hard core facts, but they are often valued more by employers than a set of straight As.

Extra-curricular activities are becoming increasingly important in determining who gets the job and therefore there must be most opportunities within the schools, alongside better promotion of the benefits that volunteering and the creative sectors can offer.

Dynamic qualifications

What steps can we take to improve our current situation? The answer is both straightforward and extremely complicated, and we understand it's going to take time, but there are few key points we can all agree on.

Qualifications have to become more dynamic. End-of-year memory-based exams do little more than stress students out and offer little reflection of reality. After all, your career isn't made in one day – it's a process that can be developed and strengthened over time.

Far more practical, then, is the implementation and assessment over time using, for instance, a points-based system that means that multiple tests count towards a final grade with a chance for remediation and extra credit where it is due.

This type of assessment could help give employers a more accurate assessment of the individual, taking into account skills gained outwith the classroom in order to build a true, living personal profile of an individual as opposed to a set of bullet points on one sheet of paper.

Roundtable and Breakout Group Discussion

Discussion on the issues raised in the presentations took place in both roundtable and breakout group formats. The following themes and points emerged.

Current context

It was pointed out that many five-year-olds now will be in employment by 2030. Although the Curriculum for Excellence provides excellent pedagogical basis and policy intent, it was suggested there were unintended consequences and challenges in delivery.

One forum participant was an advocate for extending the play-based pedagogy and relationship-based practice at the kindergarten stage, which emphasises creativity and problem solving, until the age of six or seven. Putting five-year-olds through numeracy and literacy could, they argued, increase the attainment gap rather than help close it, and prevent them from building resilience.

On the school governance reforms proposed by the Government, it was noted that the evidence suggests that school autonomy on its own does little to improve performance. For example, the academies and free schools experiment south of the border has made no real difference to the attainment gap. What does often make a difference is giving autonomy within schools, not just to head teachers but giving teachers data and measurements that they can use in the classroom.

Assessment

In the way digital technologies are revolutionising other areas, there is the potential to fundamentally change what is assessed, how it is assessed and then give that learning/assessment value.

There are opportunities for seamless assessment in which the learner isn't always aware that they are being assessed. This already happens, and technology could enable its further use. One example is the work done by Sesame Street and IBM Watson to capture information on how children are performing without sitting them down to do a test – the data captured by digital exercises can identify areas that require additional focus for each individual user. This would build assessment into learning rather than separating the two. However, the challenge would be in ensuring that the data is open and satisfies teachers and employers.

Assessment requires the use of an abstract scale (A, B, C etc) or rank order among those assessed. One suggestion was to use comparative judgment analysis, in which students rank their work against peers. Using an anonymised system, this can support their critical thinking and learning. However, it was suggested that the idea would work only in a supportive culture, which we currently do not have.

This led to a discussion of the importance of enabling people to find what they are good at – recognising their skills and possibilities rather than being pushed to climb ladders. The important thing is to encourage people to find their niche – the place where they can use their talents appropriately.

It was noted that we should learn from other countries, where assessment is done by teachers throughout the year rather than through exams. In Finland, for example, it was suggested that formal assessment doesn't take place until the age of 17.

The topic of creating a portfolio of assessment was a theme throughout. The approach could lend itself to exploring and including different types of assessment – the type of assessment would be dependent on what is being assessed and why. A portfolio could include exams, coursework, continuous assessment, peer assessment, team assessment, and references and insights from the wider community, such as from volunteering and work experience. This would provide evidence and examples of when a young person had demonstrated their skills and knowledge, especially softer skills and attributes, and overall produce a rounded view of an individual.

Can anything be learnt from the assessment centres many larger employers use, which tend to be a mix of individual exercises and group exercises? There is also the Higher Education Achievement Reports (HEAR), which enable universities to provide a rounded picture of a student's achievement throughout their time at university.

If a task or project can only be achieved as a collective effort, how can it be assessed? Whilst the element that an individual contributes could be assessed, it takes a collaborative to achieve the overall objective. Could the answer be to assess both perspectives – individual and team? It was suggested we are in the danger of applying traditional methods and the challenge is to be more creative. The last thing we want if assessing collaboration or teamwork is someone standing with a clipboard.

Soft skills

Many speakers noted that soft skills are the important ones, but they can be hard to assess with genuine currency.

In particular, rather than aspiring to have a system where an individual has a Higher in resilience or a National 5 in Problem Solving, we need to explore other possibilities. One option put forward was a form of self-awareness tool. A young person gains a strong sense of their capability in relation to soft skills, reflects upon these in terms of their aspirations and identifies areas to build upon and develop further. They could then develop a profile of their attributes, capabilities and behaviours with strong examples, which could then be shared with employers, colleges and universities.

It was also suggested that attributes such as resilience and tenacity, which are talked about less, needed to be nurtured in people to enable them to meet the transition points in their lives.

Another challenge highlighted was comparison. A lot of good work was done by Becta at the start of the decade, developing forms of assessment to capture skills/attributes such as creativity, problem solving, social skills and use of technology. However, to compare individuals you need to strip away the person from other people and world around them. This is a tension that needs to be resolved: the measurement of how pupils are doing against improving their experience and learning.

Volunteering was also agreed to be vital, especially as it shows off so many different attributes, such as commitment and compassion. The Duke of Edinburgh and Saltire awards were seen as useful ways of demonstrating soft skills, as was participation in activities such as amateur dramatics. These were all examples of soft skills in practice, and they could help provide ways of measuring and demonstrating soft skills.

It was surprising to hear that some large employers do not ask for details of volunteering or extra-curricular activities as part of their recruitment processes.

In terms of vehicles to capture and share this data, ideas offered included the use of social networking sites, which could be adapted to provide a formal version for employers. Students could be empowered to directly choose how they wanted to present themselves and employers wouldn't have to rely on CVs. The platform could be implemented in schools at an earlier stage and have the facility to support multiple media, such as video and pictures as well as written material. It was questioned how reliable the information would be if students were in complete control of the portfolio – a mix of data would be needed, and the sharing of any formal assessments within the portfolio should remain the responsibility of an external body such as the SQA or a university.

A responsive skills system

It was suggested that we should look at learning as building blocks, with the questions being: who picks the building blocks and who designs their content? Can we make them more responsive to learners and employers? It was agreed that it is vital to involve employers but hard to get agreement among them as different employers will have different priorities. The lack of support for jobs that are declining in number but still necessary was noted in that context.

It was suggested that more coursework would be a better way of assessing students, but it was noted that the National 4, which was designed not to have an exam, lacked credibility, including with young people, and had therefore not been a success. This showed the complexity of developing credible assessment.

The Scottish Credit and Qualifications Framework was described as being world leading when it was introduced and still relevant today as it provides way to manage the modularisation of qualifications.

If modularising education and further learning, how do we keep consideration of whole person in view? One example was given of some teachers who were reportedly interested only in their students' abilities in their subject. In response, it was suggested that a maths teacher who is interested only in teaching their students maths is in the wrong profession.

Role of stakeholders

It was stated that all stakeholders, including young people, parents, schools and employers, need to have an understanding of each other. For example, it was disappointing to hear there was a perception around young people in care: "If you have been in care and you disclose it, some people equate care with bad kids –you've been taken from your home".

The links between schools and employers should also be better: teachers should be given work experience to enable them to understand better what employers want, while employers should be encouraged to look at the whole person in recruitment. The use of algorithms, both in assessment and recruitment, was questioned as they can be too narrow in their application. People can perceive more than data, and gut instinct remains vital.

One Forum member also believed we have more than enough data already but involving children and young people genuinely and effectively in understanding and assessing their own learning would be a major step forward. Currently, every part of assessment lies with adults: we need to ask children and young people for their views on how we go forward.

Barriers to Career Progression

Career progression was noted as vital, with education throughout people's lives and careers important to deal with the change in our society and economy that is endemic. We run the real risk of having a bottom end who will flip burgers and sell coffee and a top end who deliver high technical skills and technical revolutions – with no progression between the two taking place. It was also questioned how the growth in the gig economy would affect this discussion, and what will be the jobs for 60 to 90 year olds?

For some, such as care-experienced young people, there were huge employment and training barriers. The cost of transport was one, and ScotRail's initiative to give free train tickets to people travelling to job interviews was praised. Other ways to tackle the barriers would be vital.

Future Economy

In considering the economic impact and link to skills, the question of metrics and measurement was discussed. It was suggested that productivity by itself is a bad metric, and a range of metrics is needed to provide balance, including taking a longer term view.

Overall, we need to be optimistic: we have made progress. The work is hard but that is no excuse. All stakeholders in the education system, who each have their own interests, need to be aligned for progress and change to qualifications and assessment to be made. It was also suggested that, just because an approach or idea has failed in the past it, it doesn't necessarily mean it will fail again in the future. An old idea can hit the right context and be the right solution at a different point in time.

As one young person concluded ***"The greatest resource is right in front of you, the children themselves ... who best to know what they want for a future curriculum, what we want from a future workforce than those who are going to be involved in it. It's what they believe that actually matters."***

Next steps

This forum formed part of the Goodison Group in Scotland's long-term programme to explore future schooling, education and learning approaches in 2030 and beyond, which it is undertaking in partnership with Scotland's Futures Forum. After the discussion, participants were asked to contribute their thoughts to the iterative vision for future education that has been developed over the programme. The most recent version of that vision is reproduced in the appendix to this report.

Appendix 1

School, Education and Learning in 2030

A vision of how education is positively contributing to our culture and society

WHEN

The education system

Politicians and policymakers have set out a clear, long-term vision for education, which was drawn up in consultation with teachers, learners, the voluntary sector and businesses. This has led to a shared understanding of the purpose of education, in addition to greater trust of learners and educators. Power and funding have been devolved to a local level to allow schools to deliver that vision, with the willing support from all sections of the local community. There are regular and transparent reviews into how the vision is being delivered; while teachers and learners have a stake in that process, there is a society-wide understanding that accountability requires openness and not just blame.

There is a strong, positive narrative about education. There is balance within the system – structures, values and behaviours – which allows space for innovation, experimentation and change.

The education system is fully funded and easy to navigate and there is parity between vocational and academic learning. Lifelong learning is strongly supported, though it is recognised that education has greatest impact in the early years.

Given its direct impact on a child's lifetime trajectory, all discussion of education is rooted in high-quality early years provision, which links to the rest of the education system and lays the foundations for effective lifelong learning. There is a clear understanding of the duration of the early years, which in UN and Scottish policy runs from pre-birth until the age of eight.

As part of their pre-school education, children are regularly taken into nature and the community, which fosters their resilience and responsiveness. Outdoor and non-standard activities are valued throughout formal schooling to encourage risk taking.

Parents trust the system and are actively signing up their children for the Education Incubator where new learning techniques and technology are tested and piloted.

The attainment gap has been closed through maximising the potential and raising the educational standards of all pupils. 100% numeracy and literacy, including digital literacy, has been achieved. Standards in all school have been raised to such an extent that moving to be in a particular school catchment area is a rarity.

There is no perceptible gender imbalance within the system. Girls are as likely to embark on engineering apprenticeships as boys, and there are as many male teachers in nursery schools as females.

In recognition of research that shows that adolescents' attention spans and their ability to digest information can be adversely affected because their brains are still developing, teenagers are offered a gap year, with options to participate in community projects or work experience.

The system offers significant flexibility, particularly after compulsory education. There is an understanding that individuals will want to participate in different stages of education at different times and that many adults need short (6 month) career-change programmes from universities and colleges.

WHAT

The curriculum

The curriculum is revisited and shaped annually by teachers, learners and parents as well as the wider community, including employers, colleges and universities. As part of this process, changes in technology, the workplace, and the political and economic situation are taken into account. Children and young people's views are sought in effective and genuine ways and their views are acted upon.

The purpose of learning is understood, and there are many opportunities to engage with the real world which gives education more meaning. The involvement of local business and charities in the school leads to work placements and projects that build teamwork and work skills.

While learning is often seen as fun, pupils and students also develop a work ethic and a desire to succeed at 'the hard stuff'. There is an understanding of the importance of knowledge rather than subjects. Pupils are encouraged to see beyond the here and now and imagine how things might be different in the future. The ability to research information and to be able to fact check is built into all stages of learning.

The four capacities of the Curriculum for Excellence (successful learners, confident individuals, responsible citizens, effective contributors) have been retained and are being realised by learners, who all speak at least one other language. Pupils are also taught emotional literacy, critical thinking and the ability to determine what's important and what's to be valued.

In general, societal attitudes to risk and failure have dramatically changed. The education system allows people to learn and unlearn, and pupils are taken on visits to the National Museum of Failure to encourage them to experiment and fail.

WHERE

Schools

With power now devolved to a local level, schools have become pastoral centres at the heart of the community with the responsibility to raise children seen as a shared one by all stakeholders. Children can access green space where a lot of time is spent learning in, and from, nature. Children are routinely involved in decisions that influence the school environment including the selection of teachers.

The labels of 'schools', 'colleges' and 'universities' have largely been abandoned and have been replaced by the terms 'learning hubs', 'learning communities' and 'learning environments'. There is much sharing of resources between these different places which offer flexible, innovative spaces for all ages as education is no longer defined by 'age and stage'.

Technology has been harnessed to further the common good and enhance, rather than drive, learning. The Global Virtual Classroom launches its second phase of cross-cultural projects, where Scottish students work with students across the world on specific areas or projects – virtually.

Teachers are adept at nurturing and building on the learning that take place within the family and other community settings such as libraries, local associations, workplaces and online forums. Given the above, there is a lot of emphasis on equipping adults with the knowledge, skills and confidence to support children's learning.

HOW and WHO

The teaching profession

Teaching is a highly valued and desirable profession. Teachers have a passion for what they do and many have entered the profession after spending years in industry enabling them to share their insights of the wider world with pupils. As well as teachers with different life experiences, pupils are exposed to teachers from a wide variety of ethnic backgrounds.

A high degree of trust has led to minimal bureaucracy, allowing teachers able to get on with delivering society's vision for education; head teachers have sufficient power, funding and flexibility to adapt the curriculum to meet the changing needs of society.

Within the classroom, teachers have more of a facilitation role, encouraging learners to access experts independently and/or to learn through peer-to-peer or intergenerational mentoring. Much learning is delivered remotely, and as pupils and students are only present at 'learning hubs' for discussions and socialising, there is minimal classroom disruption. Care is taken by teachers to encourage creative thoughts and to give children and young people the time to think before they respond to questions.

Technology has given students greater control of their learning and has enabled the removal of basic ad ministrative tasks, including marking, from teachers.

Teachers who have spent more than 10 years in the profession are obliged to take a gap year to enable them to widen their life experience and retain their passion for their subject. Teachers work into their late sixties but there are more opportunities for part-time employment. All media networks have reported that a scheme for retired teachers to coach and mentor student and new teachers has been oversubscribed this year.

Within schools, there is a vibrant leadership culture, where leadership is not defined by role. The quality of teaching is consistently high throughout the education system.

SUCCESS

Qualifications and competences

A common language is used to describe what people have gained from formal education and other forms of learning, in all areas of education as well as within business and across society as a whole.

Success is no longer evaluated through testing or by focusing solely on numeracy and literacy.

Artificial intelligence allows assessment on demand, and students' e-portfolios (passports recording their achievements and experience) are held online. Businesses can check these e-portfolios, reducing or eliminating the need for application forms or CVs when applying for jobs, although students understand, and are fully able to identify and articulate the skills that they have acquired from their learning.

There is a healthy debate about whether measurement matters and what purpose it serves within education.

VALUES and BEHAVIOURS

The values and behaviours at the 'heart' of the education system are embedded and form part of Scotland's DNA. These values include: social justice; optimism; diversity; inclusion; multi-culturalism; and open-mindedness.

The beginnings of a new enlightenment can be seen following a renewed emphasis on the arts, humanities and social sciences, with learning valued over qualifications and attitude valued as much as skills. Society sees itself as in control of and not controlled by technological innovations.

There is a belief in children and young people's potential, instincts and emotions, and a collective desire to draw out an individual's potential throughout their life. The UN Convention on the Rights of the Child, as well as children's digital rights, are understood and upheld with an understanding that children treated with human dignity will have higher levels of confidence and learning. In addition, the following qualities are encouraged within the education system: emotional intelligence, resilience, leadership, aspiration and empathy.

In higher education, less emphasis on targets has led to a greater freedom to explore and go deep. The higher education system provides an outward-looking, culturally diverse learning environment and is leading the way globally in encouraging open research, open data and open educational resources.